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**The Relationship between Educational Service Quality and Student Academic Performance in Ethiopian Public Universities Located in Southern Part of Ethiopia: A Mediating Role of Students' Satisfaction**

**Zelalem Zekarias Oliso**

**A PhD Dissertation Research Submitted to the Department of Educational Planning and Management, College of Education and Behavioral Studies of Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Educational Policy and Leadership**

**JUNE, 2024  
AAU, ETHIOPIA**

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## DECLARATION

I hereby declare that this PhD dissertation research is my original work and has not been presented for a PhD degree program in any other university, and all sources of material used for this research have been duly acknowledged.

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## Examiners' Approval Sheet

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## **List of Acronyms and/or Abbreviations**

AAU	Addis Ababa University
AMU	Arba Minch University
BPR	Business Process Re-engineering
CGPA	Cumulative Grade Point Average
CVI	Content Validity Index
EFA	Exploratory Factor Analysis
EPHEIs	Ethiopian Public Higher Education Institutions
EQUIP	Education Quality Improvement Program
ESDP	Education Sector Development Program
FGD	Focus Group Discussion
GC	Graduating Class
GER	Gross Enrolment Ratio
HA	Alternative Hypothesis
HEdPERF	Higher Education Performance
HEIs	Higher Education Institutions
HERQA	Higher Education Relevance and Quality Agency
HESC	Higher Education Strategic Centre
HESQUAL	Higher Education Service Quality
HiEdQUAL	Higher Education Quality
ICT	Information Communication Technology
I-CVI	Item Level Content Validity Index
IPA	Importance Performance Analysis
JKU	Jinka University
MoE	Ministry of Education
MoSHE	Ministry of Science and Higher Education
QAR	Quality of Academic Resources
SERVPERF	Service Performance
SERVQUAL	Service Quality
SNNPR	Southern Nation, Nationalities and Peoples Region
S-CVI	Scale Level Content Validity Index
SPSS	Statistical Package for Social Sciences
SSI	Student Satisfaction Index
UNESCO	United Nations Education, Scientific and Cultural Organization
WB	World Bank
WSU	Wolaita Sodo University

## **ABSTRACT**

*The purpose of this study was to examine the relationship between educational service quality and student academic performance via the mediating role of their satisfaction. To that end, a mixed research approach with QUAN+ QUAL model (or convergent parallel design) was implemented. The study total population consisted of all the regular undergraduate graduating class students, university instructors, and university leaders in the ten (10) public universities that found in the Southern part of Ethiopia. The study participants were selected via random and purposive sampling techniques. Questionnaires, Document analysis, Interviews and Focus Group Discussions were the main tools for gathering data. A self-prepared questionnaire, consisting of 116 items was administered to four hundred (400) randomly selected graduating class students. A semi-structured interview was conducted with twenty purposefully selected university instructors and leaders. Focus group discussion was also conducted with nineteen (19) graduating class students who were purposefully selected from each sample university. The quantitative data collected were analyzed using descriptive and advanced inferential statistics. The qualitative data collected were analyzed thematically to compare and/or relate with quantitative findings. The findings of the study revealed that although students' overall perception towards the educational service quality was somewhat positive ( $M=3.15945$ ,  $SD=1.189395$ ), poor quality of classroom environment, poor feedback on students' academic progress, inadequate supply of laboratory equipment and teaching tools and poor internet access in the universities were the most common educational service-related challenges that influence students' satisfaction and their academic performance. The findings of the study also uncovered that the lack of suitable buildings and facilities for students with disability, poor delivery of guidance and counseling services, shortage of medicines in the student clinics, unnecessary bureaucracies and difficulties particularly in finance, and skill gap among administrative workers, shortage of experienced human resources were additional challenges that influence students' learning. The quantitative findings revealed that there is a statistically positive correlation between overall education service quality and students' satisfaction ( $r=.844$ ). The findings proved that the facets of education service quality accounted for 83.5 % of the variations in students' satisfaction in the universities. The quantitative findings further showed that the education service quality has a statistically indirect effect on students' academic performance via the mediating role of students' satisfaction (Test statistic = 31.5311573, Std. Error = 0.00122536,  $p\text{-value} = 0$ ). The findings further confirmed that the overall education service quality accounted for 40.4 % of the variations in students' academic performance via student satisfaction in the universities. The study concluded that an improvement in educational service quality leads to students' satisfaction and that could contribute to boosting their academic performance. Finally, based on these findings and conclusion, it was therefore recommended that the universities should aggressively work to provide quality educational services that highly influence student academic performance to improve their satisfaction and academic performance.*

**Keywords:** Higher Education; Academic Performance; Service Quality; Quality Education; Student Satisfaction; Public Universities

# **CHAPTER ONE**

## **1. INTRODUCTION**

This chapter presents the general framework of the study which aims to examine the relationship between education service quality and student academic performance via the mediating role of their satisfaction in Ethiopian public universities located in the Southern Part of Ethiopia. The chapter encompasses background, statement of the problem, objective, significance and delimitation of the study. The chapter also deals with the conceptual framework, operational definition of key terms and organization of the study. The background section explains the rationale for undertaking the study and directs the route towards the statement of the problem and the way to investigate the research problems. In this regard, the researcher defined the research problems and designed the research questions. In addition, the researcher briefly described the importance and conceptual framework of the study. Finally, the delimitation, limitations, operational definitions of keywords and phrases and organization of the study are indicated to inform readers about the present research arena.

### **1.1. Background of the Study**

Currently, massive changes in policy, structure and status of Higher Education Institutions (HEIs) have been taking place all over the world. Process issues such as globalization, higher education expansion, massification, internationalization, privatization and increased competition among HEIs are now common in most countries (O'Neil and Palmer, 2004). In today's dynamic and competitive higher education sector, education service quality is; thus, a critical determinant of the success of HEIs as a service sector (Sandhu and Bala, 2011).

Different scholars and researchers have defined the concept of service quality in various ways in both business or market sectors and education settings. In the marketing sector, most

scholars raise two main important concepts while defining service quality. These concepts include customer expectations and the service provider's actual performance. For example, McConnell (2002) defines service quality as performing or fulfilling services beyond customers' expectations or the differences between what customers expected and what they perceived after receiving the services provided. Similarly, other most frequently cited researchers like Parasuraman *et al.* (1985, 1988) defined service quality as the comparative analysis between customers' expectations and the actual performance of the service provider or the customers' judgment of the overall excellence of the service.

In educational settings, there are various views on the term 'education service quality' based on the nature and focus of the research (Schneider and White, 2004). According to AL-Dulaimi (2016), educational service quality refers to quality services that universities and research institutes shall make available to students to improve students' learning. Furthermore, Govender, Veerasamy and Noel (2012) described educational service quality as a measurement of how well HEIs offer both academic and administrative services to students as a primary stakeholder of educational institutions. As described by Govender, *et al.* (2012), in this study, educational service quality is considered as a measurement of how well HEIs provide or offer academic as well as non-academic/ administrative services to students to enhance their learning.

Educational service quality is mainly recognized as a key strategic value in higher education. For example, according to Onditi and Wechuli (2017), education service quality is one of the factors that should be considered in managing an educational institution. They further noted that education service quality is a key determinant or a measure of the performance of higher education quality. Other researchers (such as Azam, 2018; Kandie, 2018, Malik, Danish and Usman, 2010) pointed out that educational service quality is fundamental and an important

parameter of educational excellence in general and higher education in particular. Similarly, Raju and Bhaskar (2017) in their study argue that education service quality is essential for a high standard of education and a good image of higher education institutions. In addition, education service quality is important for HEIs to achieve universities' objectives and promote the effectiveness of the education system (Al-Dulaimi, 2016).

However, similar to the concept of service quality, measuring higher education service quality is also problematic (Goran, 2014, Eshghi, Roy and Ganguli, 2008;). Since the nature of educational services in higher education is composed of multi-dimensional constructs or variables and approached from a range of indicators, different scholars propose various methods of measuring higher education service quality. There is no universally agreed measures for educational service quality (Eskicumal, Demirtaş, Arslan and Yarar, 2015; Cerri, 2012; Abdullah, 2006b). Although there is no consensus on the dimensions that higher education service quality constitutes, the existing literature reveal that the dimensions of quality of academic resources, academic service quality, administrative service quality, and quality of student support services have been consistently applied in higher education (Manzoor, 2013).

Indeed, the generic service quality models designed for business sectors and service quality models principally developed for higher education sectors have been attempted to measure higher education service quality. However, in this paper, the researcher argues that using a single model either a generic service quality model or a service quality model mainly designed to measure higher education is not comprehensive and responsive enough to measure Ethiopian higher education service quality context. Each generic as well as higher education service quality model consists too short dimensions and items or constructs which doesn't include all basic services provided by Ethiopian universities. The following Table 1 and Table 2

show the strengths and weaknesses of existing generic service quality models and higher education service quality measures.

*Table 1 Strengths and Weaknesses of Existing Generic Service Quality Models*

<b>Generic Models</b>					
	<i>Author (s)</i>	<i>Number of Dimensions and Items</i>	<i>Sectors Applied</i>	<i>Strengths</i>	<i>Weaknesses</i>
SERVQUAL	Parasuraman, <i>et al.</i> (1985)	Five dimensions with 22 items	Commercial and Higher Education	-The most popular service quality measure  -Widely used service quality measure	-Not empirically tested in higher education  -Constructs are not comprehensive enough to measure all dimensions of higher education service quality
SERVPERF	Cronin and Taylor (1992)	Five dimensions with 22 items	Commercial and Higher Education	-Well-known service quality measure  -Widely used service quality measure  -Measures service quality from a performance only perspective	-Not empirically tested in higher education  -Constructs are not comprehensive enough to measure all dimensions of higher education service quality

*\*Source: Researcher's own work*

**Where;** *SERVQUAL=Service Quality; SERPERF=Service Performance*

*Table 2 Strengths and Weaknesses of Higher Education Service Quality Models [HESQM]*

<b>Higher Education Service Quality Models</b>					
	<i>Author (s)</i>	<i>Number of Dimensions and Items</i>	<i>Sectors Applied</i>	<i>Strengths</i>	<i>Weaknesses</i>
HEPERF	Abdullah (2006b)	Five dimensions with 41 items	HEIs	-The most well-known and widely used HESQM -Empirically tested in HE sectors	-Constructs are not comprehensive enough to measure all dimensions of higher education service quality
HiEdQUAL	Annamdevula and Bellamkonda (2012)	Five dimensions with 27 items	HEIs	-Empirically tested in HE sectors	-Constructs are not comprehensive enough to measure all dimensions of higher education service quality
HESQUAL	Teerooven-gadam, <i>et al.</i> (2016)	Five major dimensions and nine sub-dimensions with 48 items	HEIs	-Empirically tested in higher education sectors	-Constructs are not comprehensive enough to measure all dimensions of higher education service quality
QAR	Kara, <i>et al.</i> (2016)	Four dimensions with 16 items	HEIs	-Empirically tested in higher education sectors	-Constructs are not comprehensive enough to measure all higher education service quality  -In addition, this model merely measures the quality of academic resources

*\*Source: Researcher's own work*

**Where;** HEdPERF= Higher Education Performance; HiEdQUAL=Higher Education Quality; HESQUAL=Higher Education Service Quality; QAR= Quality of Academic Resources; HIEs= Higher Education Institutions; HE= Higher Education

For the purpose of this study, a combination of higher education service quality models, particularly Abdullah's (2006b) Higher Education Performance [HEdPERF], Annamdevula and

Bellamkonda's (2012) Higher Education Quality [HiEdQUAL], Teeroovengadum, *et al.'s* (2016) Higher Education Service Quality [HESQUAL] and Kara, Tanui and Kalai (2016) Quality of Academic Resource [QAR] were thoroughly reviewed and adapted to examine the educational service quality of Ethiopian public higher education institutions [EPHEIs]. And there are reasons for this:

As mentioned earlier, in the first place, higher education service quality is composed of multidimensional constructs and hence using a single model cannot show the complex nature of higher education service quality. In addition, as suggested by Li and Kaye (1998) since higher education service quality is composed of various constructs, specific terms need to be used and a more careful generalization needs to be made when applying the general service quality framework in the particular field. Secondly, the adopted models to the present study are designed for higher education and empirically tested in the higher education context as compared with the other service quality measures that developed for market sectors like Service Quality [SERVQUAL], Service Performance [SERVPERF] (Brochado, 2009; Abdullah, 2006b). Thirdly, many comparable empirical earlier studies, for example, Adinegara, and Putra (2016), Jelena (n.d), Seng and Ling (2013) have employed a combination of different models to examine higher education service quality.

Therefore, through an extensive review, seven main and nine sub-dimensions of higher education service quality measures was developed and included a total of 116 items or constructs. The seven main and nine sub-dimensions of higher education service quality include: academic service quality (academic staffs' attitude and behavior, academic staffs' competence, academic facilities and resources, academic program issues, quality of instructional practices and quality of library services), administrative or non-academic service quality (administrative staffs'

attitude and behavior, quality of administrative processes and procedures, administrative staffs' competence), quality of infrastructure, quality of support services and facilities, quality of students' welfare services, university access to students and university reputation. The researcher assumed that the newly adapted Higher Education Service Quality Measure [HESQM] is a comprehensive model to measure Ethiopian higher education service quality.

It is a fact that Ethiopian higher education is characterized in poor quality. Different government documents released by the Ethiopian Ministry of Education uncovered the poor quality of the country's higher education. For example, in explaining the decline of the quality of higher education, the Ethiopian Ministry of Education in its second Education Sector Development Program [ESDP] (MoE, ESDP II, 2002) document stated that enrollment had increased substantially in Ethiopian public universities resulting in over-crowded classrooms, universities lacked sufficient books and other facilities. Furthermore, as pointed out in the last or fifth education sector development programme [ESDP V] document, despite massive resources have been allocated to improve the quality of the teaching and learning process, universities are report insufficient supplies of academic resources such as Information Communication Technology [ICT] infrastructure, library facilities, laboratory and workshop equipment and so on (MoE, 2015).

During the last two decades, the higher education service quality has received increasing research attention from scholars and researchers. This is because a continuous global, social, cultural and economic change was employed by higher education institutions through a steady stream of complex reforms based on quality (Al-Dulaimi, 2016; Kontic, 2014; Schuller, Rašticova and Konečný, 2013; Brochado, 2009). In addition, currently, students and teaching

bodies have become increasingly conscious of the value and educational service quality provided by the universities (Al-Dulaimi, 2016; 2017).

In the higher education sector; however, research works on education service quality are still a new endeavor as compared to the commercial or business sector (Sultan and Wong, 2010; Chandra, Ng, Chandra and Priyono, 2018). Furthermore, as argued by Abdullah (2006a), Đonlagić and Fazlić, (2015) and Jelena (n.d), although the issue of educational service quality has attracted considerable attention within the tertiary education sector, little research work has been conducted from students' perspective about higher education service quality.

Schools, colleges and universities have no worth without students. Students are the most essential assets for any educational institution (Ali, Ali, Mokhtar and Salamat, 2009). Besides, students are the ones for which education has been primarily designed and they are the primary recipients of educational services. Hence, evaluating educational service quality from students' perspective is imperative to improve university performance because the perceived service quality by students today changes rapidly, especially with new technologies, techniques, skills and knowledge needed in the field of their studies (Chui, Ahmad, Bassimc and Zaimi, 2016).

Moreover, students' evaluation of the service quality that provided by a particular university is a significant assessment instrument to stimulate the quality enhancement and continuous improvement in a university (Ryan, 2015; Kontic, 2014). Likewise, Hameed and Amjad (2011) urge that evaluating the education service quality based on students' viewpoint is vital to pinpoint institutions' strengths and identify areas for improvement and improve students' academic achievement (Ahmed *et al.*, 2010). In the present study, the relationship between educational service quality and student academic performance was examined via students' satisfaction in Ethiopian public higher education.

## 1.2 Context of the Study

Ethiopia possesses a 1,700-year tradition of elite education that is linked to the Orthodox Church. However, modern higher education began in Ethiopia in 1950 with the establishment of the then University College of Addis Ababa (Habtamu, 2003; Saint, 2004). Higher education in Ethiopia has been elitist in nature. The majority of the school-age population has not had access to higher education as the institutions were built in major urban areas of the country. For instance, the tertiary Gross Enrolment Ratio [GER], which was only 0.2% by the year 1970, had not shown any significant improvement after twenty-five years in 1995 (0.7%), which increased to only 1.5% by the year 2003 (World Bank [WB], 2004; Teshome, 2005). The following Table 3 shortly summarizes low access to higher education during that period.

*Table 3 Ethiopian Higher Education Access during 1970, 1995 and 2003*

<i>SN</i>	<i>Years</i>	<i>GER</i>	<i>Remark</i>
1	1970	0.2%	
2	1995	0.7%	GER has not shown any significant improvement after 25 years
3	2003	1.5%	

*\*Source: WB (2004); Teshome (2005)*

**Where; GER=Gross Enrollment Ratio**

Although access to higher education has been extremely low in Ethiopia from 1970 to 2003, there has been a rapid expansion of higher education institutions in different parts of the country over the past fifteen years (Mulu, 2012; Kedir, 2009). The researcher examined the rapid expansion of Ethiopian higher education institutions over the past two to three decades based on the three major indicators, including: (1) an increment in the number of higher education institutions; (2) a high GER as compared with the past two to three decades' GER; and (3) an increment in the number of undergraduate and postgraduate students in different universities.

When we look at an increment in the number of Ethiopian higher education institutions, the number of public universities increased from two in 1991 (Tesfaye, 2011) to 36 in 2015 (MoE, 2016). Currently, there are 49 public universities and 128 accredited private HEIs in the country (MoE, 2018). The GER increased from 5.7 percent in 2013 (MoE, 2013) to 10.2 percent in 2014/15 (MoE, 2016) and is expected to reach 15 percent by 2019/20 (MoE, 2016).

Furthermore, the number of undergraduate students increased from 326,318 in 2007/8 to 729,028 in 2014/15 (MoE, 2016). Postgraduate enrollment dramatically increased from 7,355 in 2007/8 to 40,287 in 2014/15 (MoE, 2016). The most recent data released by the Ethiopian Ministry of Education shows that the total number of undergraduate students attending different public universities reached more than 825,003 (MoE, 2018). This indicates that the annual intake of undergraduate students has increased dramatically. The following Table 4 summarizes the number of undergraduate and postgraduate students in Ethiopian higher education.

*Table 4 Increment in Number of Students in Ethiopian Higher Education*

Years	UG Programs			PG Programs		
	Male	Female	Total	Male	Female	Total
2007/08	263,001	63,317	326,318	6652	703	7355
2014/15	475,971	253,057	729,028	30704	9583	40287
2018	520,177	304,826	825,003			

*\*Source: MoE, 2016; 2018*

**Where;** UG=Undergraduate; PG=Postgraduate

The radical expansion of both private and public universities and an increment in undergraduate and postgraduate students' gross enrolment rates had affected the overall quality of Ethiopian higher education. The current study was conducted at Ethiopian public universities located in the Southern part of Ethiopia. In the Southern part of Ethiopia, a total of ten public universities are found (viz., Hawassa University, Dilla University, Wachamo University, Wolkite University, Worabe University, Wolaita Sodo University, Arba Minch University, Mizan-Tepi University, Bonga University, and Jinka University). Based on the former Ministry of Science

and Higher Education [MoSHE] differentiation of Ethiopian public higher education, among the ten universities found in the Southern part of Ethiopia, Hawassa and Arba Minch universities are differentiated as research universities, Dilla, Wolkite, and Wolaita Sodo universities are categorized as applied universities, and the remaining five (namely, Mizan-Tepi, Bonga, Wachamo, Worabe, and Jinka) universities are identified as comprehensive universities.

### **1.3 Statement of the Problem and Rationale**

Presently, higher education institutions [HEIs] have been experiencing quality assurance processes in most countries (Hasbullah and Yosuff, 2017). The assessment of educational service quality at HEI is at the heart of the quality assurance system because, based on the results of this assessment, an improvement plan should be made, and this plan includes human resources, infrastructure improvement, etc., which can be considered strategic goals for HEIs (Đonlagić and Fazlić, 2015). Thus, educational standards need to be implemented by each institution that consists of competency standards, learning content, learning processes, learning assessment, lecturers and staff, facilities and infrastructure, management, and financing of the learning process to run the learning process well (Adinegara and Putra, 2016). Furthermore, as suggested by HERQA (2006a), providing quality and adequate educational services is imperative to ensure the effective delivery of university programs and support students' learning.

However, in relation to Ethiopian higher education quality, many studies indicated the quality of the country's higher education is poor. According to different empirical studies, Ethiopian higher education is characterized in poor service quality from the past decades till now. For example, according to the past almost two decades' studies conducted by the World Bank (2004) found that Ethiopian higher education is characterized in limited autonomy, a shortage of experienced academic staff, poor service delivery, declining educational quality,

weak research output and outdated curricula. In the same vein, Saint (2004) points out that Ethiopian HEIs face a number of problems that related to the quality, relevance of programs and shortage and inefficient utilization of resources.

Cognizant of these challenges, the Ethiopian government has considered quality in higher education as one of the top priorities to address (MoE, 2005; WB, 2004). Accordingly, in higher education, the government introduced various quality improvement initiatives and reform programs. For example, establishing supporting agencies such as the Higher Education Relevance and Quality Agency [HERQA], a Higher Education Strategic Centre [HESC], and the Educational Quality Improvement Program [EQUIP], introducing new courses and curricula, making new funding arrangements, acquiring student contributions by means of cost sharing, building necessary infrastructure, recruiting new staff, improving service quality through the implementation of Business Process Re-engineering [BPR], and developing and procuring teaching materials have been applied in the country (Ayalew, Dawit, Tesfaye, and Yalew, 2009; Saint, 2004; Teshome, 2003).

Though different quality improvement initiatives and reform programs have been implemented in the country to improve the quality of Ethiopian higher education, recent empirical studies indicated that these initiatives and reform programs have had a low impact on Ethiopian higher education quality. For example, Solomon (2012) pointed out in his study that the quantitative expansion of higher education in the country has affected the overall quality of educational activities, particularly in the context of severely limited resources. Another study conducted by Reisberg and Rumbley (2010) stated that Ethiopian higher education quality is also constrained by infrastructure. In this study, they further identified that the construction of classroom space, the expansion of library collections, the addition of computer labs, and the

development of electronic networks lag behind enrollment expansion. Similarly, in studying the historical challenges and opportunities of Ethiopian higher education, Alemayehu and Solomon (2017) found that the expansion of higher education was challenged by educational service quality. Girmaw (2014) and Elizabeth (2017), in their study, also found that when the government aggressively worked on the expansion of higher education, universities struggled with decreasing per-student budgetary allocations, a shortage of qualified staff, and an inadequate supply of necessary infrastructure such as furniture, ICT, laboratory chemicals, library resources, and so on.

Moreover, the most recent empirical study conducted by the Ethiopian Ministry of Education in collaboration with educational professionals assured that the activities carried out to improve Ethiopian quality education have had little positive impact on the quality of HEI's core educational processes, or teaching and learning (MoE, 2018). This study further indicated that "most Ethiopian universities are confronted with insufficient supplies of reference materials, laboratory and workshop equipment, and access to ICT facilities" (p.49).

Any higher education cannot play its role without the quality of education, because the quality of higher education is an important determinant of national competitiveness (WB, 2009). Thus, HEIs across the world are critically working on the quality assurance process to improve higher education quality (Green, 2014; Randheer, 2015). Though defining and measuring quality in higher education is certainly complex, sometimes it is easy to identify it from a multidimensional perspective, including teaching, research, staff-students' relationships, services, and facilities (Uka, 2014). Furthermore, other researchers, such as Hanaysha, Abdullah, and Warokka (2011) and Azam (2018), argue that quality education can come from the

combination of a well-organized learning process and the provision of better-quality service to stakeholders, particularly students.

Many earlier studies investigated the nexus between service quality and students' satisfaction in higher education institutions. For example, a study conducted by Baniya (2016) in Nepal, Hanaysha *et al.* (2011) in Malaysia, and Kara *et al.* (2016) in Kenya found a significant and positive correlation between facets of service quality and students' satisfaction. Although these empirical studies showed the link between higher education service quality and students' satisfaction, those studies didn't thoroughly show other internal stakeholders' perspectives on higher education service quality, areas that need further improvement, and how service quality affects students' academic performance. Studying the internal stakeholders' perspective, such as students, teachers, school management bodies, and administrative employees, towards higher education service quality is an important area of consideration to improve the university's service quality. In addition, dealing with how service quality affects the academic performance of the learner is also an important area of investigation because the students' academic performance is one of the key indicators of quality education.

Some other prior international empirical studies have also investigated the relationship between students' satisfaction with educational service quality and their academic performance. For example, Ahmed *et al.* (2010) in Pakistan examined how educational service quality affects students' academic performance in both public and private universities and found that students' satisfaction with the educational service quality positively influences students' academic performance. In this study, Ahmed *et al.* (2010) concluded that better service quality can enhance students' academic performance because better service quality is associated with students' satisfaction, which in turn leads to better academic performance.

Similarly, Aung and Ye (n.d.) in Myanmar studied the relationship between the levels of students' satisfaction with educational service quality and students' academic performance and found a positive correlation between the levels of students' satisfaction with educational service quality and their academic performance. In addition, Banahene, Kraa, and Kasu (2018) investigated the impact of Higher Education Performance [HEdPERF] (one of the educational service quality models) on students' satisfaction and academic performance in Ghanaian universities, mediating the role of attitude towards learning, and found that HEdPERF has positive and statistically significant relationships with students' satisfaction, attitude towards learning, and academic performance. Attitude towards learning also has a positive and statistically significant relationship with students' satisfaction and academic performance. As regards the mediation effect, an attitude towards learning partially mediates between HEdPERF on the one hand and students' satisfaction and academic performance on the other.

In addition, Mihanović, Batinić, and Pavičić (2016) have studied the link between students' satisfaction with university service quality and student performances. In their study, they confirmed that the students' satisfaction with university contents, university bodies and services, teaching, teaching methods, and academic reputation affects their satisfaction, which in turn affects their academic performance. In Armenian higher education, other researchers, such as Martirosyan, Saxon, and Wanjohi (2014), studied students' satisfaction with service quality and academic performance by using the student satisfaction inventory [SSI] and identified that Armenian students who reported better satisfaction with their overall college experience had achieved higher grade point averages than those with low satisfaction. And it is intuitive that higher academic performance would lead to improved retention and college outcomes.

However, the above-mentioned related empirical studies conducted by Ahemd *et al.* (2010), Aung and Ye (n.d.), Banahene *et al.* (2018), Mihanović *et al.* (2016), and Martirosya *et al.* (2014) didn't show which dimensions of service quality are highly correlated with students' academic performance via the mediating role of students' satisfaction and to what extent students' satisfaction with the facets of educational service quality affects students' academic performance. Investigating which dimension of service quality is highly correlated with students' academic performance makes it imperative to indicate the service quality variables that highly influence the academic performance of the pupil. On top of that, examining to what extent students' satisfaction with the facets of service quality predicts students' academic performance is also important in order to know the share of service quality influence on students' academic performance because academic performance is determined by many factors. Furthermore, all the above-mentioned studies were conducted abroad, even though there are many local-related studies that have been conducted on quality education and its management, quality assurance, and service quality in Ethiopian higher education.

Regarding Ethiopian higher education quality, many studies investigated the issue of quality education and its management and quality assurance in Ethiopian higher education institutions (e.g., Biruk, 2014; Mulu, 2012; Tefera, 2014; Tefera, 2018; Rediet, 2014, 2015; Arega, 2016; Dawit, 2006; Melaku, 2008; Tesfaye and Kassahun, 2009; Abebaw and Aster, 2012; Abeya, 2014; Misgana, 2013; Ashcroft and Rayner, 2012; Eba, Tamiru, Hirpa, and Raghavendra, 2017). Besides, the other related study conducted by Kefelegn and Tigist (2019) examined determinant factors for the quality of higher education in the case of Ethiopian public universities.

In connection to the higher education quality service, most Ethiopian studies focused on stakeholders' perceptions of higher education service quality (e.g., Solomon, 2012; Solomon, Niekerk, and Jansen, 2014) and found that both academic staff's and students' perceptions of Ethiopian higher education service quality were very poor. Moreover, some other associated local studies have investigated Ethiopian higher education service quality and students' satisfaction. For example, Dawit and Nesredin (2017) examined the determinants of higher education student satisfaction by focusing on educational service quality at Dire Dawa University (one of the public universities in Ethiopia) and found that almost half of the students who are studying at Dire Dawa University are satisfied with the program diversity and alternative departments and dissatisfied with facility provision and health services in the university.

Similarly, Solomon, Niekerk, Jansen, and Müller (2018) studied students' satisfaction regarding service quality at six Ethiopian public universities, namely Hawassa University, Addis Ababa University, Dilla University, Wolaita Sodo University, MedaWolabo University, and Debre Markos University, and their research findings indicated that the majority of the elements that constitute attributes of service quality were perceived by students to be very poor. Other researchers, like Abeya and Bedasa (2018), have conducted a comparative study on students' satisfaction and its determinants in two Eastern Ethiopian universities, namely, Jigjiga University and Dire Dawa University. Their study findings generally identified that variables like institutional effectiveness, academic support, advice and counseling, effectiveness, and admission, enrolment and admission, enrollment, and registration effectiveness had significantly affected the satisfaction of students in both universities.

Other empirical studies have examined the relationship between education service quality and students' satisfaction in Ethiopian private higher education institutions (e.g., Girum, 2017; Gelilawit, 2019; Semira, 2019). Girum (2017) examined the effect of service quality and students' satisfaction in Ethiopian private higher education institutions in Addis Ababa using the Higher Education Performance [HEdPERF] model and found that five dimensions of service quality have a positive and significant relationship with student satisfaction: academic aspects, non-academic aspects, reputation, and access have a strong and positive correlation with satisfaction, while program issues and access have a weak positive correlation with student satisfaction.

Gelilawit (2019) explored the effect of service quality and students' satisfaction in Ethiopian private higher education institutions in Addis Ababa using the Service Performance [SERVPERF] model fit and found that even though all of the service quality dimensions affect students' satisfaction, the requisite service quality dimensions are very significant to the students. In the same title, Semira (2019) also studied the effect of service quality on students' satisfaction in the case of private higher education institutions in Addis Ababa using the Higher Education Performance [HEdPERF] model and indicated that non-academic aspects, program issues, reputation, and access proved to be very essential and were predictors of students' satisfaction, whereas academic aspects had a positive but no significant influence on students' satisfaction.

On the other hand, some other domestic empirical studies have also examined the determinants of students' academic achievement in higher education institutions (e.g., Dejen and Muluken, 2014; Moges, 2017; Yeshimebrat, Alemayehu, and Firew, 2013). Dejen and Muluken (2014) examined the determinants of academic performance of second-year regular students in the case of Addis Ababa University School of Commerce and indicated that study hours,

mothers' educational level, teachers' commitment, standard of lectures and presentations, assessment and marking criteria, and course interest have positive effects on the academic achievement of students. Similarly, at Arba Minch University, Moges (2017) also investigated the determinants of academic performance of undergraduate students and identified students' former academic background, gender, studying hours, and the students' behavior toward taking alcoholic drugs and chat as determinants of students' academic achievement. In addition, Yeshimebrat *et al.* (2013) studied factors that affect female students' academic achievement at Bahir Dar University and indicated that the students' personal related factors, university environment, and academic related factors are factors that affect female students' academic achievement.

In general, as we can notice from the above-reviewed empirical studies, both from abroad and locally, many prior research works have been heavily focused on higher education service quality and students' satisfaction. As the researcher argued earlier, past empirical studies have given low attention to higher education service quality and students' academic performance. The main aim of this research is therefore to examine the relationship between education service quality and students' academic performance in Ethiopian public universities located in Southern Part of Ethiopia via the mediating role of students' satisfaction. To achieve this objective, the following four basic research questions guide the study:

#### **1.4. Basic Research Questions**

1. What are internal stakeholder perceptions of educational service quality in Ethiopian public universities?
  - 1.1 Is there a statistically significant perception difference between male and female students regarding the facets of educational service quality?

- 1.2 Is there a statistically significant perception difference between male and female students regarding the overall educational service quality?
- 1.3 How does educational service quality affect students' learning, including their academic performance in Ethiopian public higher education institutions?
2. What is the relationship between facets educational service quality and students' satisfaction?
  - 2.1 Which dimensions of educational service quality is highly correlated with students' satisfaction?
  - 2.2 To extent what does educational service quality predict students' satisfaction?
3. Is there a statistically significant effect of educational service quality on students' academic performance via their satisfaction?
  - 3.1 To what extent does educational service quality predict students' academic performance via their satisfaction?
4. Which dimensions of educational service quality are highly correlated with students' academic performance through the mediating role of their satisfaction?

## **1.5. Research Hypothesis**

In addition to the aforementioned research questions, seven alternative hypotheses (HA) are also designed to better determine which dimensions of educational service quality highly influence students' academic performance via the mediating role of student satisfaction.

HA1. Academic service quality significantly affects students' academic performance via their satisfaction

HA2. Administrative service quality significantly affects students' academic performance via their satisfaction

HA3. Quality of general infrastructure significantly affects students' academic performance via their satisfaction

HA4. Quality of support services and facilities significantly affects students' academic performance via their satisfaction

HA5. Quality of students' welfare services significantly affects students' academic performance via their satisfaction

HA6. University access to student significantly affects students' academic performance via their satisfaction

HA7. University reputation significantly affects students' academic performance via their satisfaction

## **1.6 Objectives of the Study**

### **1.6.1 General Objective**

The main purpose of this study is to examine the relationship between educational service and students' academic performance in Ethiopian public universities via the mediating role of their satisfaction.

### **1.6.2 Specific Objectives**

The specific objectives of this study are to:

1. Examine stakeholder perceptions of education service quality in Ethiopian universities.
2. Identify a statistically significant perception difference between male and female students regarding education service quality.
3. Explore how does education service quality affect students' academic performance in Ethiopian higher education.

4. Determine the relationship between facets of education service quality and students' satisfaction.
5. Examine the effect of educational service quality on students' academic performance via their satisfaction?
6. Identify which dimensions of educational service quality are highly correlated with students' academic performance via the mediating role of their satisfaction.

## **1.7 Conceptual Framework of the Study**

The conceptual framework for the present study is designed based on the literature reviewed on higher education service quality and its role in students' academic achievement. As a result, the review incorporates the conceptual belief that educational service quality influences students' academic performance. Studies have noted that better education service quality leads to students' satisfaction, and their satisfaction with better service quality improves academic achievement. For example, Ahmed *et al.* (2010), in their empirical study, argued that students who receive better service quality can perform better academically as compared with students who experience or get low service. Dhaqane and Afrah (2016) pointed out that students' satisfaction with service quality promotes both academic achievement and retention in the university. Martin and Tracey (2001) and Jelena (n.d.) contended that highly satisfied students in educational service quality are achievers who strive to achieve and are energetic to work and learn effectively because satisfaction builds enthusiasm in students, and the student finds his or her learning to be more engaging and fruitful.

Prior studies have used various models to study higher education service quality. Most abroad studies have used the service quality [SERQUAL] model to deal with higher education service quality. For example, Baniya (2016) employed the SERQUAL model in dealing with the

relationship between perceptions of service quality and students' satisfaction. Another most frequently cited researchers, Hanaysha *et al.* (2011), have used the SERQUAL model to examine the relationship between service quality and students' satisfaction. Similarly, Ali and Mohamed (2014), in their study, also used the SERQUAL model to examine the service quality provided by HEIs in Somalia and its impact on student satisfaction. In addition, from local studies, for example, Solomon (2012) used the SERQUAL model to examine stakeholders' perceptions of Ethiopian higher education service quality.

The SERVQUAL model focuses on the philosophy that customers typically assess service quality by comparing the service they have actually experienced (the perceived service quality) with the service they desire or expect (their expected service quality). If the perceived value is greater than expectations, then the perceived quality is high, and if the perceived value is smaller than expected, then it shows the perceived quality is low. The SERVQUAL model consisted of five dimensions, viz., tangibles, reliability, responsiveness, assurance, and empathy, and included a total of 22 items (Parasuraman *et al.*, 1988).

Other researchers have employed higher education performance [HEdPERFR] and Service performance [SERVPERF] to examine higher education service quality. For instance, Adedamola, Modupe, and Ayodele (2016) used the SERPFER model to examine students' perceptions of the quality of classrooms in Nigerian private universities. Similarly, Manea and Iatagan (2015) also employed the SERPERF model to investigate the perceptions of PhD students regarding the quality of educational services in Romania. Karatas, Alci, Balyer, and Bademcioglu (2016), in their study, used the HEdPERF model to examine students' perceptions of service quality dimensions in higher education. Mang'unyi (2014) also employed the HEdPERF model to investigate the perceived service quality and students' satisfaction in

Kenyan private universities. Among past local studies, Girum (2017) and Semira (2019) have employed the Higher Education Performance [HEdPERF] model, and Gelilawit (2019) used the Service Performance [SERPERF] model to examine the association between service quality and students' satisfaction.

The SERVPERF model is another form of measuring service quality that was developed by Cronin and Taylor (1992). The SERVPERF is a modified SERVQUAL instrument that only measures customer perceptions rather than their expectations. It looks at the attributes of the 5 dimensions above, worded the same as SERVQUAL, but does not repeat the set of statements as expectation items. The authors of this model argue that service quality should be defined simply based on perceptions, because SERVQUAL's model thinks about customers's expectations before experiencing the service, which is difficult to conceptualize.

However, the Higher Education Performance [HEdPERF] developed by Abdullah (2006) is intended to measure higher education service quality. This model was originally designed by adapting Cronin and Taylor's (1992) SERPERF model. The author of this model contended that the use of existing measures as a means of measuring service quality throughout the marketing sector may have been tested with some degree of success, but this may not be the case for other service sectors, particularly higher education. The HEdPERF model has five distinct factors, namely, non-academic aspects, academic aspects, reputation, access, and program issues, and consists of 41 items.

Although prior studies abroad as well as local studies have employed various instruments to measure higher education service quality, in this study, a combination of different models was employed. As the researcher argued in the previous section, using a single model, either a generic service quality model or a service quality model mainly designed to measure higher

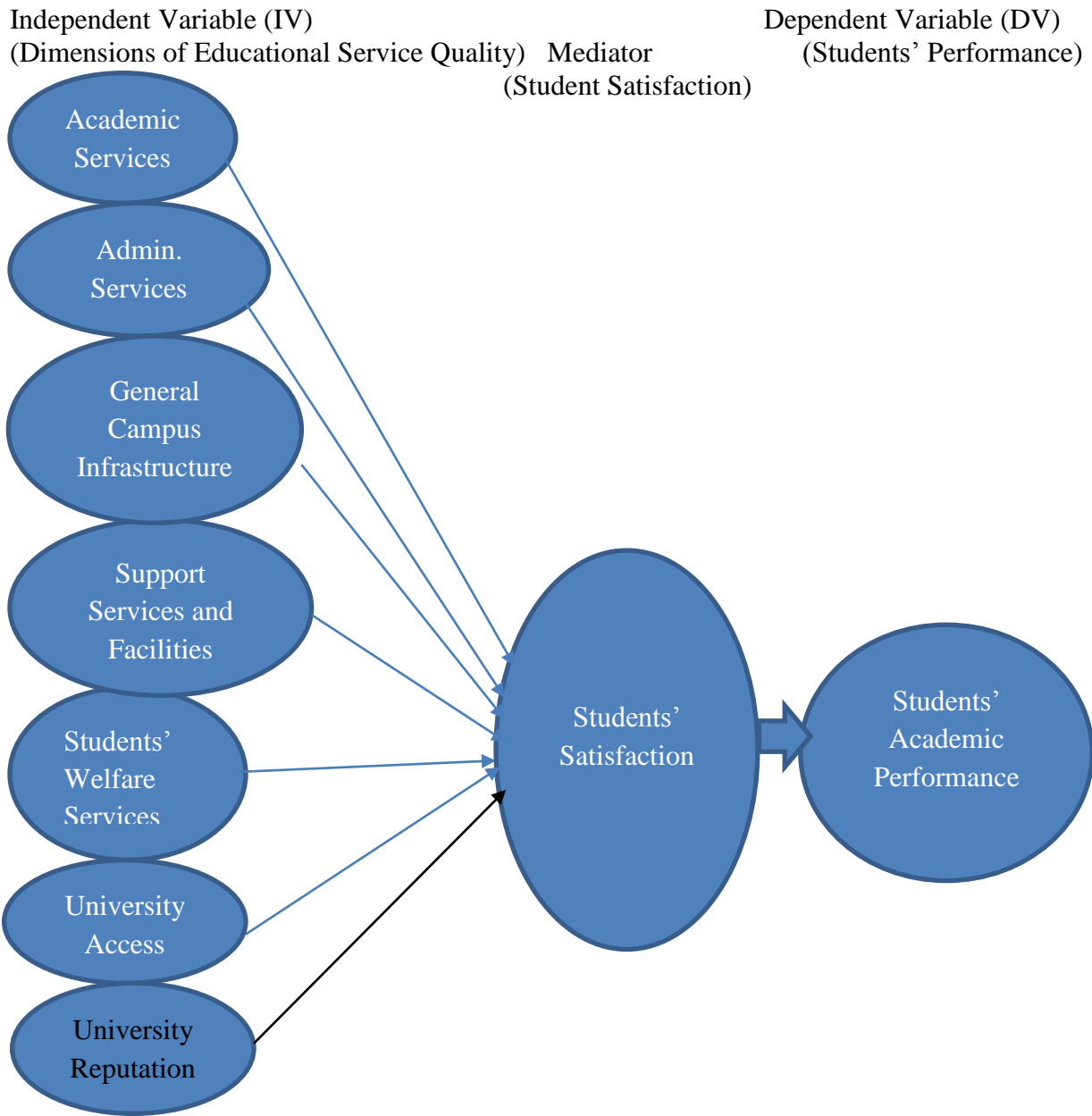
education, is not comprehensive and responsive enough to measure the Ethiopian higher education service quality context. Each generic as well as higher education service quality model consists of too few dimensions and items or constructs, which doesn't include all the basic services provided by Ethiopian universities. Hence, to measure the level of Ethiopian higher educational service quality, the researcher thoroughly reviewed service quality models designed and empirically tested in a higher education context. For example, the researcher intensively reviewed Abdulla's (2006b) modified HEdPERF model, Annamdevula and Bellamkonda's (2012) Higher Education Quality [HiEdQUAL] model, Teeroovengadum *et al.*'s (2016) Higher Education Service Quality [HESQUAL] model, and Kara *et al.*'s (2016) eleven higher education service quality dimensions.

During the intensive reviewing processes, the seven main higher education service quality dimensions and nine sub-dimensions emerged. These include: academic services (academic staff's attitude and behavior, academic staff's competence, academic facilities and resources, academic program issues, quality of instructional practices, and quality of library services); administrative services (administrative staff's attitude and behavior, quality of administrative processes and procedures); quality of general campus infrastructure; quality of support services and facilities; quality of students' welfare services; university access to students; and university reputation.

The researcher assumed that these newly emerged service quality dimensions are inclusive in their nature and that it would be better to examine Ethiopian higher education service quality. In this study, therefore, the relationship among the seven service quality facets and students' academic performance was studied through the mediating role of students' satisfaction. In the study, the seven main service quality dimensions and sub-dimensions,

namely, academic services, administrative services, program issues, general infrastructure, support services, access, and university reputation, are treated as independent variables [IV], students' satisfaction is considered a mediating variable [MV], and students' academic performance is treated as a dependent variable [DV]. The following Figure 1 shortly summarizes the conceptual framework of this study.

*Figure 1 Conceptual Framework of the Study*



*Source: Generated from Intensive Literature Review and Higher Education Service Quality Models*

***Description of the Conceptual Framework Variables:*** As it has been presented in the above figure, there are seven main dimensions and nine sub dimensions of education service quality developed to examine the Ethiopian higher education service quality. The variables that employed in the study, such as seven main facets of education service, students' satisfaction and academic performance are discussed here under:

Academic service quality highlights key attributes of academic staff, competence of academic staff and academic facilities (such as availability of experienced staff, positive attitude towards students, good communication with students, provision of efficient and courteous consultation service to students, and being able to provide regular feedback to students, availability of academic facilities such as supplies of text and reference books, laboratory and workshops equipment and access to ICT and so on (Abdullah, 2006b). While administrative or non-academic services refer to the duties and responsibilities carried out by non-academic staff members (for example, prompt in dealing with students' complaints, providing service within reasonable time frame, maintaining accurate and retrievable records of their students, providing caring an individualized attention to students etc (Abdullah, 2006b;Teeroovengadam, *et al.*, 2016).

The quality of general campus infrastructure, describes the general physical environment of the university like adequate water supply, sufficient number of toilets, adequate electric supply, accessible internet services, suitable buildings and facilities for students' with disability, availability of transportation services to students, and so forth (Teeroovengadam, *et al.*, 2016;Annamdevula and Bellamkonda, 2012).On the other hand, the quality of support services and facilities include sufficient sports and recreation facilities, counseling services, adequacy of cafeteria infrastructure, adequacy of medical facilities, quality of dormitory services, adequacy of

photocopy and printing facilities, availability of extra-curricular activities and so forth (Kara, *et al.*, 2016). The constructs or variables that explaining the quality of students' welfare services encompass adequacy of support mechanism for needy students, promoting students' union, involving students 'representatives in decision making, providing equal treatment and respect to students and providing enough security services to students (Kara, *et al.*, 2016).

The university access dimension constructs are associated with approachability, ease of contact, availability and convenience. It encompasses services like students' association, simple information exchange to students via telephone, email and so on (Abdullah, 2006b). Finally, the seventh dimension is university reputation. It is loaded with items suggesting the importance of higher learning institutions in projecting a professional image such as easily employable graduates, ideal campus location/layout, students are given a fair amount of freedom and so forth (Abdullah, 2006b).

In this study, students' satisfaction plays a mediating role between education service quality and students' academic performance. Students' satisfaction in higher education is a multidimensional process which is influenced by different factors (Weerasinghe and Dedunu, 2017). Even though students' satisfaction is influenced by various factors, most scholars define and examine students' satisfaction in light of the services provided to them. According to the most frequently cited definition, student satisfaction refers to a psychological state of happiness as a result of performance evaluation of the service attributes in the context of higher education (Sultan and Wong, 2012). Another continuous variable in this study is academic performance. The students' academic performance is one of the indicators of quality education. Academic performance defined as a measurable index depicts a students' cognitive, affective and psychomotor domains in an educational setting (Kpolovie, *et al.*, 2014).

## **1.8 Significance of the Study**

The significance of the study refers to the relevance of the research in improving the knowledge base of a profession and its contribution towards evidence-based practice (Polit and Beck, 2004). The main purpose of this study is to investigate the relationship between educational service quality and students' academic performance in Ethiopian public higher education institutions. The researcher, thus, believes that the findings of this study will provide pertinent and timely information for various groups of people as well as an educational organization.

As the researcher mentioned in the earlier sections, there are many local empirical studies that have been conducted in quality education, educational service quality and students' satisfaction in both private as well as public Ethiopian higher education institutions. However, little is known about the role of educational service quality on students' academic achievement. Therefore, the author of this research believes that the findings of this paper create awareness to higher education leaders and other academic as well as administrative staff members about the role of educational service quality on students' academic performance and how educational service quality relates to students' academic performance.

In addition, the conclusion of this study is an imperative for higher education leaders to understand more about the Ethiopian higher education service quality status and to identify areas for further improvement in their respective institution. On top of that, the researcher of this paper hopes that the findings of this study also benefit university leaders because the findings may indicate which dimensions of educational service quality is highly correlated with students' academic performance. Hence, higher education leaders, perhaps work aggressively on the service dimensions that boost students' academic performance.

The researcher of this study also hopes that the findings of the study may provide vital and timely information to educational planners, policy makers, decision makers and educational experts about the role of better education service quality in improving students' academic achievement. They may use the findings of this study as input for their strategic planning. Not only that, but also educational planners, policy makers, decision makers and educational experts may also learn the status of Ethiopian higher education service quality and how education service quality affects students' learning particularly their academic performance.

Finally, the present study is significant for the existing body of knowledge and future researchers who are interested to conduct their study on related research topics. As far as my readings concerned, both national and international prior studies focused on the relationship between service quality and students' satisfaction. Thus, the current study contributes a lot to the existing body of knowledge in showing how education service quality affects students' academic achievement. In addition, the researcher of this study believes that this study will benefit other researchers and scholars who want to conduct research in the same or related topic in greater depth and to learn more about the function of educational service quality on students' academic performance.

## **1.9 Delimitation of the Study**

Delimitations describe the scope of the study or establish parameters or limits of the study. The primary purpose of this study was to investigate the relationship between education service quality and students' academic performance in Ethiopian public universities through the mediating role of students' satisfaction. In the country, there are government and private higher education institutions. To make the research process more manageable, this study was delimited to Ethiopian government or public higher education only. Among Ethiopian Public Higher

Education Institutions [EPHEIs], the study particularly, focuses public universities that located in the Southern part of Ethiopia. The target population include all ten higher education institutions that located in the Southern part of Ethiopia, Graduating Class [GC] students, all university instructors who have been teaching in higher education, university leaders who have been working in both academic and administrative wings.

In the study, the relationship among three variables such as educational service quality, students' satisfaction and students' academic performance were studied. Although many variables could influence students' academic performance, some selected variables were considered in the study. The selection of study variables was based on the review of comparable empirical studies, intensive literature reviews, and educational policy directives.

Accordingly, the facets of educational service quality, such as academic service quality, non-academic service quality, quality of general infrastructure, quality of support services and facilities, quality of students' welfare services, university access to students and finally university reputation were served as independent variables. The students' academic performance was considered as dependent variable. Besides, students' satisfaction with educational service quality played role a mediating role in the study.

In the present study, a mixed research approach with convergent parallel design was used because it allows the researcher to merge the quantitative and qualitative to compare or relate the quantitative findings as a thought of (Creswell, 2014). In addition, mixed research method provides comprehensive evidence for studying a research problem than either quantitative or qualitative research alone (Creswell, 2012). In this study; therefore, equal emphasis was given to both quantitative and qualitative research approach.

## **1.10 Limitations of the Study**

Limitations are any aspects of factors that influence the study and are out of the researcher's control. Any research work has its own limitations. There are several limitations that have influenced the current study. The researcher defended his research proposal at the end of the first semester of the academic year 2015E.C. Due to that reason; the researcher couldn't find available respondents for the study, particularly students. Many students were too busy doing assignments and reading for final examinations. The researcher couldn't collect the data immediately after defending his research proposal. This situation directly restricted the researcher from collecting relevant data on time from study subjects. Hence, the researcher and his research assistants were waiting until the study subjects were able to participate in the study. This is because internal stakeholders' evaluation and feedback on higher education service quality is imperative to pinpoint an institution's strengths and identify areas for improvement. In addition, measuring higher educational service quality from internal stakeholders' perspectives is one of the most important elements to assure the quality of higher education. The existing literature also lacks a description of the role of educational service quality on student academic performance, particularly in the Ethiopian higher education context, which is the focus of current research. However, upon completion of the students' final examination, the researcher successfully collected both qualitative and quantitative data from the students.

In some sampled universities, the researcher faced challenges in getting the real data from the study participants, principally university leaders. Since the researchers' study is mainly related to educational service quality, the study participants in some sampled universities considered the research an Ethiopian Ministry of Education study and attempted to hide the reality on the ground. When the researcher and his research assistants appear in those sample

universities, individuals who hide real information inform us not to contact individuals who provide wrong information about their institution. The respondents' dynamic behavior somewhat influenced the researcher not to collect real information about the quality of the sample university's educational services. However, attempts were made to gather real data from different groups of participants via triangulating data.

Another limitation of the study is time constraints. The researcher conducted this study while writing publishable articles. Since both writings, such as Ph.D. final dissertation research and publishable articles, demanded more time to write, the researcher faced time constraints to manage these two critical tasks. Although time constraints have influenced the researchers' work plan, the researcher used two shifts (day and night) to successfully complete the tasks.

The researcher collected a large amount of data from interviews and focus group participants. The large volume of qualitative data saturation has influenced the researcher to distinguish relevant data that is directly related to the present study focus from irrelevant ones. The researcher transcribed more than two hundred twenty (220) pages of interview and focus group data. It was not easy for the researcher to identify related ideas, merge related ideas together, and create themes from interview and focus group transcripts. Consequently, there could be the missing of relevant information that is to be included in this final dissertation work. However, the researcher tried his best not to miss relevant data and bring that data to the major research paper through re-reading, coding, and coloring the interview and focus group transcripts.

In the existing literature, many prior studies have been conducted on the link between service quality and students' satisfaction. However, there is a lack of prior research studies on the relationship between educational service quality, students' satisfaction, and academic

performance. The prior research studies are important to form the basis for the literature review and help lay a foundation for understanding the research problem that the researcher is investigating. In order to address the problem associated with a lack of prior studies on the topic, the researcher had to access pertinent research materials from well-known databases such as Science Direct, Elsevier, EBSCO, Project Muse, Springer Link, SAGE Journals, and the Francis and Taylor Group.

In this study, the relationship between education service quality and students' academic performance was conducted in public universities located in the Southern part of Ethiopia. The findings and conclusions of the study may not be generalizable to all Ethiopian public universities. However, the study provides pertinent information about the educational service quality in Ethiopian higher education and its indirect effect on students' academic performance.

### **1.11 Operational Definition of Key Terms**

**Academic Performance:** according to this study, refers to students' successful performance in academic knowledge and skills and that reflected in their Grade Point Average [GPA].

**Educational Service Quality:** in this study, educational service quality is described as a measurement of how well higher education institutions provide different services to students in order to enhance their learning. Although, there are many services that provided by university to students, the present study mainly focuses on seven services that provided by universities to students (viz., academic services, administrative services, general campus infrastructure, support services, welfare services, access and university reputation).

**Higher Education:** in this study, higher education is explained as tertiary level education that imparts in-depth knowledge and understanding to students in order to advance them to new frontiers of knowledge in the different fields of the study.

**Higher Education Performance (HEdPERF):** in this study, HEdPERF refers to an instrument that developed by Abdullah (2006a) to measure higher education service quality.

**Higher Education Quality (HiEDQUAL):** according to this study, HiEDQUAL refers to an instrument that developed by Annamdevula and Bellamkonda's (2012) to measure higher education service quality.

**Higher Education Service Quality (HESQUAL):** according to this study, HESQUAL refers to an instrument that developed by Teeroovengadum, *et al.* (2016) to measure higher education service quality.

**Internal Stakeholders:** in this study, internal stakeholders of the education organization refer to individuals who are working or learning in the institution. The internal stakeholders of educational organization include: students, teachers, university management bodies, and administrative employees.

**Students' Satisfaction:** according to this study, students' satisfaction explained as a short-term attitude resulting from an evaluation of students' educational experience, services and facilities.

## **1.12 Organization of the Study**

This research paper is composed into five chapters in its main body. The first chapter is an introductory part which deals with the general framework of the study. The second chapter is all about review of related literature and chapter three deals with the methodology of the study such as research approach, research design, subject of the study, sources of data, data gathering tool/instrument, sample size and sampling technique, data gathering procedure and method of data analysis. The fourth chapter tried to deal with data presentation, interpretation and analysis. Finally, chapter five is presenting the summary, conclusion and recommendations.

## CHAPTER TWO

### 2. REVIEW OF RELATED LITERATURE

#### 2.1 Introduction

This chapter deals with the applicable literature that pertaining to the present study. The review mainly highlights studies of educational service quality and students' academic performance within the higher education institutions, with the aim of assessing students' perspective towards Ethiopian higher education service quality and its nexus students' academic achievement. The chapter is divided into seven main topics and sixteen sub sections.

The beginning part of this chapter deals with how service features conceived in higher education, higher education as a service sector, marketization in higher education, debate on whether students as customer or not in higher education and conceptualizing higher education quality. The later topics and sub topics present the meaning and methods of measuring service quality in both market sectors and in the higher education context. Following this, the review tries to deals with the meaning of students' academic performance including its measurement and some earlier empirical studies that conducted on students' academic performance are presented. Finally, this chapter deals with international and national empirical studies that have been conducted on educational service quality and students' satisfaction and students' academic performance.

#### 2.2 How Service Features Conceived in Higher Education?

In the literature, the term 'service' can be seen, conceived and defined in different ways by different scholars. This part deals with how various researchers view service in general and higher education service attribute in particular. According to Jallatand Wood (2005) and Eskicumal, *et al.* (2015) unlike tangible products, a service is a complex concept and has

fragmented definitions. For instance, Rathmell (1966) and Zeithaml, *et al.* (2006) in their research paper describe services as deeds, processes and performances. Another researcher like Lovelock (2000) defined service as any activity that provided by one party to another and did not result in any ownership and as economic activity that can create value and benefits for customers.

Likewise, according to Kotler and Keller (2006) a service is an act or performance that one party can offer to another that it is essentially intangible and does not result in the ownership of anything. Although different scholars have diverse opinions concerning the term "service", various definitions recognize that services are intangible, interactive, and experiential and do not involve the transfer of ownership (Kotler and Armstrong, 2006).

As service sector, a university in general may offer explicit as well as implicit services. The explicit services include the quality and standard of teaching, the knowledge and skills of the staff, availability of teachers, work burden and teaching styles including presentations and tutorials and many more. Conversely, the implicit side includes the access to teachers, concerns and behaviors of teachers and competencies. Students are satisfied when both the implicit and explicit services are offered professionally (Douglas, Douglas and Barnes, 2006). In this study, both explicit and implicit services that are provided by the university were examine examined from internal stakeholders' perspectives and the influence of those services on students' satisfaction and their academic performance was also thoroughly investigated.

### **2.2.1 What Qualities Differentiate Services from Goods?**

An investigation of the characteristics of services is useful to differentiate services from goods. In the literature, there are five major natures of services, viz. intangibility, inseparability, heterogeneity, perishability, no transfer of ownership (Zeithaml, *et al.*, 1985) and many scholars

agreed that these characteristics differentiate services from goods (e.g., Parasuraman, *et al.*, 1988; Fisk, *et al.*, 1993). The following information shows the description of each nature of services that differentiate from goods.

**2.2.1.1 Intangibility:** The most commonly cited characteristic of services is intangibility, because services are performances or actions rather than objects, whereas we can sense tangible goods because they are tangible and material. Thus, intangibility is an important property distinguishing services from goods according to many service researchers (Goldkuhl and Röstlinger, 2000; Singh, n.d). In education, the feature of intangibility expresses that the knowledge received during courses is not tangible, this knowledge could only be understood and experienced, even if teaching has tangible parts including e.g. the educational environment, applied course materials, etc (Surman and Tóth, 2019; Li and Mike, 1998). For example, when we pay fees for a semester in the university, we are paying for the benefits of deriving knowledge, skills and education which is delivered to us by teachers and hence, teaching is an intangible service (Singh,n.d). In addition, as described by Clewes (2003) teaching is classified as highly intangible, because its services are more of actions or performances rather than objects and they cannot be seen, felt or tasted in the same way that one can sense a tangible good. Therefore, intangibility is a key determinant of whether an offering is or is not a service (Wolak, Kalafatis and Harris, 1998; Singh, n.d).

**2.2.1.2 Inseparability:** refers to the service production and consumption occur simultaneously and hence, they were perceived as inseparable (Say, 1836). Additionally, Berry (1980) stated that “simultaneous production and consumption” means that the service provider is often physically present when consumption takes place. Common examples of inseparable services are education, consultations of physicians, or concerts and so on.

**2.2.1.3 Heterogeneity:** reflects that no two services are precisely alike. The quality and essence of service can vary from customer to customer and from producer to producer and from day to day. Heterogeneity poses a challenge of maintaining consistent quality as behavior and performance vary not only among service workers but even between the same employee's interactions from one customer to another. Service performance from the same individual may also differ (Jan, 2012). Therefore, it is very difficult to standardize the service that consumers receive. For example, this is a particular problem in a labor-intensive industry such as education as many different employees will be in contact with an individual student (Clewes, 2003). Even at course level, there is heterogeneity, for example, variety of courses, examples, notes, handouts, assessment methods, exercises, practices and its participants, etc (Surman and Tóth, 2019).

**2.2.1.4 Perishability:** *the* notion of perishability refers to the fact that services cannot be saved, stored, resold, or returned. Since services are deeds, performances or act whose production and consumption takes place simultaneously, they tend to perish in the absence of consumption, whereas goods can be stored and sold at a later date in the absence of a customer (Goldkuhl and Röstlinger, 2000). In short, perishability is strongly connected to intangibility by emphasizing that the educational service cannot be stored (Surman and Tóth, 2019).

**2.2.1.5 No Transfer of Ownership:** when we buy a product, we become its owner-be it a pen, book, shirt, TV or Car. In the case of a service, we may pay for its use, but we never own it. In addition, in case of a service, the payment is not for purchase, but only for the use or access and transfer of ownership does not take place (Singh,n.d).In general, the following Table 5 shortly summarizes the difference between goods and services.

*Table 5 The Differences between Physical Goods and Services*

<i>SN</i>	<i>Physical Goods</i>	<i>Services</i>
1	A thing	An activity or process
2	Tangible	Intangible
3	Homogenous	Heterogeneous
4	Production and distribution are separated from consumption	Production, distribution and consumption are simultaneous process
5	Core value produced in factory	Core value produced in buyer-seller interaction
6	Customers do not participate in the production process	Customer may participate in production process
7	Can be kept in stock	Cannot be kept on stock
8	Transfer of ownership	No transfer of ownership

*\*Source: Adapted from Vargo and Lusch (2004)*

### **2.3 Does Higher Education Considered as a Service Sector?**

Most of the countries are now shifting their economies from manufacturing to services sector. Education sector is one of the most important sectors of economy (Kundi, *et al.*, 2014). Nowadays, thus, higher education sector is considered as a service industry because the sector possesses all the unique characteristics of services, such as, intangibility, inseparability, perishability, heterogeneity and lack of ownership (Gruber, Fub, Voss and Glaeser-Zikuda, 2010). Moreover, as stated in Anim and Mensah (2015) higher education is a part of service industry because the primary focus of tertiary institutions is to provide a quality learning experience to students and its secondary purpose is to meet the industry needs for skills and knowledge. Thus, higher education is one of the fast-expanding sectors worldwide to which increasing attention has been paid recently due to its significantly strengthening economic impacts and growing business-like features (Depkenet, *et al.*, 2019). It is, therefore, possible to apply findings from the services literature to the context of higher education (Voss and Gruber, 2006).

The higher education sector has been making notable changes in the recent past to make the quality of their services of a high standard. Even though universities are considered as non-business entities, they operate like a business where service quality is urgently sought for (Sokoli, Koren and Shala, 2019). Educational institutions are increasingly recognizing the importance of higher education as a service industry and placing greater emphasis to improve students' learning (Adinegara, and Putra, 2016). As a part of the industries, higher education such as university and college have to provide the best service quality to the students and it is essential to measure the quality of services (Chandra, et al., 2018; Sokoli, *et al.*, 2019).

## **2.4 Why Marketization in Higher Education?**

The concept of marketing has grown in importance for universities across the world from the 1990s onwards (Kotler and Fox, 1995). Accordingly, the higher education (HE) environment has been influenced by marketization. Marketization in HE refers to higher education institutions (HEIs) using marketing practices. Many factors have led to this approach including increased competition, decreased government funding, and the increased cost of education (Guilbault, 2016). Marketing of any product requires an understanding of the customer. This is also true in HE (Guilbault, 2016). The most detrimental effect of marketization in higher education is its ability to transform relationship between teachers and learners to a relationship between service provider and customer (Hana,2017). It led to a metaphor of student as customer. As a result, student satisfaction got importance like customer satisfaction. The performance of faculty is now judged mainly by students' feedback. Student feedback, whether positive or negative, helps HEIs to improve service quality (Robinson and Celuch, 2016). However, the concept of students as customer is not completely agreed upon in the education sector. The following sub section deals with an argument for and against students as customer in higher education.

### **2.4.1 Are Students Customer in Higher Education?**

Although marketing in higher education (HE) is well established, there is a continued debate on who is the customer in HEIs? In the literature, the student as customer model has its opponents and proponents. Hence, treating students as customers is open to debate in the academic environment. This sub section presents the scholars debate on whether students are considered as customer or not in HEIs?

At the one extreme, the supporters of students as customer in higher education raise different issues that lead to see student as customer in school. For example, Guilbault (2016) argue that the criticism of treating students like customers fails to differentiate between marketization and marketing of higher education. Likewise, DeShields, *et al.* (2005) claim that because of the fierce competition on the higher education market, HEIs should approach students as customers and make extra efforts to serve, attract and retain students. They posit that because teaching is a service as any other, students as customers are best placed to make the judgment about what they want to get from participating in higher education. Furthermore, Svensson and Wood (2007) attest those students are encouraged to voice their discontent if they have problems with their studies and contend that surveys that look into what the students like and what they dislike about their university are frequent.

On the other continuum, the opponents of students as customer in higher education perspective, for example, Clayson and Haley (2005) argue that treating students as customers may free students from their responsibility of doing hard work for success. They further contend that handling students as customers may make teachers please their students even at the cost of compromising desired rigor. Edmundson (1997) adds that treating students as customer has resulted in a common behavior of floating in and out of classes with no commitment.

Others like Hussey and Smith (2010) applying the student-customer orientation metaphor to a HEI has additionally resulted in having turned teachers into salespeople who must accept that at least in principle the student as the customer is always right. Similarly, Bay and Daniel (2001) posited that if students are considered as customer in higher education, they may simply blame teachers in return for their failure. In addition, Marsh and Roche (2000) argue that if teachers dilute the content of course by looking students as customer and to make life easier and happy for them by showing unnecessary generosity, it will be counterproductive in the long run. And it will also kill the basic premise of raising the quality of education.

In general, although it is argumentative to conclude students as customer in higher education, researcher like Guilbault (2016) suggests that instead of continuing to debate whether students are customers, perhaps what needs to be considered is how to best treat them as customers (and not lose academic integrity). Guilbault (2016) further indicated that the view that students are not customers often comes from a simplified view of customers and research outside of the marketing discipline. The debate then might usefully be reframed and the implications of students as customers examined by marketing researchers using recent developments in the discipline.

In addition, Mark (2013) posited that the criticism of considering students as customers is based on outdated marketing approach. Service marketing now includes an aspect of co-creation of quality (Guilbault,2016), where customers contribute in the overall delivery of a service. In the same way, students participate in the service delivery. Contemporary view of a student as co-producer of quality education will not deteriorate the rigor required for students to excel (Guilbault, 2016). In the present project, I am not arguing that students are pure customer of higher education. However, as suggested by Guilbault (2016) the university should treat them

as primary stakeholder by not losing academic integrity so as to improve educational service quality and students' learning.

## **2.5 Conceptualizing Higher Education Quality**

The issue of quality has been the major focus of institutions and governments in the field of higher education since the last two decades (Okae-Adjei, 2016). However, quality in higher education is a multi-dimensional, multilevel, and dynamic concept that relates to the contextual settings of an educational model, to the institutional mission and objectives and to specific standards within a given system, institution, programme, or discipline (Sahito and Vaisanen, 2017). In addition, from a pragmatist standpoint, it is argued that no single construct of quality can fit all sectors and situations due to contextual factors and the perspectives of different stakeholders (Ansah, n.d).

Therefore, it is hardly possible to provide a single and universally agreed definition to the concept of quality in higher education. This is mainly because different segments of the stakeholders in higher education define the concept of quality in their own terms, interests and perspectives (Schindler, *et al.*, 2015). For instance, while discussing the quality of an HEI, students may focus on the facilities provided and the perceived usefulness of education for future employment, whereas students' parents may consider the achievements of their children. On the other hand, teachers may pay attention to the teaching-learning process, while the university management may give importance to the institution's achievements. Finally, employers may consider the competence of the institution's graduates (United Nations Education, Scientific and Cultural Organization [UNESCO], 2010).

In general, quality is a relative concept that means different things to different people. Each stakeholder has a different approach to defining quality and thus it is not possible to talk

about quality as a single concept. Any definition of quality must be defined in terms of the context in which it is used. In the case of HEIs, we should bear in mind that an institution may be of high quality in relation to one factor or in the perspective of a category of stakeholders, but of low quality in relation to another (UNESCO, 2010; Omidian and Nia, 2018). Moreover, universities are complex entities as they may have very different aims and sometimes conflicting, that is, the teaching and/ or research or the other community service or the technology transfer, so, each of these objectives could not have not only a different concept of quality, but a different measure (Mavil, 2013).

### **2.5.1 Five Ways of Thinking Higher Education Quality**

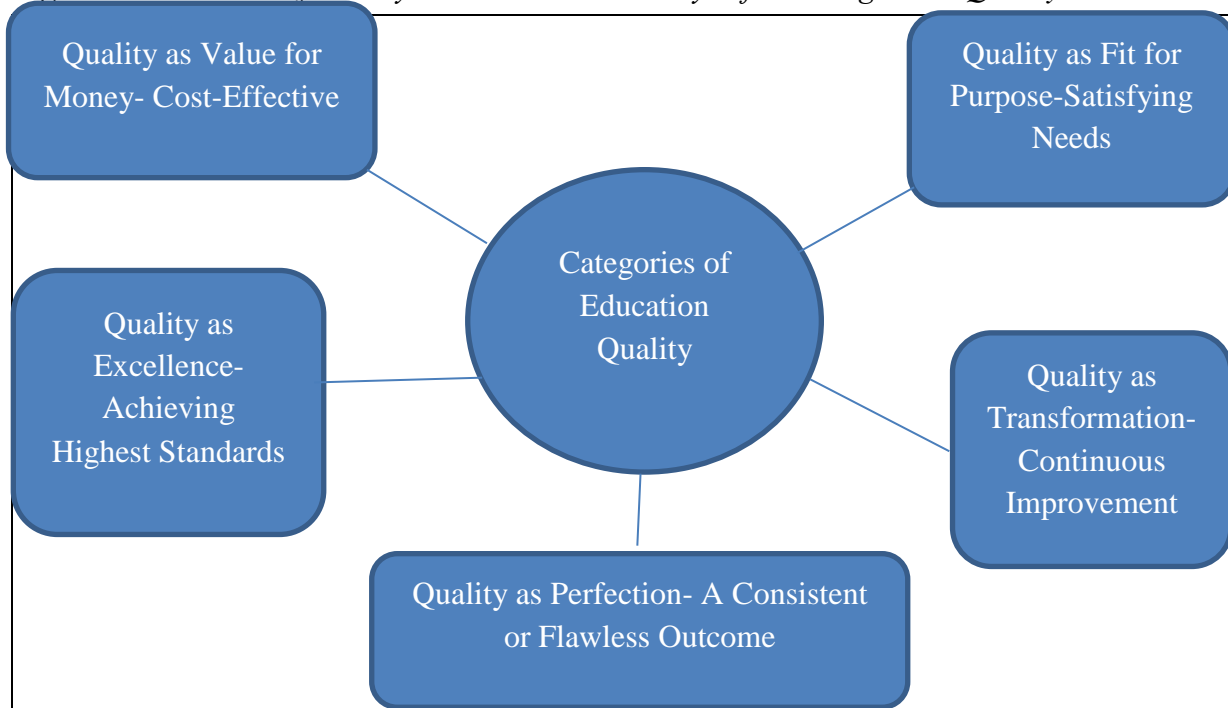
Based on a review of various attempts at defining quality in higher education, Harvey and Green (1993) proposed five “ways of thinking about quality”, rather than definitions. These are: quality as exceptional/excellence, quality as perfection or consistency, quality as fitness for purpose, quality as value for money and quality as transformation. The following information describes each way of thinking about quality according to Harvey and Green (1993).

The first view is quality as exceptional/excellence. This view refers to quality as exceptional with regard to the highest academic standards and excellence. By definition, this kind of quality is not attainable by all. The second one is quality as perfection or consistency approach. It looks at quality as a process to eliminate defects and aiming for a consistent or flawless outcome. In this view, quality can be attained by all by focusing on consistency (constantly improving and eliminating flaws).

The third ways of thinking about quality are quality as fitness for purpose and in this view, quality is measured by the level of fulfillment of a stated purpose, mission or goals either by an institution or an academic program; the exact meaning will vary depending on the actual

purpose envisioned. The fourth view is quality as value for money and the focus here is on the output per input ratio, with the aim of gaining more efficiency. In other words, this is similar to a return-on-investment approach. Quality is attained when a better or higher outcome can be achieved at the same cost, or if the cost can be decreased while the outcome level is maintained. Finally, quality as transformation view looks learning that is centered on the student; views quality as value-added and transformation and empowerment of a student through the learning process. In this scheme, quality is achieved when the learning proves transformative for the student. The following Figure 2 summarizes five ways of thinking about quality in higher education.

*Figure 2 Illustration of Harvey and Green’s Five Ways of Thinking about Quality in HE*



*\*Source: Adapted from Matei and Iwinska (2016)*

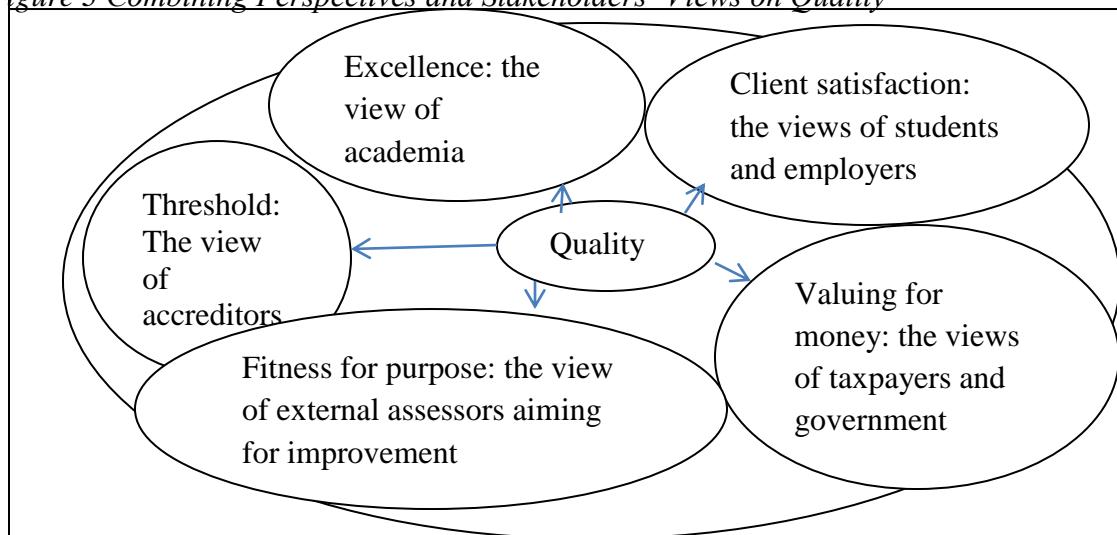
**Where; HE=Higher Education**

## 2.5.2 Other Ways to Think About Higher Education Quality

Another way by which quality in higher education can be understood and has been discussed in the literature concerns two additional aspects, namely the context and the stakeholders (Watty, 2003). The context aspect of higher education quality looks at specific elements of the process, such as quality of assessment, student intake, academic programs, teaching and learning or student experience. This way of looking at quality in higher education typically emphasizes quality-related problems such as outdated teaching methods or curricula, too big classes and too high student teacher ratios or lack of sufficient academic resources (Santiago, Tremblay, Basri and Arnal, 2008).

The second aspect of quality in higher education examines the stakeholders' perspective about the quality. It focuses on the premise that there is a diversity of perceptions regarding what quality of higher education is among different stakeholders such as policy makers, academics, students or employers as mentioned earlier (Santiago, *et al.*, 2008). The following Figure 3 describes the combined (context and stakeholders' perspectives) in thinking about higher education quality.

*Figure 3 Combining Perspectives and Stakeholders' Views on Quality*



*\*Source: Adapted from Matei and Iwinska (2016)*

## 2.6 How Service Quality Conceived in Higher Education?

In the market or business, service quality defined and conceived in different ways. Similarly, in the education sector, service quality is defined in different way by different scholars. In fact, the concept of service quality spreads from business sector to education sector (Ali and Mohamed, 2014; Kimani, Kagira and Kendi, 2011). In the literature, thus, there are various definitions of service quality and hence it is ambiguous to provide universally agreed definition to this term (Schneider and White, 2004).

In the business or market sectors, most service quality definitions are customer-centered. In the eyes of a customer, service quality is like beauty; it means that service quality has different meanings for different people and is person-dependent (Farahmandian, *et al.*, 2013). For instance, according to Brysland and Curry (2001) service quality refers to “providing something intangible in a way that pleases the consumer and that preferably gives some value to that customer”(p.391). Hoffman and Bateson (1997) defined service quality as an attitude shaped by a long-term overall evaluation of a service performance. Oakland (1993) emphasizes service quality as the extent to which a service meets customer’s needs or expectations. Accordingly, service quality can be defined as discrepancy between consumer service expectation and the perceived service, if the expectations were greater than the performance, the consumer satisfaction will not occur (Parasuraman *et al.*, 1985).

Similarly, Prakash and Mohanty (2012) define service quality as the customers' thought about the service they are getting better than expected. Zeithaml and Bitner (2002) further explain service quality as a focused evaluation that reflects the customer’s perception of specific dimensions of services provided. Service quality focuses on satisfying consumers’ needs during the service process, where the customers shape their perceptions about the delivered service

(Kong and Muthusamy, 2011). Though different scholars define the term service quality in different ways, Parasuraman, *et al.* (1988) attempted to provide somewhat comprehensive definition of service quality. They define it as the extent to which the service delivery level matches or meets customers' expectations (level of service the customer hopes to receive).

Similar with business sectors, in the higher education context, defining and measuring educational service quality has also turned to be a problematic (Eshghi, *et al.*, 2008). However, according to AL-Dulaimi (2016) educational service quality refers to quality services that universities and research institutes shall make available to students with a view to improve students' learning. Furthermore, Govender, *et al.* (2012) described educational service quality as a measurement of how well higher education institutions offer both academic and administrative services to students as primary stakeholders of educational institution. In this study, educational service quality was examined from how well Ethiopian public higher education institutions provide academic as well as administrative services to students in order to improve their learning.

### **2.6.1 Methods of Measuring Service Quality**

In the literature, there are various service quality measures that developed by different scholars in both business and education sectors. In business sectors, most authors (e.g., Parasuraman, *et al.*, 1985; 1988; 1991; Zeithaml and Bitner, 1996; 2002; Zeithaml, Berry and Gremler, 2006; 2008; 2009) describe service quality in terms of the gap between customer perception about service delivery and customer expectation, while the other service quality researchers describe service quality from the institutions' performance only perspective (e.g., Cronin and Taylor, 1992). Still others designed service quality measures from higher education context (Adullah, 2006a and 2006b; Teeroovengadum, *et al.*, 2016; Annamdevula and

Bellamkonda,2012). The following information shows the detail description of general service quality measures and higher education service separately.

### **2.6.1.1 General Service Quality Measures**

#### **2.6.1.1.1 Perceived Service Quality Model**

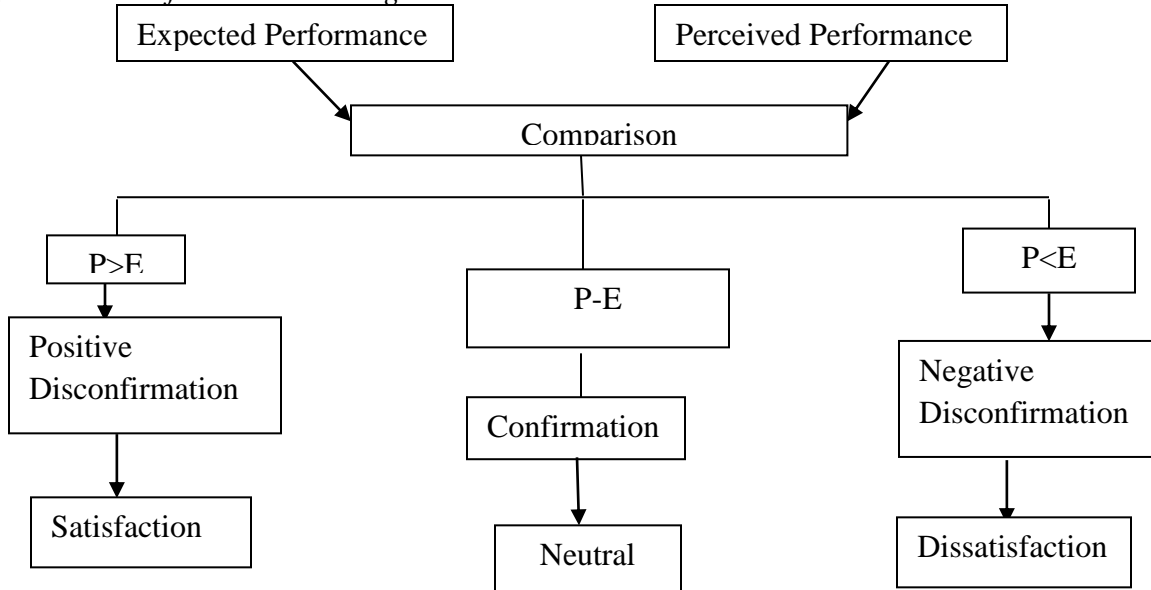
Gronroos (1982, 1984) was one of the first authors to conceptualize service quality with the development of the perceived service quality model. The model is based on the disconfirmation paradigm where the consumer or customer compares their service expectations with their perceptions about actual service experiencing from service provider. And hence, the quality of the service is determined by the outcome of this evaluation process. Traditionally, the disconfirmation paradigm has been used extensively to determine satisfaction. Not only that but it is also useful for the measurement of quality in services (Gronroos, 1982).

The paradigm is useful for understanding the relationship between a consumer's expectations and actual perceptions. The model utilizes four important constructs, viz., expectations (E), performance (P), disconfirmation and satisfaction (Parasuraman *et al.*, 1985). Expectations are predictions of performance and their comparison with perceived performance leads to three possible outcomes, such as confirmation, positive disconfirmation and negative disconfirmation. Confirmation occurs when actual performance is as expected, whereas positive disconfirmation occurs when actual performance is greater than expectations (Buttle, 1996).

On the other hand, negative disconfirmation happens actual performance less than expected. Positive disconfirmation produces satisfaction, whereas negative disconfirmation produces dissatisfaction. However, when the expected and perceived performance is the same, the customer is neither satisfied nor dissatisfied (Buttle, 1996). This paradigm has been studied and tested by many researchers and serves as the basis for the vast majority of satisfaction studies

(Appleton-Knapp and Krentler, 2006). The following Figure 4 summarizes the conception of disconfirmation paradigm.

Figure 4 Disconfirmation Paradigm Model



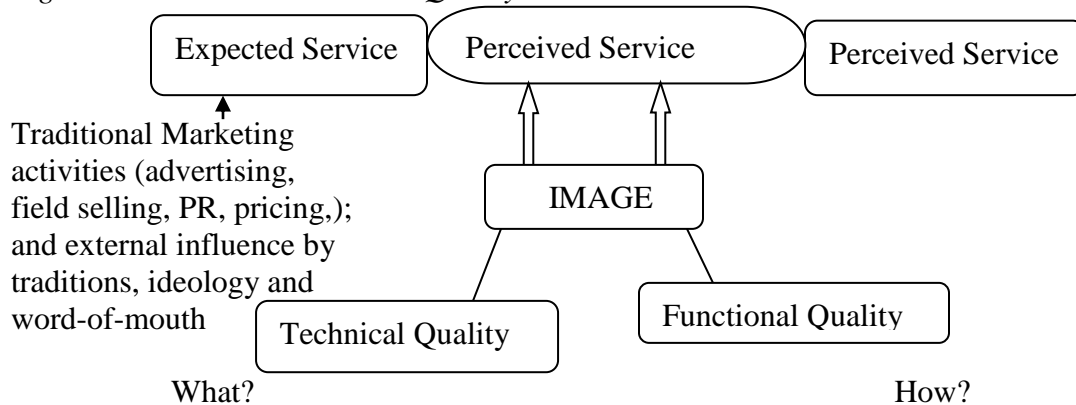
\*Source: Taken from Walker (1995)

Gronroos (1984) has discussed two dimensions of service quality, namely, technical and functional quality. The technical quality of service encounters concerning the outcome of a service (i.e. what is offered and received by customer). It relates what is provided during the service process (e.g. knowledge, tangibles and technical solutions). These are the relatively quantifiable aspects of the service, which the customer and supplier can easily measure (Gronroos, 1984). In other way, the functional quality of the service-delivery process concerned with the way in which the service is delivered (i.e. how is it offered and received). It concerned with how the service is provided and the interpersonal behaviors contributed by the service employee during the service encounter. It is more difficult to measure than technical quality (Gronroos, 1984).

Gronroos (2007) proposes that the gap between the expected and perceived service is vital for a service organization to keep this gap as small as possible. In addition, it is important

for managers to understand how the technical quality and functional quality of a service is interacted and how customers perceive these quality dimensions to ensure perceived service quality is maximized. The following Figure 5 shows the Gronroos's (1984) Perceived Service Quality Model.

Figure 5 The Perceived Service Quality Model



\*Source: Adapted from Gronroos (1984)

### 2.6.1.1.2 Importance Performance Analysis [IPA] Model/Grid

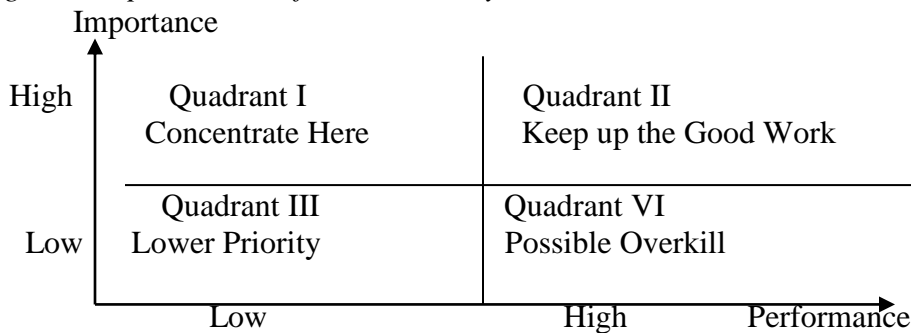
Importance Performance Analysis was first proposed by Martilla and James (1977). It is one of the simple evaluation tools that can be used to understand and prioritize customer satisfaction attributes for improvement. IPA model is used to determine the priority attribute for improvement and also provide guidance to the company's strategic development plan. IPA is a powerful evaluation tool for practitioners and academics to find out the good attributes and attributes that need to be improved and the need for corrective action so as to increase profits and market opportunities (Wong, *et al.*,2011).

The two dimensions of the IPA model, namely, the level of interest and performance is divided into four quadrants (Martilla and James, 1977). Quadrant I is concentrate here or priority. In this quadrant, there are factors that are considered important or expected consumers, but the company's performance has not been satisfactory, so the company needs to concentrate to

allocate its resources to improve performance in this quadrant. Quadrant II is keep up the good work or maintain the achievements, all the attributes that fall into this quadrant is a strength of the organization as well as the pride of the organization. Quadrant III is a low priority. In this quadrant there are factors that are considered to have the perception or the actual performance levels are low and not too important or not expected by consumers, so companies do not need to prioritize or pay more attention to these factors. Quadrant IV is possible overkill, in this quadrant there are factors that are considered less important and less expected by the customer so that companies better allocate resources related to these factors to other factors that more have a higher priority level.

According to IPA grid, from four quadrants, leaders or managers should focus on quadrant I and II because it reflects the high importance and represents the voice of the customer. If the leader is able to perform well in fulfilling requirement of customers, then customers will be satisfied and can manifest loyalty. The following Figure 6 summarizes four quadrants of IPA grid.

*Figure 6 Importance Performance Analysis [IPA] Model*



*\*Source: Adapted from Martilla and James (1977)*

### **2.6.1.1.3 Service Quality [SERVQUAL] Model**

#### **2.6.1.1.3.1 Theoretical Perspectives of "Gaps Model "**

The introduction of the perceived service quality model encouraged the development of the SERVQUAL model (Parasuraman *et al.*, 1985, 1988). Parasuraman *et al.* (1985) developed the gap model that explains gaps that may arise in between what the customer expects to receive and what the organization provides. The "Gaps model" of SERVQUAL is based on a "disconfirmation paradigm". The GAPS model aims to identify the possible causes for a gap between expected quality and perceived quality.

The concept of expectations has been widely used in many studies about customer behavior (e.g., Usman 2010; Parasuraman *et al.*, 1985, 1988; Zeithaml and Bitner, 2002; Arambewela and Hall, 2009). Most of the time, customer expectations are based on their own norms, values, needs, wishes and these expectations are not stable, and may change over time due to changes in aspiration levels at a particular moment in time (Al-Khattab and Fraij, n.d). Nevertheless, customers' expectations are not only determined by individuals themselves, but their expectation are also influenced by external situations, reference groups, time, norms, and the like (Kasper, Helsidngen, and de Vaies, 1999).

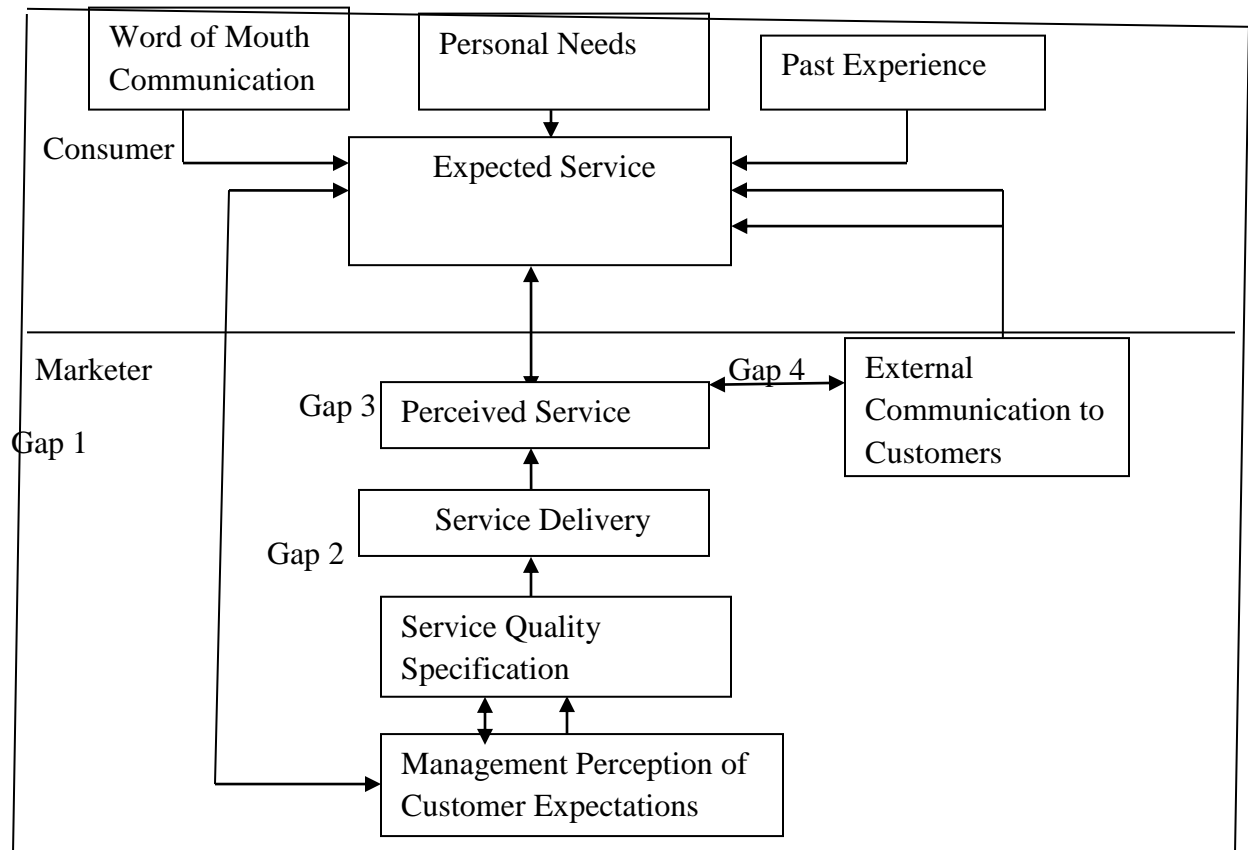
Many researchers have discussed the concept of perception. For example, as thought of Schiffman and Kanuk (1987) perceptions refers to the process by which an individual select, organizes and interprets stimuli into a meaningful and coherent picture of the world. Thus, it is can be influenced by attributes of the service delivery process (Bolton and Drew, 1991). The initial Gap Model included the ten determinants or attributes of service quality, such as, reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding and tangibles. The GAP's model conceptualizes key concepts, strategies and

decisions which are essential for the quality offer according to a sequence which starts from the consumer, identifies the necessary actions. It is composed of five gaps linked together. The following points explain each gap that indicated in GAPS model.

Gap one is the first gap in service quality. It occurs as result of management's misunderstanding of the customer's needs from the market research carried out. In other words, it happens management of a firm fails to accurately identify customer expectations. It is also referred to as the knowledge gap. Gap two (service quality specification): is the difference between management perception and the actual designing of service specifications. Even if the management understand customer needs and expectations, it may be difficult to transform them into service quality specifications.

Gap three is the conformance gap and arises when staff fails to perform the service as stipulated by the standards that have been put by the organization. It represents the variation in service design and services delivery. Since individuals perform the service, performance will depend on the skill level or the level of training of the individual providing the service. In short, it referred to as the performance gap. Gap four is the communication gap, which arises due to the wrong information being passed on to the customer. This means that the customer is not informed of what goes on in the background and therefore may interpret delays as failure when this is not the case. It is the difference between what is promised to customer explicitly or implicitly and what is actually being delivered. Over-promising is usually responsible for this gap. Finally, gap five is the difference between what the customer expects and what the customer thinks of the service that has been received. It is the total accommodation of variations in gaps to it and it represents the difference between the customer expectations and the perceived service. The following Figure 7 illustrates the Parasuraman *et al.'s* (1985) GAPS Model.

Figure 7 GAPS Model



\*Source: Adapted from Parasuraman, et al. (1985:42)

#### 2.6.1.1.4 The Modified SERVQUAL Model

The 1985's Parasuraman et al. SERVQUAL model again refined in the early 1990s. The refined model also focuses on the philosophy that customers typically assess service quality by comparing the service they have actually experienced (the perceived service quality) with the service they desire or expect (their expected service quality). In other words, service quality involves a comparison of customer expectations with customer perceptions of actual service performance. This can be formulized as  $Q = P - E$ ; Q stands for perceived service quality, P refers to performance perception and E stands for performance expectation (Bennett and Barkensjo, 2005).

As indicated earlier, the former service quality model initially focuses on ten dimensions. In 1988, these ten dimensions of service quality were reduced into five dimensions (such as, tangibles, reliability, responsiveness, assurance and empathy) to form the well-known SERVQUAL model. The following explanation summarizes each facet of modified SERVQUAL model according to authors thought.

Tangibles consist of those things that a customer can see or touch. They refer to the appearance of physical facilities such as equipment, buildings, staff/personnel, communication materials that are used to provide the service, and so on. The aspects in the tangibles factor are factors like, "up-to-date equipment", physical facilities are visually appealing" and materials are visually appealing. In most cases, new customers use these tangibles to evaluate the service quality. Thus, it has great importance that firms enhance their image to reflect quality as well as provide continuity in their "service quality image" (Zeithaml and Bitner, 1996).

Reliability refers to whether the outcome of the service delivery is as promised. In other words, reliability is concerned with the ability to perform the promised service dependably and accurately. That means that the service organization provides a service to its customers at a time without making any errors and delivers what it promised during the time that was agreed upon. As indicated in Zeithaml *et al.* (2008) reliability is considered as the most important dimension of service quality.

Responsiveness describes the service render's ability to be helpful to customers and the provision of prompt attention. In short, it is the willingness of service organization to help customers and to provide prompt service. This means the service organizations are ready to help customers and respond to their demand as well as to notify customers when service is available.

If a service fails to occur, then the ability to recover quickly and professionally is important as it will create very positive perceptions of services provider.

Assurance is the ability to instill trust and confidence by a service organization in the mind of the customer regarding its service delivery. It includes competence, courtesy, credibility and security. This dimension involves capabilities such as delivering services with respect, polite, and effective communication. Competence in particular refers to knowledge and skill of an organization in delivering services. Such knowledge and way to interact with customer should inspire confidence in an organization (Gao and Wei, 2004).

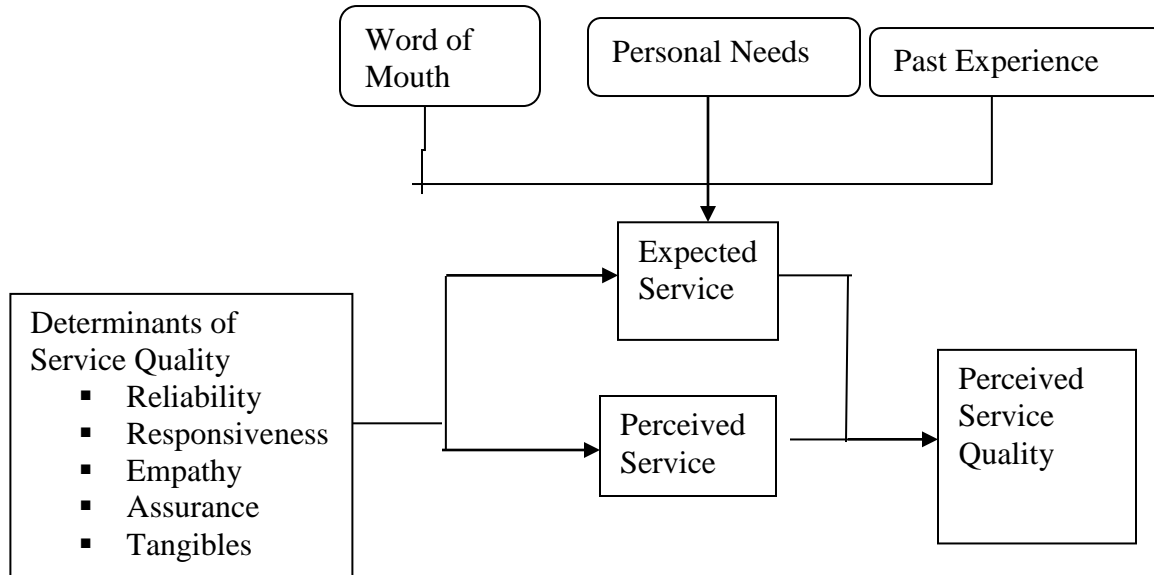
Empathy pertains to the caring and individual attention provided by the service organization to its customers. An organization should understand the problem of customers and results must favor customers with individual personal attention. According to the thought of Zeithaml *et al.* (2008) and O'Neill and Palmer (2004) empathetic organizations understand the needs of their customer and make their services accessible to them.

As stated in Zeithaml *et al.* (2009) the modified SERVQUAL model that comprises of five domains or dimensions of service quality has 22-items. This 22 items SERVQUAL questionnaire has two sections. Section one measuring the expectations of the service for each of the 22-items and the second section measuring the perceptions of the service for each of the 22-items in the scale.

The modified SERVQUAL model highlighted the differences between the perceptions of customers and companies linked to the services quality provided. They argue that service quality can be determined by measuring the differences between what the customer expectations and their perception of actual service. If the perceived greater than expectations, then the perceived quality is high, and if the perceived smaller than expected then it shows the perceived quality is

low. The following Figure 8 shortly illustrates Parasuraman *et al.*'s (1988) determinants of perceived service quality.

Figure 8 Determinants of Perceived Service Quality



\*Source: Adapted from Parasuraman *et al.* (1988)

#### 2.6.1.1.5 Service Performance [SERVPERF] Model

SERVPERF is another form of measuring service quality that developed by Cronin and Taylor (1992). Cronin and Taylor (1992) were one of the first authors to criticize the reliability and validity of the SERVQUAL model. Due to the limitations of SERVQUAL model, Cronin and Taylor (1992) designed SERVPERF scale. The authors of this model believe that service quality should be defined simply on perceptions, because SERVQUAL's model thought about customer's expectation before experiencing the service is difficult to conceptualize. This led to the development of a more direct form of measurement that utilized an attitudinal rather than a disconfirmation paradigm (Cronin and Taylor, 1992).

SERVPERF is a modified SERVQUAL instrument that only measures customer perceptions than their expectations. It looks at the attributes of the 5 dimensions above, worded the same as SERVQUAL but does not repeat the set of statements as expectation items. Cronin

and Taylor (1992) and another scholars like Brady, Cronin and Brand (2002) contended that service quality measurement based on performance only is a better approach than SERVQUAL model. Similarly, Abdullah (2006b) and Sultan and Wong (2012) in their research has shown that the SERVPERF instrument is a better indicator than SERVQUAL in higher education. They claim that there is little evidence, either theoretical or empirical, to support the notion of the “expectations minus performance” gap as a basis for measuring service quality.

#### **2.6.1.2 Measuring Higher Education Service Quality [HESQ]**

Defining and measuring service quality in universities will serve as an initial step towards a more student-friendly education service and in improving overall service (Cerri, 2012). While there is a consensus on the importance of service quality issues in HE, the identification and implementation of the right measurement instrument is a challenge that practitioners who aim to gain a better understanding of the quality issues of students’ experiences face (Brochado, 2009).

Research on service quality in higher education setting has generally revolved around two issues, such as, measurement method and the dimensionality of higher education service quality construct (Yildiz, 2012; Kontic, 2014). According to Marimuthu and Ismail (2012) measuring service quality of higher educational institutions are still underdeveloped because its measurements are almost adopted from different industries and thus, there is no generally accepted model for measuring service quality.

However, the assurance of service quality in the field of higher education (HE) has received escalating attention from both researchers and academicians during the last two decades. This is because quality education system plays in articulating a framework for providing qualified, highly skilled and well-trained manpower for the markets (Tahar, 2008).

Therefore, various researchers indicated different dimensions of higher education service quality though there is no generally accepted dimension or model to measure higher education service quality.

For example, Athiyaman (1997) stated library facilities, level of curriculum, leisure facilities, computing facilities, availability of academic personnel and quality of teaching as dimensions of higher education service quality. Another researcher like Hill (1995) proposed 11 dimensions of higher education service quality such as library facilities, travel agency, housing services, occupation services, university bookshop, advisory services, health services, financial assistance, involvement of students in course contents, work expertise and computing facilities.

Still others like Kara, *et al.* (2016) identified the quality of administrative service, quality of instructional practices, perceived learning gains, quality of students' welfare services, quality of teaching facilities, library service environment, lecturer quality, internet services, reliability of university examinations, quality of computer laboratory services, availability of text books in the library as measures of higher education service quality. Furthermore, Manzoor (2013) indicated that academic resources, teaching quality, administrative service quality, and quality of student support services as dimensions of service quality in higher education.

On the other hand, other scholars like Abdullah (2006a, b), Annamdevula and Bellamkonda (2012) and Teeroovengadum, Kamalanabhan and Seebaluck (2016) designed different models to measure higher education service quality. In general, researchers like Jain, Sinha and Sahney (2011) proposed a model based on the conceptualization of service quality and summarized higher education service quality in two primary categories, namely, (1) programme quality (curriculum, university–industry interaction, input quality and academic facilities) and (2) quality of life (non-academic processes, support facilities, campus and interaction quality). The

following explanations reveal some models that developed to measure higher education service quality.

#### **2.6.1.2.1 Higher Education Performance [HEdPERF] Model**

In 2006a, Abdullah developed new service quality measurement that intended to measure higher education service quality. He contended that the use of existing measures as a means of measuring service quality throughout the marketing sectors may have been tested with some degree of success, but this may not be the case for other service sectors particularly higher education. In addition, it has been recognized that little has been done to identify the determinants of service quality in higher education from the viewpoint of the student (Abdullah, 2006a). As a result, Abdullah (2006a) proposed the new measure of higher education service called HEdPERF.

The HEdPERF model is designed by adapting the Cronin's and Taylor (1992) performance-only or SEVPERF approach. Abdullah (2006a) states that the aim of this model is to capture a context specific view of service quality in higher education, enabling the whole student experience to be measured. According to the author, HEdPERF instrument has six dimensions, namely, non-academic aspects, academic aspects, reputation, access, programme issues and understanding. Non-academic factors consisting items which are crucial for ensuring that students fulfill their obligations and is linked to obligations of non-academic staff. While academic dimensions are items describe solely the responsibility of the academics. On the other hand, reputation includes items which suggest the importance of the higher education institution in projecting a professional image, whereas access factor consists of items which relate to such issues as approachability, ease of contact, availability and convenience. Program issues emphasize the importance of offering wide ranging and reputable academic

programs/specializations with flexible structure and syllabus. Finally, understanding includes items related to understanding students' specific needs in terms of counseling and health services.

In his later work, Abdullah (2006b) modified the existing HEdPERF instrument. He compared three service quality measurements, such as, HEdPERF, SERVPERF and the moderating scale of HEdPERF-SERVPERF within higher education setting. He was surveying students in Malaysia and had applied regression analysis. The research results showed that the modified HEdPERF scale is the most suitable for higher education sector. All 50 items (22 from SERVPERF and 28 from HEdPERF) were included in the factor analysis.

Finally, HEdPERF consists of 41 items, of which 13 items were taken from SERVPERF, and the remaining 28 were developed from literature overview. HEdPERF was proven to be the best indicator, explains higher variances, is a more reliable predictor and shows better criteria of construct's validity (Abdullah, 2006b). In the modified HEdPERF instrument, Abdullah (2006b) indicated five distinct factors, namely, non-academic aspects, academic aspects, reputation, access and programme issues by excluding understanding from former HEdPERF instrument. Finally, he concluded that a modified five-factor structure of HEdPERF is put forward as the most appropriate scale for the higher education sector.

#### **2.6.1.2.2 Higher Education Quality [HiEdQUAL] Model**

Annamdevula and Bellamkonda (2012) developed new higher education service quality measure called HiEdQUAL Model. They argued that though the existing generic service quality measures such as SERVQUAL, SERPERF and evaluated performance (EP) are empirically tested and with some degree of success in market service sectors, this may not be the case for other service sectors, namely, higher education.

They further contend that since higher education services are complex combination of various factors, more attention should be required. Thus, it is essential to develop an instrument that is exclusively designed for evaluating service quality in higher education, instead of continuing the evaluation under the shadow of a standard measurement scale that is applicable to a wide variety of services. Therefore, Annamdevula and Bellamkonda (2012) introduced HiEdQUAL model with five dimensions, viz., teaching and course content, administrative services, academic facilities, campus infrastructure and support services and twenty-seven (27) items.

#### **2.6.1.2.3 Higher Education Service Quality [HESQUAL] Model**

In 2016, Teeroovengadam, *et al.* developed another higher education service quality measure called HESQUAL. They argued that only a few earlier studies attempting to measure service quality in higher education adopted termed as a holistic approach. Although previous empirical studies adopted a holistic approach, none of them integrated the notion of transformative quality in the development of service quality models.

Therefore, Teeroovengadam, *et al.'s.* (2016) HESQUAL consisting of five primary dimensions and nine sub dimensions such as administrative quality (attitude and behavior, administrative processes), support facilities quality, core educational quality (curriculum, attitude and behavior, competence and pedagogy), transformative quality and physical environment quality (support infrastructure, learning setting and general infrastructure) and included a total of 48 items.

For the purpose of this study, however, the combination of higher education service quality models particularly Abdullah's (2006b) HEdPERF, Annamdevula's and Bellamkonda (2012) HiEdQUAL, Teeroovengadam, *et al.'s* (2016) HESQUAL models and Kara *et al.'s*

(2016) eleven higher education service quality dimensions were thoroughly reviewed and adapted to examine the educational service quality of Ethiopian higher education institutions. Because, higher education service quality is composed of multidimensional construct and hence using single model cannot show complex nature of higher education service quality.

## **2.7. Conceptualizing Student Satisfaction**

Defining students' satisfaction is not an easy task because satisfaction differs from one student or consumer to another and influenced by many factors (Munteanu, Ceobanu, Bobâlca and Anton, 2010). Even though students' satisfaction is influenced by various factors, most scholars define and examine students' satisfaction from services provided to them.

According to Weirs-Jenssen, Stensaker, and Groggaard (2002) students' satisfaction is refers to the extent to which an institutions' service performance meets the needs of the students. Besides, Weerasinghe and Fernando (2017) defined students' satisfaction as a short-term attitude is resulting from an evaluation of students' educational experience, services and facilities. Likewise, Sultan and Wong (2012) define student satisfaction as a psychological state of happiness as a result from performance evaluation of the service attributes in the context of higher education. In other words, it is an emotional reaction to the difference between what customers anticipate and what they receive in terms of quality of service delivered (Hansemark and Albinsson, 2004). In short, it is the result of students' the perceived service quality of the university during the educational processes (Adinegara and Putra, 2016).

### **2.7.1 Factors Contribute to Students' Satisfaction in Higher Education**

Students' satisfaction in higher education is a multidimensional process which is influenced by different factors (Weerasinghe and Dedunu, 2017). Different scholars stated different factors that influence students' satisfaction. For example, as argued by Sevier (1996)

students' satisfaction is influenced by four dimensions, namely, student's academic, social, physical, and spiritual experiences. Other studies that conducted by Athiyaman (1997) and DeShields, *et al.* (2005) suggest that students' satisfaction is determined by recruitment, retention, and academic success. Still others, for example, Arif, Ilyas, and Hameed (2013) pointed out that quality of courses can influence students' satisfaction. Helgesen and Nasset (2007) in their research indicated that the effectiveness of instructional process may influence students' satisfaction. Navarro, Iglesias and Torres (2005) stated that course organization can affect students' satisfaction. Sultan and Wong (2012) in their study concluded that campus climate can hamper students' satisfaction.

In addition, Maimunah, Kaka and Finch (2009) indicated students' satisfaction can be predicted by three factors, such as performance of trainers, services delivery and support facilities. Another authors like Hu, Kandampully and Juwaheer, 2009 stated students' satisfaction is affected by students' expectations and their perception about services and quality of services provided by the university. In general, students' satisfaction is determined by both academic aspects and non-academic or administrative one (Meštrović, 2017). Though there is no agreement amongst researchers on contributing factors for overall students' satisfaction, this study examines students' satisfaction from educational service quality.

### **2.7.2 The Role of Students' Satisfaction in Higher Education**

The perception of customers on service quality is important because it provides the management with valuable information about service quality and customer satisfaction on service delivery (Seymour, 1992). In relation to this, Munteanu (2010) explains that measuring customer satisfaction provides an information to organizations regarding how successful they actually are in providing products to the market, where that the satisfaction of consumer is an

important differentiator of marketing strategy and depends largely on the degree to which a product supplied by an organization meets or surpasses customer expectation.

As explained in previous section, in the educational organization, students are considered as consumers and hence identifying the satisfaction level of students is a significant factor to survive in the environment of competitive market, while the increased level of students' dissatisfaction will lead to drop-out of the institution (Kerlin, 2000). Similarly, Navarro, Iglesias, and Torres (2005a) points out that students' satisfaction is becoming an important key factor for the survival of educational institutions such as universities. They argued that students' satisfaction leads to student's intent to return to university and support the university to increase its number of students. In addition, it is one of the most important factors that measures and evaluates academic development and growth, the level of the university and provision of education services (Kammur, 2017). In short, student satisfaction is considered an imperative variable in measuring the quality of learning approach and a key factor in the success of learning programs (Duong, 2016).

Student satisfaction is one of major concern areas in higher education institutions. As argued by Bryant and Bodfish (2014) it is a major indicator of higher education performance. Measuring students' satisfaction is helpful for HEIs in order to identify their strengths and areas for improvement (Arnerić, Talajaand Prka, 2010). On the other hand, students' satisfaction improves institutions' wise use of resources. In this regard, Tinto (1987) explains that a failure to retain current students may waste both human and financial resources and hence retaining students by satisfying their need is important for organizational success. Additionally, Elliot (2001) contended that retaining the existing students in the university is less costly than

admitting new students. Thus, students' satisfaction is one of important factors to retain students in the institution.

## **2.8 Empirical Studies on Educational Service Quality and Students'**

### **Satisfaction in Higher Education**

#### **2.8.1 International Empirical Studies**

In the literature, many previous studies have been investigated the relationship between educational service quality and students' satisfaction in both public and private higher education institutions. From international studies, for example, Asaduzzaman, et al. (2013) service quality and student satisfaction: a case study on private universities in Bangladesh by using SERVQUAL model and found positive correlation facets of service quality and students' satisfaction.

Likewise, Hanaysha, Kumar, Abdullah and Hilman (2012) service quality and international students' satisfaction in universities of North Malaysia by employing SERVQUAL instrument and the study observed significant relationship between the five dimensions of service quality (tangibility, reliability, responsiveness, assurance and empathy) or SERVQUAL and students' satisfaction. Other researchers like Pohyae, et al. (2016) also examined the relationship between service quality and student satisfaction in the case of international students in public university and the results indicated that the SERVQUAL dimensions have strong relationship with the international students' satisfaction.

Moreover, Kundi, Qureshi, Khan and Akhtar (2014) studied the impact of service quality on students' satisfaction in higher education institutions and results exposed a positive and a significant relationship between the variables of SERVQUAL and students' satisfaction. In the same way, Son, Ha and Khuyen (2018) has conducted an experimental study to measure

students' satisfaction with higher education service Thainguyen University and found that five factors of SERVQUAL model (tangible, assurance, reliability, empathy and responsiveness) influence on students' satisfaction in higher education.

### **2.8.2 National Empirical Studies**

In the literature, many local empirical studies have been also studied the relationship between service quality and students' satisfaction in Ethiopian public higher education. For example, Abreham (2018) service quality and customer satisfaction in Ethiopian higher education institutions in the case of Oromia state university and identified that students of Oromia State University were not satisfied with the perceived services of three dimensions of the model, such as, reliability, assurance, responsiveness, whereas the students were satisfied empathy and tangibles dimensions of service quality.

Similarly, Solomon, *et al.* (2018) examined student satisfaction regarding service quality at six Ethiopian Public Higher Education Institutions that selected from first up to three generation universities, namely, Hawassa and Addis Ababa universities from the first stratum (first-generation universities); Dilla and Woliata Soddo Universities from the second stratum (second-generation universities); and Meda Wolabo and Dibre Markos universities from the third stratum (third-generation universities) and the findings indicated that the majority of the elements that constitute attributes of service quality were perceived by students to be very poor.

In addition, Girum (2017); Gelilawit (2019) and Semira (2019) studied the effect of service quality on students' satisfaction in Ethiopian private universities in the case of Addis Ababa. Even though the title they tried to investigate is the effect of service quality on students' satisfaction to somewhat similar, the researchers used or employed different models of higher education service quality to investigate students' satisfaction.

For instance, Girum (2017) conducted his study on the effect of service quality on student satisfaction in private higher education institutions in Addis Ababa by employing HEdPERF and found that all the five dimensions of service quality have a positive significant relationship with student satisfaction where academic aspects, non-academic aspects and reputation have a strong and positive significant correlation with satisfaction while program issues and access have a weak positive correlation with student satisfaction. Gelilawit (2019) studied the effect of service quality on student satisfaction: evidence from private universities in Addis Ababa, Ethiopia by employing SERVPERF model and concluded that all SERVPERF dimensions have a significant relation with students' satisfaction.

Lastly, Semira (2019) studied the effect of service quality on students satisfaction in the case of private higher education institutions in Addis Ababa by using HEdPERF instrument and the findings established that non-academic aspects, program issues, reputation and access proved to be very essential and are predictors of students satisfactions of higher education institutions particularly in the case of private institutions in Addis Ababa . On the contrary, academic aspects had positive relation with students' satisfaction but no significant influence on students' satisfaction.

As a whole, both international and national empirical studies mainly examined the link between service quality and students' satisfaction in higher education. However, from international empirical studies, for example, Ahmed, *et al.* (2010), Banahene (2018), Dhaqane and Afrah (2016), Oja (2011) Martin and Tracey (2001) Jelena (n.d) indicated that students who are satisfied with educational services perform good academic grades than students who are not satisfied with university services. Although they tried to indicate the relationship between service quality and student achievement, their study did not show to what extent do service quality

affects students' academic achievement. In addition, these studies are conducted in very limited scope as case study in one university. Not only that but also these comparable studies are conducted in abroad. From related empirical studies, we can deduce that low attention has been given to service quality and student academic achievement. And thus, the relationship between service quality and student performance via mediating role of students' satisfaction are not studied in-depth both internationally and nationally.

## **2.9 Students' Satisfaction as a Mediating Variable**

Students' satisfaction with educational service plays a significant role in students' academic performance. According to Ahmed, *et al.* (2010) students who are satisfied with the university service quality or receive better services perform high academic performance than students who are dissatisfied with university's service or receive low service. In support of this view, Aung and Ye (n.d) in their study stated that the levels of students' satisfaction with educational service quality influences students' academic performance.

Mihanović, Batinić and Pavičić (2016) confirmed that the students' satisfaction with university contents, university bodies and services, teaching, teaching methods and academic reputation affects the satisfaction of the students and this in turn affects the student academic performance. Martirosyan, Saxon and Wanjohi (2014) studied students' satisfaction with service quality and academic performance by using Student Satisfaction Inventory [SSI] and identified that students those who reported better satisfaction with their overall college experience had achieved higher grade point averages than those with low satisfaction.

## **2.10 How Scholars Conceive Performance in Education?**

It is obvious that students' academic performance is one of the indicators of quality education. Student academic performance forms the basis of almost aspects of education. However, how can we see and define performance in academic setting? Indeed, there are different forms of performance. The following section elucidates the literal meaning of performance and scholar's view of performance in education.

Literally, performance means “the accomplishment of something”, and in education that “something” generally refers to articulated learning goals (Suleymanov,2014). Scholars define students' academic performance in different ways. For example, according to Fisher (1995) academic performance refers to successful performance in academic skills such as writing, reading, problem solving etc. In addition, Basri, Alandejani and Almadani (2018) define students' academic performance as the enhancement of the students' current state of knowledge and skills reflected in their GPA and also in the formulation of their personality and academic growth from lower levels of study to higher levels.

On the other hand, Armstrong (2006) proposes somewhat detailed definition of students' academic performance. According to him, students' academic performance refers to the totality of speech acts and written communications that view the purpose of education primarily as supporting, encouraging, and facilitating a students' ability to obtain high grades and standardized test scores in school courses, especially in courses that are part of the core academic curriculum. Thus, students' academic performance is the outcome of education as it indicates the extent to which the student, teacher, curricular and indeed the educational institution has achieved the predetermined educational goals (Kpolovie, Joe and Okoto, 2014).

In general, students' academic performance is a measurable index that depicts a student's cognitive, affective and psychomotor domains in an educational setting. Students' academic performance is ascertained by testing which has and will continue to play significant role in any educational system world-over. Academic performance is therefore a yard stick for ascertaining the capabilities of a student from which his overt, covert and inherent or unrevealed abilities could be inferred. It is used to determine how well an individual is able to assimilate, retain, recall and communicate his knowledge of what has been learnt (Kpolovie, *et al.*, 2014). As attested by Kpolovie, *et al.* (2014) university's instructional objectives are also designed in three domains viz., cognitive, affective and psychomotor. And hence, students are expected to bring behavioral change on these three domains. In this regard, it is projected that the university tests and examinations will be constructed based on three educational objectives. In this study; therefore; students' Cumulative Grade Point Average [CGPA] was used to measure students' academic performance.

### **2.10.1 Methods of Measuring Students' Academic Performance**

It is not easy to define, quantify and measure students' academic performance. However, the most common measure of students' academic performance is test scores in different subject matters or disciplines, completion of numbers of years of schooling, entrance to university (Thomson, 2018). Moreover, students' academic performance is measured by the CGPA because it shows the overall students' academic performance by considering the average of all examinations' grade for all semesters during the tenure in university (Ali, *et al.*, 2009). In the present project also students' CGPA was employed to measure students' academic performance.

## **2.10.2 International Empirical Studies on Students' Academic Performance in Higher Education**

Students' performance has become a great concern to stakeholders in education throughout the world and a subject of discussions and debate among scholars (Alaka, 2011) because it appears to be the major criterion by which the effectiveness and success of any educational institution could be judged (Adedeji, 1998). In addition, academic performance is the fundamental criterion by which all teaching learning activities are measured, using some standards of excellence and the acquisition of particular grades in examinations measures students' talents, abilities, mastery of the content, competencies and skills in applying knowledge acquired to a particular situation (Aremu, 2001).

In the literature, many international as well as local empirical studies have been discussed various factors that affect students' academic performance in higher education. From international studies, for example, Alam, Billah and Alam (2014) studied factors affecting academic performance of undergraduate students at International Islamic University Chittagong [IIUC], Bangladesh and found that students' demographic characteristics such as age, gender, past academic track, medium of education and absence in the classes have also influenced the academic performances of a student. Likewise, Ali, *et al.* (2009) examined factors influencing students' performance at Universiti Teknologi MARA Kedah, Malaysia and identified that four factors are positively related to students' performance, namely, demographic, active learning, students' attendance and involvement in extracurricular activities.

In addition, the other related studies have been also investigated students' background and their academic performance. For instance, Gooding (2001) studied the relationship between parental educational level and academic success of college freshmen and confirmed that parents'

educational levels impacted students' academic performance in test scores. On the other hand, Abdullahi (2016) investigated the effects of home background factors on students' academic performance in agricultural sciences in Katsina State, Nigeria and his study finding showed that socio-economic characteristics of parents correlate significantly to students' academic performance.

In the same vein, Martha (2009) examined factors affecting academic performance of undergraduate students at Uganda Christian University and reported that there was a significant relationship between parents' social economic status and academic performance and a significant relationship between former school background and academic performance. Moreover, Olufemi, Adediran and Oyediran (2018) studied factors affecting students' academic performance in colleges of education in Southwest, Nigeria and found that students' factors, parental background, school factors, and teachers' factors have serious influence on students' academic performance.

On the other hand, many other researchers tried to investigate the impact of financial resource allocation, physical resource, students' interest and engagement, study habits on students' academic performance. For example, Alaka (2011) in Nigeria examined fund mobilization, allocation and utilization as predictors of students' performance and found that fund mobilization, allocation and utilization jointly accounted for 46.9% variance in predicting students' academic performance.

Furthermore, Mohamed, Dahie and Warsame (2018) investigated factors that affect students' academic performance in the case of university of Somalia and indicated that learning technique, home related aspects, study habits and physical resource have positive relationship with academic performance. And hence, students with good academic performance have better

learning techniques, home related aspects, study habits and physical resource. Similarly, Earthman (2002) school facility conditions and student academic achievement and stated that there is a positive relationship between student performance and various factors or components of the built environment.

Still other researchers also studied the influence of students' engagement and interest in learning and their academic performance. For instance, Gunuc (2014) in Turkey investigated the relationships between student engagement and their academic performance at Anadolu University and the findings revealed that there were significant relationships between the students' academic performance and student engagement as well as between their academic performance and especially the dimensions of cognitive engagement, behavioral engagement and sense of belonging.

In addition, it was found out that cognitive, behavioral and emotional engagements, that are class engagement, predicted academic performance and explained it with a rate of 10%. While Kpolovie, *et al.* (2014) explored academic performance prediction: role of interest in learning and attitude towards school and the results showed significant correlation and multiple prediction of students' academic performance with the predictor variables; accounting for 21.60% of the variance in students' academic performance and thus, improvement of students' interest in learning and attitude to school could contribute in boosting their academic performance.

To sum up, international empirical studies posited different factors that affect students' academic performance. From many factors that influence student performance, some empirical studies tried to show how school related factors that hamper students' academic performance. For example, as mentioned earlier Olufemi, *et al.* (2018) indicated school and teacher's factors,

while Mohamed, *et al.* (2018) and Earthman (2002) showed physical resources and facility conditions affect academic performance of the learner. Although these empirical studies somewhat comparable to the current study, they did not focus on educational service quality and students' academic achievement. In addition, these studies failed to reveal how and to what extent the quality of different services affect student academic performance via students' satisfaction.

### **2.10.3 National Empirical Studies on Students' Academic Performance in Ethiopian Public Higher Education**

Similar with that of international studies, various local studies have been discussed different determinants of students' academic performance in Ethiopian public universities. Though the studies were conducted as a case study in limited Ethiopian public universities university, they tried to show factors that influence students' academic performance in higher education. For instance, Bereket (2015) examined determinants of academic performance of students in the case of Wolaita Sodo university and found that age, study outside class, amount of money received from family and first choice of department, father's education level, peer influence and motivation have significant association with students' academic performance.

In the same vein, Dejen and Muluken (2014) studied multilevel analysis on determinants of academic performance of second year regular students in the case of Addis Ababa university school of commerce and the result revealed that factors, such as, study hours, mothers' educational level, teachers' commitment, standard of lectures and presentations, assessment and marking criteria, and course interest have positive effects on the performance of students. On the other hand, department preference and absent from school have negative effects on academic performance of students. In addition, Galgalo, Aga, Yeshe and Abebe (2017) studied

determinants of university students' academic performance and gender differences in the case of Addis Ababa University Main Campus and the findings indicated that family income, mother's education, father's occupation, mother's occupation and CGPA have a significant association with the gender difference in academic performance.

Nevertheless, Gemechu (2018) investigated family socio-economic status effect on students' academic performance at Haramaya University College of education and behavioral sciences and the results showed that family income did not bring anything new to students' academic performance and there was statistically significant negative relationship between sex and students' academic performance. However, family education level has significant influence on students' academic performance. Other researchers also studied determinants of students' academic performance at Arba Minch, Jimma and Ambo Universities. For example, Moges (2017) investigated determinants of academic performance of under graduate students in the Case of Arba Minch University Chamo Campus and the findings revealed that there was a significant relationship between gender difference, university entrance exam and studying hours and academic performance. The findings also revealed that there was a significant relationship between students former academic back ground, studying hours, and students' behavior on taking of alcoholic drug and chat on academic performance of students.

Similarly, Muhdin (2016) examined determinants of economics department students' academic performance in the case study of Jimma University and the study finding illustrates that university entrance exam score, family economic situation, sleep time and habit of study are the main determinants of students' academic performance. However, sex, residential place, study time and recreation time were found insignificant. On the other hand, Muna (2018) studied stress and associated factors as a predictor variable on academic performance among students at Ambo

university and the result shows there was a statistically significant negative and moderate relationship was reported between stress and academic performance and recommended that the university shall strengthen the academic counseling and preventive mental health services for the students so as to provide a conducive learning environment.

In general, as we can notice from the above national empirical studies on students' academic performance, except Dejenand Muluken's (2014) study almost all studies not studied how educational service quality affect students' academic achievement. Dejen and Muluken (2014) tried to show how the components of academic service quality such as teacher's commitment, standard of lectures and presentation, assessment and marking criteria influence the academic performance of the student. From this information, one can understand that in both international and national empirical studies, the issue of service quality and academic performance are not well addressed. Therefore, this study intended to show how the educational service quality affects students' academic performance.

## Summary

In this chapter, relevant literature and prior empirical studies that related to the current study are thoroughly reviewed. The review mainly focused on the concept of educational service quality, ways of measuring service quality, empirical studies on educational service quality, students' satisfaction and their academic achievement. However, in the first sections of this chapter, the conceptualization of service and quality issues are well addressed as educational service quality is composed of two terms such as service and quality.

According to the review, though different scholars defined service in different ways, service refers to an act or performance that one party can offer another that is essentially intangible and does not result in the ownership of anything. Services basically include five major natures, viz. intangibility, inseparability, heterogeneity, perishability and no transfer of ownership. And a university in general may offer explicit as well as implicit services.

On the other hand, defining higher education quality is also difficult and challenging because different segments of the stakeholders in higher education define the concept of quality in their own terms, interests and perspectives. And hence, the most frequently cited scholars like Harvey and Green (1993) proposed five ways of thinking about higher education quality, rather than definitions, viz., quality as exceptional/excellence, quality as perfection or consistency, quality as fitness for purpose, quality as value for money and quality as transformation.

Similar with the concept of serve and quality, defining educational service quality is somewhat elusive. In the literature, however, various researchers describe educational service quality as a measurement of how well higher education institutions offer both academic and administrative services to students as primary stakeholders of educational institution. Yet, measuring service quality is difficult in market sectors in general and higher education in

particular. Thus, different scholars suggest various models to measure service quality for both market sectors and higher education.

In this chapter, both general measures of service quality and higher education are discussed separately. The general measures of service quality include Gronroos's (1982) Perceived Service Quality Model, Martilla and James's (1977) Importance Performance Analysis (IPA) Model/ Grid, Parasuraman, *et al.*'s (1985) SERVQUAL Model and Cronin and Taylor's (1992) SERVPERF Model. On the other hand, methods of measuring higher education service quality encompass Abdulla's (2006a) HEdPERF, Annamdevula and Bellamkonda's (2012) HiEdQUAL Model and Teeroovengadam, *et al.*'s (2016) HESQUAL Model.

Ultimately, the review also highlighted empirical studies on educational service quality and students' satisfaction and their academic performance. According to the review, the earlier empirical studies that conducted by Asaduzzaman, *et al.*, (2013), Hanaysha, *et al.*, (2012), Pohyae, *et al.* (2016), Kundi, *et al.*, (2014), Son, *et al.* (2018), Abreham (2018), Solomon, *et al.* (2018), Girum (2017); Gelilawit (2019) and Semira (2019) found that there is a statistically significant relation between educational service quality and students' satisfaction. Furthermore, the past empirical studies; for example, Ahmed, *et al.* (2010) in Pakistan, Aung and Ye (n.d) in Myanmar, Banahene, *et al.*, (2018), Mihanović,*et al.*, (2016) and Martirosyan, *et al.*, (2014) confirmed that there is a statistically significant correlation among educational service quality, students' satisfaction and their academic performance.

## **CHAPTER THREE**

### **3. RESEARCH DESIGN AND METHODOLOGY**

#### **3.1. Introduction**

It is familiar that the effectiveness of any research study depends upon the correctness of the research design and methodology employed. Thus, this chapter deals with the research methodology that employed in the major paper. It explains research approach, research design, description of study sites, data sources, total population, sample size and sampling techniques, data gathering instruments/ tools; data collection procedures; methods of testing the validity and reliability of instruments and finally followed with method of data analysis and ethical considerations.

#### **3.2 Philosophical Assumptions**

In social science researches, there are mainly two broad research paradigms, namely, quantitative and qualitative approach. Among these approaches, some social science researchers advocate quantitative research and some others believe in qualitative research (Mills, Durepos and Wiebe, 2010). Still, there is also another group of social researchers who argue for the possible combination of these two different approaches for a better understanding of a phenomenon (Atieno, 2009; Creswell, 2003). However, the concept of mixed method is contradictory as the quantitative and qualitative research paradigms hold different ontological and epistemological assumptions (Atieno, 2009) because quantitative or positivist perspective believes on independent single reality while qualitative or interpretive perspective holds assumption of contextual multiple realities (Harrison, Birks, Franklin and Mills, 2017). This scenario suggests philosophical assumptions that shape the nature of any research because the philosophical position determines the ontological and epistemological characteristics of research.

And it becomes fundamental for a research design. Therefore, it is important to thoroughly examine the ontological and epistemological assumptions of the present research approach. The following sub sections briefly describes the ontological and epistemological assumptions of this research.

### **3.2.1 The Ontological Assumptions**

Before explaining the ontological assumptions of the current study, first it is an imperative to define what ‘ontology’ means. According to Saunders, *et al.* (2012) ontology looks at the nature of reality as seen through the lens of the individual’s experiences and it represents what there is to know about the reality of the world. Besides, Guba and Lincoln (1989) state that the ontological assumptions are those that respond to the question ‘what is there that can be known?’ or ‘what is the nature of reality? Having given these definitions for the term ‘ontology’ it is now worthwhile to identify ontology for this study.

As the researcher mentioned earlier, the main purpose of the present study is intended to examine the relationship between educational service quality and students’ academic performance in Ethiopian public higher education institutions via the mediating role of student satisfaction. And the ontological and epistemological assumptions of the current study were determined based on the nature of the problem and research questions or objectives. In order to achieve the study purpose, four basic research questions were developed. As stated in the chapter one, the first research objective was intended to examine the internal stakeholders’ perspective towards Ethiopian higher education service quality, whereas the third sub research objective was aimed to explore how educational service quality affects students’ academic performance. Hence, prior to determining to what extent do educational service quality affects students’ academic performance via their satisfaction, it is vital to look into students’, instructors’,

department heads', college deans' and university top leaders' perspective towards Ethiopian higher education service quality and how education service quality affects students' academic performance.

The ontology that was used to meet these research objectives are; thus, social world of meanings or subjectivism. This is because; the researcher assumes that the world that the researcher investigates is a world populated by human beings who have their own thoughts, interpretations and meanings. Accordingly, in this study, the researcher projects that students, instructors, department heads, college deans and university top leaders may share their own opinions, feelings, experiences and inner thoughts on service quality of higher education. In order to investigate their perspective towards higher education service quality, interview and focus group discussion was principally conducted. Therefore, the best research approaches that suit for these research objectives are mainly qualitative research approach.

The rest research objectives are aimed to identify which dimensions of service quality is highly correlated with students' satisfaction and their academic performance and determine to what extent do education service quality predicts students' academic performance via their satisfaction. These research objectives adopt a realistic ontology because the researcher believes that in this world every phenomenon has cause and effect relationships. In this study, the researcher assumes that there are some realities "i.e., the seven service quality dimensions (such as academic and administrative services, program issues, general campus structure, support services, access and reputation)" that mentioned earlier may affect the academic performance of Ethiopian higher education students via their satisfaction. To address these research objectives; therefore, quantitative research approach was mainly employed.

### **3.2.2 The Epistemological Assumptions**

As the researcher did in ontological assumption section, before introducing the epistemological stance of the current study, it is again important to define what epistemology means? According to Crotty (2003), epistemology means “a way of understanding and explaining how we know what we know” (p.3). Crotty (2003) further indicated that epistemology is also concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate.

The Epistemological stance used for the first and the third sub study objective is constructionism. As defined by Crotty (2003) constructionism is “the view of that all knowledge and therefore all meaningful reality as such is contingent upon human practices, being constructed in and out of interaction between human beings and their world and developed and transmitted within an essentially social context. (p.42)” Thus, meaning is not discovered, but constructed. And there is the reason behind why constructionism is the epistemological stance of the first and third study objective is the construction of meaning is transmitted within an essentially social context and this was shown in the interviews and focus group discussion.

As for the later two basic research objectives, objectivism is the epistemological stance. Objectivist epistemology holds that meaning, and therefore meaningful reality, exists as such apart from the operation of the any consciousness. It means that the mind of the investigator is thought to be separate from the world of objects, of what is investigated (Crotty, 2003). In these research objectives, the researcher separates himself away from the objects he is studying. The researcher looking for the influence of service quality dimensions on the academic performance of the learners via their satisfaction. The researcher assumes that the dimensions of service

quality have different effects on the academic performance of the learner through their satisfaction.

### **3.3 Research Approach**

Although mixed research approach holds different ontological and epistemological assumptions, the rationale for choosing mixed method depends on the nature of the problem and research objectives. As mentioned in the previous section, the main objective of this study is to examine the relationship between educational service quality and students' academic performance via students' satisfaction. To serve this purpose, research objectives are developed which are answered by both quantitatively and qualitatively. Therefore, in the present study, a mixed research approach was employed that adhering to pragmatic philosophy (Morgan, 2007) was used. This is the fact that mixed research method provides comprehensive evidence for studying a research problem than either quantitative or qualitative research alone (Creswell, 2012). Similarly, Halcomb and Hickman (2015) pointed out that mixed research method allows researchers to explore complex phenomena in detail and provides a broader picture of the phenomenon being studied.

In addition, numerous earlier published and unpublished international as well as local comparable studies have used a mixed research approach. From abroad studies, for example, Rajab, *et al.* (2011) used a mixed method to investigate post- graduate students' perspective towards the provision of service quality of research university and found that learners' have moderate level of satisfaction towards the university's service quality. Likewise, Butterfield (2014) in her PhD dissertation employed mixed- study method to examine students' satisfaction with faculty performance and course instruction in higher education and identified that students are satisfied with faculty performance and course instruction. Others like Lagrosen, Seyyed-

Hashemi and Leitner (2004) have also used mixed research method to explore the service quality dimensions in higher education and identified different dimensions of higher education service quality.

In addition, from local research, for example, Solomon (2012) in his PhD dissertation has employed mixed research approach to assess stakeholders' perception towards Ethiopian Public Higher Education Institutions (EPHEIs) service quality improvement by using SERQUAL model. And Solomon (2012) identified that all dimensions of the service quality improvement initiatives perceived by academic staff and students were found to be very poor. Again, Solomon, Niekerk and Muller (2014) employed mixed research design to investigate academic staff perceptions of service quality improvement in EPHEIs and found that all dimensions of the service quality improvement initiatives perceived by academic staff were found to be very poor.

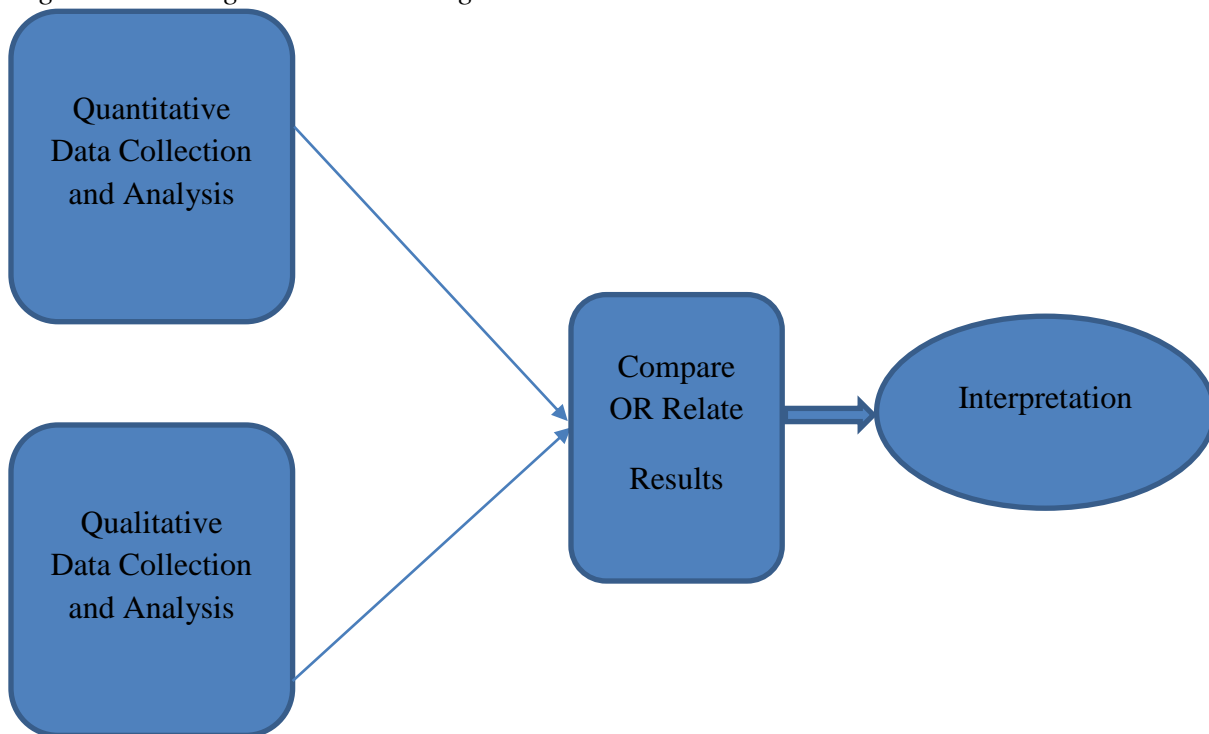
Other local researchers like Dawit and Nesredin (2017) in their study surveyed Dire Dawa University's service quality (which is one of Ethiopian public universities) and students' satisfaction using mixed research method and found that almost half of the students who are studying at Dire Dawa University are satisfied with the program diversity and alternative departments and low satisfaction with facility provision and staff of the university.

### **3.4 Research Design**

In research, an efficient and appropriate research design should be carefully designed before data collection or analysis can commence because research design stands for advance planning of the methods to be adopted for collecting the relevant data and the techniques to be used in the analysis (Akhtar, 2016) and its main purpose is to obtain evidence which addresses the research question and objectives (Shukla, 2008).

There are various mixed research designs. Taking the research objectives, conceptual framework of the study into consideration, the researcher selected QUAN+QUAL model (or Convergent Parallel Mixed Methods) as an appropriate design among different mixed research designs. In addition, convergent parallel mixed method allows the researcher to simultaneously collect both quantitative and qualitative data, merge the data, and use the results to understand a research problem. Not only that but also a convergent parallel mixed method design is the most important design to gain a more complete understanding of a research problem, because one data collection form supplies strengths to offset the weaknesses of the other form. For example, quantitative scores on an instrument from many individuals provide strengths to offset the weaknesses of qualitative documents from a few people (Creswell, 2012). Hence, the study gives equal emphasis to both quantitative and qualitative approach. The following Figure 9 shortly summarizes the convergent parallel design that was employed in the study.

*Figure 9 Convergent Parallel Design*



*\*Source: Creswell (2012)*

## **3.5 Description of Study Sites**

### **3.5.1 Arba Minch University [AMU]**

Arba Minch University is located in the Southern part of Ethiopia, which is about 505kilometers far away from the capital city of the country, Addis Ababa. Arba Minch University is one of research universities in Ethiopia. Among ten first generation universities that found in Ethiopia, Arba Minch University is also categorized in under the first-generation university. In 1986 it was established as Arba Minch Water Technology Institute [AWTI] with the objective of addressing water related issues in the country. In June 2004, the AWTI was upgraded to Arba Minch University [AMU] after 18 years of continuous progressive move. Currently, the university has two Institutes [namely, Institute of Water Technology and Institute of Technology, six Colleges [viz., College of Business and Economic, College of Social Sciences and Humanities, College of Natural and Computational Sciences, College of Medicine and Health Sciences, College of Agricultural Sciences and College of Continuing and Distance Education] and four Schools [namely, School of Law, School of Pedagogical and Behavioral Sciences, School of Medicine and School of Post-Graduate Studies]. Among six campuses that run in under Arba Minch University five campuses are located in different sites of Gamo Zone Administration, Arba Minch Town and the other sixth campus is located in the Gofa Zone Administration, Sawla Town. In different campuses, Arba Minch University runs 77 undergraduate programs with more than 28, 052 students, 96 Masters programs with more than 1,969 students and 24 PhD programs with 136 PhD students (Arba Minch University, Revised Profile, 2023).

### **3.5.2 Wolaita Sodo University [WSU]**

Wolaita Sodo University is one of the second-generation public higher institutions in Ethiopia, located in Wolaita Sodo town, 315 km away from the capital Addis Ababa. The university was established on March 24, 2007 G.C. It has been commenced teaching and learning process by ending its first batch of 801 (609 males and 192 females) students under four faculties and 16 departments. Presently, WSU has been running teaching learning process in three campuses (Gandaba campus, Otona campus and Tercha campus) with 58 undergraduate and 43 graduate programs including 6 doctorate (PhD) degree programs under six colleges and four schools. During 2017/18 academic year, students' enrollment in all programs has shown increment and reaches over 30,000, the academic staff composition is boosted to 1,313 and there are over 3,113 administrative staff. In the previous years, the university also graduated over 24,000 alumni in undergraduate and graduate programs (Brief History of Wolaita Sodo University, 2023).

### **3.5.3 Jinka University [JKU]**

Jinka University was established on 23 October 2015 with endorsement of the Council of Ministers of Ethiopia. JKU is one of the 11 universities to be built during the Second Growth and Transformation Plan (GTP II) period, 2015/16–2019/20. Jinka University is located in South Omo Zone, 750 kms away the capital from Addis Ababa, Ethiopia. JKU has started operation with the 4 colleges and 14 departments. Presently, the university has been running the teaching learning process with five colleges and twenty-nine undergraduate programs and six post-graduate programs. In addition, the university also providing weekend programs in seven distance centers, such as Konso, Basketto, Gelila, Meither, Koybe, Jinka and Laska centers (About Jinka University, 2023).

### **3.6 Data Sources**

In the study, both primary and secondary sources of data were used to collect data because primary data sources provide firsthand information, whereas secondary data sources provide second-hand data (Kumar, 2011). In research, primary data can be collected by using observation, interview, questionnaire and secondary data are gathered via different methods such as document analysis, reviewing government or semi-government publications, earlier research works, personal records, journal, magazines, newspapers and mass media. However, the choice of data source depends upon the purpose of the study, the resources available and the skills of the researcher (Kumar, 2011).

In this research, primary data sources include regular undergraduate graduating class students, student union presidents and vice presidents, student union representatives, university instructors, university leaders, such as, student service directorates, student deans, department heads, college deans, directors, university presidents and vice presidents and support service workers, such as general facility leaders, dormitory services team leaders, cafeteria service team leaders, and student clinic team leaders. In addition, secondary data sources include published and unpublished government documents, published journals, peer reviewed research articles, journals, empirical studies, unpublished PhD dissertations, M.A thesis, research books etc.

### **3.7 Total Population, Sample Size and Sampling Techniques**

In this section, the study population, sample size determination and the sampling techniques and procedures that used in the study are briefly discussed.

### **3.7.1 Total Population**

Presently, there are a total of 49 public universities found in the different parts of the country. However, this study was carried out in public universities located in the Southern part of the country to examine the link between educational service quality and students' academic performance via their satisfaction. And there are reasons for this: (1) budgets are mainly allocated by federal government to almost all Ethiopian public universities. In addition, the federal government assigns regular students to different universities. Due to that reason, there is a relatively similarity among Ethiopian universities in provision of educational services to students though the administration system varies from one university to the other. Thus, data collected from universities found in the Southern part of Ethiopia provide comprehensive information about the educational service quality of the Ethiopian universities. (2) The universities located in the Southern part of Ethiopia are close to the researcher of this study and have easy-to access study subjects and collect data. (3) Among higher education situated in the Southern part of Ethiopia, universities from different differentiations were participated in the study. Including universities from three differentiations allows us to investigate the current status of higher education in providing educational services to students as primary stakeholders of educational organizations. Hence, the total population of the study consisted of all ten higher education institutions that located in the Southern part of Ethiopia, all university instructors who are teaching in higher education, university leaders who are working in both academic and administrative wings and regular GC students.

### **3.7.2 Sample Size and Sampling Techniques**

The quality of a piece of research work not only depends on the appropriateness of methodology and instrumentation but also by the suitability of the sampling strategy that has

been adopted (Cohen, Manion and Morrison, 2000). Most of the educational phenomena consist of a large number of units (Koul, Kumar, Chawla and Sondhi, 2016). And hence, it would be impracticable to collect data from the whole population due to factors such as expense, time and accessibility (Cohen, *et al.*, 2000). Therefore, sampling is an important element in research (Sampson, 2012) because it involves the process of selecting a relatively small number of elements or characteristics from a larger defined group of elements and expecting that the information gathered from the small group of elements will provide accurate judgment about the larger group (Shukla, 2010).

In this study, purposive or judgmental sampling technique from non-probability sampling technique and simple random technique from probability sampling technique were employed. From the total of ten universities (*viz.*, Hawassa University, Dilla University, Wachamo University, Wolkite University, Worabe University, Wolaita Sodo University, Arba Minch University, Mizan-Tepi University, Bonga University and Jinka University) that found in the Southern part of Ethiopia, three universities 3 (30%) were randomly selected, from research, applied and comprehensive universities to examine the status of educational service quality and students' academic performance. Thus, the study was conducted at Arba Minch, Wolaita Sodo and Jinka Universities. According to the recent differentiation of Ethiopian public higher education, AMU is differentiated as a research university, WSU is identified as an applied university and JKU is categorized as a comprehensive university (Ministry of Science and Higher Education ([MoSHE], 2020). The following Table 6 shortly summarizes the universities located in the Southern part of Ethiopia, including their differentiations and regions.

*Table 6 Summary of Public Universities Located in the Southern Part of Ethiopia*

SN	Name of Universities	University Differentiation	Region Located
1	Hawassa University	Research	Sidama
2	Dilla University	Applied	South Ethiopia
3	Wachamo University	Comprehensive	Central Ethiopia
4	Wolkite University	Applied	Central Ethiopia
5	Worabe University	Comprehensive	Central Ethiopia
6	Wolaita Sodo University	Applied	South Ethiopia
7	Arba Minch University	Research	South Ethiopia
8	Mizan-Tepi University	Comprehensive	South West Ethiopia
9	Bonga University	Comprehensive	South West Ethiopia
10	Jinka University	Comprehensive	South Ethiopia

*Source: Researcher's own work or creation*

**Where;** SN=Serial Number

In addition, among undergraduate regular students, regular graduating class students were purposefully selected. The participants of this study were purposefully recruited using the following criteria: To be included in the study, students are expected to reach the final year or graduating class. Students reached at the final year are assumed to have more knowledge of the educational services provided by their respective universities. Additionally, most graduating class students are waiting for graduation forces them to consider whether to start looking for employment or pursue further studies and at which university. Not only that, but also targeting graduating class students allows the researcher to include students from different batches, including medicine and technology students. (2) Students who have been regularly attending classes in the current semester and projected that they can provide recent information regarding the quality of education services of their university. (3) Able to provide information in both English and Amharic language and it is assumed that students who have the ability in communication skills can easily share information to the current study objectives.

From purposefully selected graduating class students, the study participants were selected via simple random sampling technique. This is the fact that the simple random sampling

technique permits each member of the population under study has an equal and independent chance of being selected and the selection of one individual in no way affects selection of another individual (Cohen, *et al.*, 2000; Creswell, 2012; Gay and Mills, 2012; Goodwin, 2010; Johnson and Christensen, 2014).

However, among other factors, the quality of the research outcome depends on the size and representativeness of the sample (Taplin, 2005) because the sample size is concerned with the function of the population of interest, the desired confidence level, and level of precision. When sample size increases precision also increases as a result of decreasing variability (Creswell, 2003). Therefore, when determining a sample size, it is essential to make sure that the sample is representative of the population to reduce biased conclusions and the sample is precise enough (Taherdoost, 2018).

There are several approaches to determining the sample size. These include: using a census for small populations, imitating a sample size of similar studies, using published tables, and applying formulas (such as formula for calculating a sample for proportions, finite population correction for proportions, a simplified formula for proportions and formula for sample size for the mean) to calculate a sample size (Israel, n.d). In the current study, the approach that was used to determine the number of student samples is a simplified formula provided by Yamane (1967) as presented hereunder:

$$n = \frac{N}{[1 + N(e)^2]}$$

Where, **n** is sample size, **N** is total the population size and **e** is the level of precision.

Thus,  $n = \frac{5982}{[1+5982(0.05)^2]}=400$ . Of which, 285 were male students and the remaining 115 were female ones.

In addition, to take again a representative sample from each sample university, college, department, and sex proportionate sampling technique was employed, because proportionate

sampling is used to classify the population depending upon their known characteristics and randomly take the sample from each group (Haque, n.d).

Thus, in the first place, to calculate a representative sample from each university, first, the total number of graduating class students in each sample university are divided into the total number of students in the three sample universities i.e., 5982 and multiplied by the desired sample size, 400 (for instance, in Arba Minch University, the total number of graduating class students are 2559 and we can calculate  $2559 \div 5982 * 400 = 172$ ).

Secondly, to take a representative sample from college, the total number of graduating class students in each college are divided into the total number of graduating students in university and multiplied by the desired sample from university (for example, in Arba Minch University, College of Business and Economics, there are a total of 563 graduating class students and hence we can calculate  $563/2559*172=38$ ). Thirdly, to take a representative sample from each department, the total number of students in each department are divided into the total number of graduating students in college and multiplied by the desired sample from college ( for example, in Arba Minch University, Department of Management , there are a total of 199 graduating class students and hence we can calculate  $199/563*38=13$ ). Finally, to take a representative sample from each sex, we can divide the total number of one sex in the department into the total number of students in the department and multiplied by the desired sample from that department (for instance, in the Department of Management, there are 118 male students. So, we can calculate  $118/199*13=8$ ). The following Table 7 clearly shows the total population and sampling technique employed.

*Table 7 Total Population and Sample Taken from Study Universities and Sampling Technique*

<i>SN</i>	<i>Sample Universities</i>	<i>Total NO. of GC Students</i>	<i>Sample</i>	<i>Sampling Technique</i>	<i>Colleges/Schools /Institutes</i>	<i>Total NO. of Students</i>	<i>Sample</i>	<i>Sampling Technique</i>
<b>1</b>	AMU	2,559	172	Proportionate Stratified	College of Business and Economics [CBE]	563	38	Proportionate Stratified
					CMHS	402	27	>>
					College of Agriculture	188	12	>>
					CNCS	195	13	>>
					CSSH	205	14	>>
					AWIT	303	20	>>
					AMIT	587	39	>>
					School of Law	45	4	>>
					SPBS	71	5	>>
					CBE	440	29	>>
<b>2</b>	WSU	2,506	167	Proportionate Stratified	CNCS	186	12	>>
					College of Engineering	578	38	>>
					CEBS	145	10	>>
					College of Agriculture	265	18	>>
					College of Health Sciences	435	29	>>
					CSSH	275	18	>>
					SVM	57	5	>>
					School of Informatics	125	8	>>
					CBE	269	18	>>
					CSSH	236	16	>>
<b>3</b>	JKU	917	61	Proportionate Stratified	CNCS	166	11	>>
					CANRM	246	16	>>

*\*Source: Compiled from Arba Minch, Wolaita Sodo and Jinka Universities' Registrar Office*

**Where;** AMU=Arba Minch University; WSU=Wolaita Sodo University; JKU=Jinka University; CMHS=College of Medicine and Health Sciences; CNCS=College of Natural and Computational Sciences; CSSH=College of Social Sciences and Humanities; AWIT=Arba Minch Water Institute Technology; AMIT=Arba Minch Institute of Technology; SPBS=School of Pedagogical and Behavioral Sciences; CEBS=College of Education and Behavioral Sciences;SVM=School of Veterinary Medicine; CANRM=College of Agricultural and Natural Resource Management; GC=Graduating Class

Table 8a Sample Taken from each Department, Sex and Sampling Technique: Arba Minch University [AMU]

SN	CSSH	Male	Female	Total	The Sample Taken from each Department and Sex				
					Departments	Male	Female	Total	Sampling Technique
1.	English	20	12	32	2	2	-	2	Proportionate Sampling
2.	Amharic	5	9	14	1	1	-	1	
3.	'Gamocho'	20	4	24	2	2	-	2	
6.	Civics	25	11	36	2	2	-	2	
7.	History	18	12	30	2	2	-	2	
8.	Geography	24	15	39	3	2	1	3	
9.	Sociology	17	13	30	2	2	-	2	
	<b>Grand Total</b>	129	76	<b>205</b>	<b>14</b>	13	1	<b>14</b>	
<b>SPBS</b>									
1.	Psychology	15	10	25	3	3	-	3	Proportionate Sampling
2.	AELL	13	11	24	1	1	-	1	
3.	SNIE	10	12	22	1	-	1	1	
	<b>Grand Total</b>	38	33	<b>71</b>	5	4	1	<b>5</b>	
<b>CBE</b>									
1.	Accounting	95	24	119	8	6	2	8	Proportionate Sampling
2.	Economics	143	37	180	12	10	2	12	
3.	Hotel	11	12	23	2	-	2	2	
4.	Management	118	81	199	13	8	5	13	
5.	Management Tourism	30	12	42	3	3	-	3	
	<b>Grand Total</b>	397	166	<b>563</b>		27	11	<b>38</b>	
<b>School of Law</b>									
1	Law	35	10	45	5	5	-	5	Proportionate Sampling
	<b>Grand Total</b>	35	10	<b>45</b>	5	5	-	<b>5</b>	

\*Source: Compiled from Arba Minch University Registrar Data;

Where; CSSH= College of Social Sciences and Humanities; SPBS= School of Pedagogical and Behavioral Sciences; CBE= College of Business and Economics; AELL=Adult Education and Lifelong Learning; SNIE=Special Needs and Inclusive Education

Table 8b Sample Taken from each Department, Sex and Sampling Technique:Arba Minch University [AMU]

SN	AWIT	Male	Female	Total	The Sample Taken from each Department and Sex			Sampling Technique	
					Departments	Male	Female		Total
<b>Departments</b>									
1.	Hydraulics	82	21	103	7	6	1	7	Proportionate
2.	WR&IE	75	26	101	7	6	1	7	
3.	WS&EE	59	40	99	6	5	1	6	
	<b>Grand Total</b>	216	87	<b>303</b>	20	17	3	<b>20</b>	
<b>AMIT</b>									
1.	Civil	73	21	94	6	5	1	6	Proportionate
2.	Engineering	73	18	91	6	5	1	6	
3.	Electrical Eng.	94	17	111	7	6	1	7	
4.	Mech. Eng.	17	9	26	2	2	-	2	
5.	IT	20	13	33	2	2	-	2	
6.	Comp.	53	18	71	5	4	1	5	
7.	Science	96	33	129	9	7	2	9	
8.	Arch.&UP	18	14	32	2	2	-	2	
	Software Eng. Surveying Eng.								
	<b>Grand Total</b>	444	143	<b>587</b>	39	33	6	<b>39</b>	
<b>CAS</b>									
1.	Animal	13	7	20	1	1	-	1	Proportionate
2.	Science	20	5	25	2	2	-	2	
3.	Horticulture	14	5	19	1	1	-	1	
4.	Rural Dev't	20	2	22	1	1	-	1	
5.	Plant Science	16	8	24	2	2	-	2	
6.	NaRM	11	6	17	1	1	-	1	
7.	Forestry	34	8	42	3	2	1	3	
8.	Agribusiness Animal Health	12	7	19	1	1	-	1	
	<b>Grand Total</b>	140	48	<b>188</b>	12	11	1	<b>12</b>	

\*Source: Compiled from Arba Minch University Registrar Data

Where; AWIT=Arba Minch Water Institute Technology, AMIT=Arba Minch Institute of Technology; CAS=College of Agricultural Sciences; WR &IE=Water Resource and Irrigation Engineering; WS &EE=Water Supply and Environmental Engineering; IT=Information Technology; Arch. &UP=Architecture and Urban Planning

Table 8c Sample taken from each Department, Sex and Sampling Technique: Arba Minch University [AMU]

SN	CNCS	Male	Female	Total	The Sample Taken from each Department and Sex				Sampling Technique
					Departments	Male	Female	Total	
	<b>Departments</b>								
1.	Mathematics	9	1	10	1	1	-	1	Proportionate
2.	Chemistry	19	8	27	2	2	-	2	
3.	Industrial Chemistry	8	4	12	1	1	-	1	
4.	Forensic Chemistry	6	3	9	1	1	-	1	
5.	Biology	31	8	39	2	2	-	2	
6.	Biotechnology	21	12	33	2	1	1	2	
7.	Statistics	11	5	16	1	1	-	1	
8.	Geology	10	2	12	1	1	-	1	
9.	Sport Science	21	5	26	1	1	-	1	
10.	Physics	8	3	11	1	1	-	1	
	<b>Grand Total</b>	144	51	<b>195</b>	13	12	1	<b>13</b>	
	<b>CMHS</b>								
1.	Clinical Nursing	25	28	53	4	2	2	4	Proportionate
2.	Medical Laboratory	26	27	53	4	2	2	4	
3.	Public Health	38	19	57	4	3	1	4	
4.	Midwifery	23	22	45	3	2	1	3	
5.	Medical Radiology	8	19	27	2	-	2	2	
6.	Anesthesia	23	18	41	3	2	1	3	
7.	Medicine	93	33	126	7	6	1	7	
	<b>Grand Total</b>	236	166	402	27	17	10	<b>27</b>	

\*Source: Compiled from Arba Minch University Registrar Data

Where; CNCS=College of Natural and Computational Sciences; CMHS= College of Medicine and Health Sciences

Table 9a Sample Taken from each Department, Sex and Sampling Technique: Wolaita Sodo University [WSU]

S N	CSSH Departments	Male	Female	Total	The Sample Taken from each Department and Sex				Sampling Technique
					Departments	Male	Female	Total	
1	English	33	12	45	3	2	1	3	Proportionate
2	Sociology	22	8	30	2	2	-	2	
3	History	27	5	32	2	2	-	2	
4	Geography	37	10	47	3	2	1	3	
5	Social Anthropology	35	11	46	3	2	1	3	
6	PRC	34	12	46	3	2	1	3	
7	Wolaitatto	24	5	29	2	2	-	2	
	<b>Grand Total</b>	212	63	<b>275</b>	<b>18</b>	14	4	<b>18</b>	
	<b>CEBS</b>								
1.	Psychology	23	17	40	2	2	-	2	Proportionate
2.	ECCD	27	22	49	3	2	1	3	
3	EdPM	38	18	56	5	4	1	5	
	<b>Grand Total</b>	88	57	<b>145</b>	<b>10</b>	8	2	<b>10</b>	
	<b>CBE</b>								
1.	Accounting	53	25	78	5	4	1	5	Proportionate
2.	Economics	47	33	80	5	4	1	5	
3.	Tourism	21	11	32	2	2	-	2	
4	Management	58	44	102	7	4	3	7	
5	Marketing	53	42	95	6	4	2	6	
6	PA &DM	33	20	53	4	3	1	4	
	<b>Grand Total</b>	255	185	440	<b>29</b>	21	8	29	

\*Source: Compiled from Wolaita Sodo University Registrar Data

**Where;** CSSH=College of Social Sciences and Humanities; CEBS=College of Education and Behavioral Sciences; CBE=College of Business and Economics; PA&DM=Public Administration and Development Management; PRC=Public Relation and Communication, ECCD=Early Childhood Care and Development; EdPM=Educational Planning and Management

Table 9b Sample Taken from each Department, Sex and Sampling Technique: Wolaita Sodo University [WSU]

SN	School of Informatics Departments	Male	Female	Total	The Sample Taken from each Department and Sex				
					Departments	Male	Female	Total	Sampling Technique
1.	Information Technology	33	21	54	4	2	2	4	Proportionate
2.	Computer Sciences	21	17	38	2	1	1	2	
3.	Information Sciences	23	10	33	2	1	1	2	
	<b>Grand Total</b>	77	48	<b>125</b>	<b>8</b>	4	4	<b>8</b>	
<b>College of Engineering</b>									
1.	Civil Engineering	68	43	111	7	5	2	7	Proportionate
2.	Electrical Engineering	78	39	117	8	5	3	8	
3.	CTOM	62	35	97	6	5	1	6	
4.	Mechanical Engineering	59	21	80	5	4	1	5	
5.	Hydraulics	63	48	111	7	5	2	7	
6.	Arch. &UP	43	19	62	5	4	1	5	
	<b>Grand Total</b>	373	205	<b>578</b>	<b>38</b>	28	10	<b>38</b>	
<b>CAS</b>									
1.	Animal &Range Sciences	42	23	65	4	3	1	4	Proportionate
2.	Agro-economics	53	23	76	6	5	1	6	
3.	Agribusiness	47	24	71	5	4	1	5	
4.	NaRM	43	10	53	3	3	-	3	
	<b>Grand Total</b>	185	80	<b>265</b>	<b>18</b>	15	3	<b>18</b>	
School of Veterinary Medicine									
1	Veterinary Medicine	33	24	<b>57</b>	<b>5</b>	3	2	<b>5</b>	Proportionate

\*Source: Compiled from Wolaita Sodo University Registrar Data

Where; COTOM=Construction Technology Management; Arch. &UP= Architectural and Urban Planning; CAS=College of Agricultural Sciences; NaRM=Natural Resource Management

Table 9c Sample Taken from each Department, Sex and Sampling Technique: Wolaita Sodo University [WSU]

SN	CHS	Male	Female	Total	The Sample Taken from each Department and Sex				Sampling Technique
					Departments	Male	Female	Total	
<i>Departments</i>									
1.	Medical Lab.	47	23	70	5	3	2	5	Proportionate
2.	Midwifery	43	18	61	4	3	1	4	
3.	Clinical Nursing	48	10	58	4	3	1	4	
4.	Pharmacy	37	5	42	3	3	-	3	
5.	Anesthesia	36	7	43	3	3	-	3	
6.	Public Health	23	5	28	2	2	-	2	
7.	Medical Radiology	32	7	39	2	2	-	2	
8.	Medicine	65	29	94	6	4	2	6	
	<b>Grand Total</b>	331	104	<b>435</b>	<b>29</b>	23	6	<b>29</b>	
<i>CNCS</i>									
1.	Biotechnology	28	13	41	3	2	1	3	Proportionate
2.	Statistics	13	4	17	1	1	-	1	
3.	Chemistry	27	7	34	2	2	-	2	
4.	Sport Science	17	4	21	1	1	-	1	
5.	Geology	18	5	23	1	1	-	1	
6.	Biology	35	11	46	4	3	1	4	
	<b>Grand Total</b>	138	44	<b>182</b>	<b>12</b>	10	2	<b>12</b>	

\*Source: Compiled from Wolaita University Registrar Data

Where; CHS= College of Health Sciences; CNCS=College of Natural and Computational Sciences; CNCS=College of Natural and Computational Sciences

Table 10a Sample Taken from each Department, Sex and Sampling Technique: Jinka University [JKU]

SN	CNCS Departments	Male	Female	Total	The Sample Taken from each Department and Sex			Sampling Technique
					Departments	Male	Female	
<b>1</b>	Biology	36	11	47	4	3	1	Proportionate
<b>2</b>	Chemistry	28		28	2	2	-	
<b>3</b>	Mathematics	13	1	14	1	1	-	
<b>4</b>	Physics	21		21	1	1	-	
<b>5</b>	Sport Science	36	4	38	2	2	-	
<b>6</b>	Statistics	16		18	1	1	-	
	<b>Grand Total</b>	150	16	<b>166</b>	11	10	1	<b>11</b>
	<b>CBE</b>							
	<b>Departments</b>							
<b>1</b>	Accounting	26	10	36	3	2	1	Proportionate
<b>2</b>	Economics	50	22	72	5	4	1	
<b>3</b>	Management	52	66	118	8	3	5	
<b>4</b>	Tourism Mgt.	10	33	33	2	-	2	
	<b>Grand Total</b>	138	131	<b>269</b>	18	9	9	<b>18</b>
	<b>CSSH</b>							
	<b>Departments</b>							
<b>1</b>	English	32	5	37	3	3	-	Proportionate
<b>2</b>	Geography	55	29	84	6	4	2	
<b>3</b>	History	30	2	32	2	2	-	
<b>4</b>	Psychology	29	14	43	3	2	1	
<b>5</b>	Social Anthropology	37	3	40	2	2	-	
	<b>Grand Total</b>	183	53	<b>236</b>	16	13	3	<b>16</b>

\*Source: Compiled from Jinka University Registrar Data

Where; CNCS=College of Natural and Computational Sciences; CBE=College of Business and Economics; CMHS= College of Social Sciences and Humanities; Mgt.=Management; CSSH=College of Social Sciences and Humanities

Table 10b Sample Taken from each Department, Sex and Sampling Technique:Jinka University [JKU]

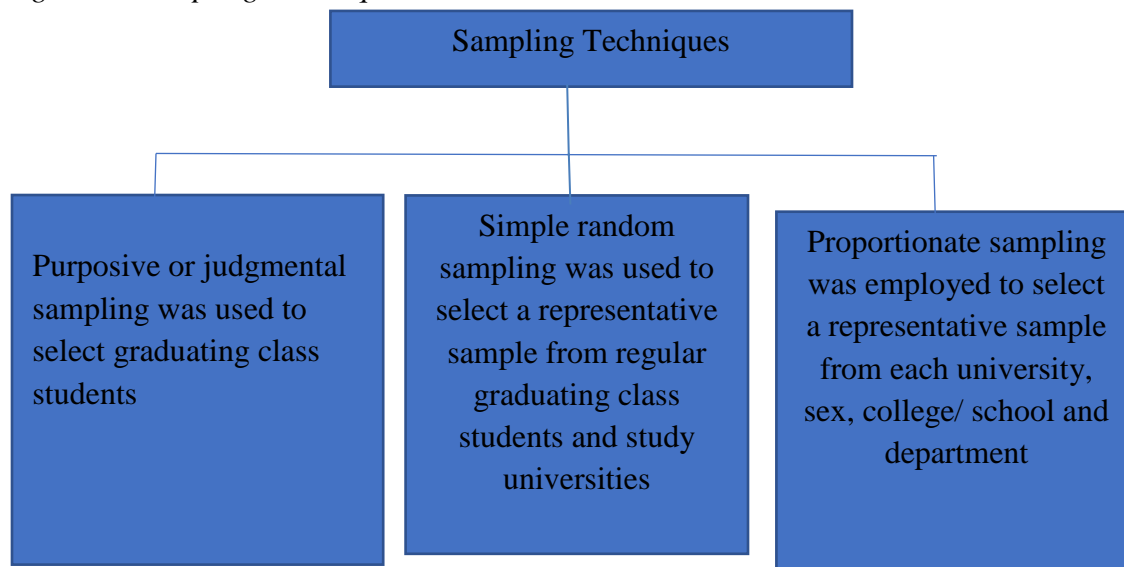
SN	CANRM	Male	Female	Total	The Sample Taken from each Department and Sex				
					Departments	Male	Female	Total	Sampling Technique
	<b>Departments</b>								
1.	Agribusiness	30	12	42	3	2	1	3	Proportionate
2.	Agro-economics	25	24	49	3	2	1	3	
3.	Animal Health	24	12	36	2	2	-	2	
4.	Horticulture	24	8	32	2	2	-	2	
5.	NaRM	16	27	43	3	1	2	3	
6.	Plant Science	34	10	44	3	2	1	3	
	<b>Grand Total</b>	153	93	<b>246</b>	16	11	5	<b>16</b>	

\*Source: Compiled from Jinka University Registrar Data

Where; CANRM= College of Agricultural and Natural Resource Management; NaRM=Natural Resource Management

On the other hand, focus group discussion and interview participants were selected purposefully from three sample universities. This is because purposeful or judgmental sampling technique is one of the most commonly used sampling mechanisms in qualitative research, and its choice depends on the research question, types of data collection methods deployed, availability and experiences of participants and resources of the researcher (Wood, 2012). Similarly, as indicated in Saunders (2009) purposive sampling enables you to use your judgment to select cases that will best provide you to answer your research question(s) and to meet your study objectives. In general, the following Figure 10 shortly summarizes the sampling techniques that employed in the study.

Figure 10 Sampling Techniques



Source: Researcher's Own Construct

### 3.8 Data Gathering Instruments/Tools

The selection of data collection techniques is determined by the extent to which it allows the researcher to obtain information needed to address the research questions. Based on this assumption, in this study, self-developed questionnaire, document analysis, semi-structured interview and focus group discussion were main data gathering tool. Each data gathering instruments that were used in this study is described in detail here under:

**3.8.1 Questionnaires:** As mentioned earlier, in this study, a self-developed questionnaire was designed via detail literature review as a thought of Lodico, Spaulding and Voegtle (2006) to measure educational service quality of Ethiopian Public Higher Education Institutions [EPHEIs]. This is the fact that questionnaire is a widely used and useful instrument for collecting survey information and provides structured numerical data and straightforward to analyze (Wilson and McLean, 1994). Moreover, it is a versatile tool to obtain information about the thoughts, feelings, attitudes, beliefs, values, perceptions, personality, and behavioral intentions of research participants (Johnson and Christensen, 2014).

In the study, one set of questionnaires was prepared in English language and the questionnaire has eight parts. The first part of the questionnaire presents respondents' demographics and have eleven question items for respondents with answers to select from. These include sex, age, study university, program division, year of entry, college/institution/school, department, students' university choice, transferred student from another institution, a students' plan to transfer to another institution and current Cumulative Grade Point Average (CGPA).

The second and third parts of the questionnaire present items pertaining to the quality of a university's academic and administrative services. The fourth part of the questionnaire explains items related to the quality of the general infrastructure. The fifth and sixth parts of the questionnaire present items associated with the quality of the support services and facilities and the quality of the students' welfare services. The seventh and eight parts of the questionnaire present items related to access and university reputation. The education service quality questionnaire included a total of one hundred eighteen (116) items. All the question items were gauged in a Five-point Likert scales ranging from 1=Strongly Disagree [SD] to 5=Strongly

Agree [SA], where participants will be required to put a tick mark in the box that best represented their best opinions.

Finally, the ninth part of the questionnaire describes students' overall satisfaction questionnaire. Fourteen (14) items which asks students' overall satisfaction on five main facets and nine sub-facets of education service quality were prepared to measure students' overall satisfaction towards the services being provided by the university. The response options were gauged in a Five-point Likert scales ranging from 1=Extremely Dissatisfied [ED] to 5=Extremely Satisfied [ES].

**3.8.2 Document Analysis:** In the study, document analysis was used to gather quantitative data on students' academic performance. And hence, the status of students' academic performance was examined using the current semester Cumulative Grade Point Average [GPA], because GPA is an important tool to measure students' academic performance (Thomson, 2018; Ali, *et al.*, 2009).

In addition, many earlier associated as well as not associated studies have used test scores to measure students' academic performance. For example, Martirosyan, *et al.* (2014) in Armenian higher education used students' current CGPA to investigate students' satisfaction with higher education service quality and academic performance and found that students who reported lower satisfaction with educational service had lower academic performances. On the contrary, students who reported higher satisfaction with educational service had higher academic performances.

In studying Information Communication Technology [ICT] adoption impacts on students' academic performance, Basri, *et al.* (2018) in Saudi Arabia used students' GPA and found a significant correlation between ICT adoption and students' academic performance.

Gunuc (2014) in Turkey employed students' GPA to study the relationships between student engagement and their academic performance and identified that there were significant relationships between the students' academic performance and the students' cognitive, behavioral and emotional engagement in learning process.

Others researchers like Fialho, *et al.* (n.d) in Portugal employed students' GPA to examine the effect of teaching quality that reflected in three domains, such as, teacher commitment, teaching methodologies and evaluation methodologies on students' academic performance and found that teaching quality has a positive and significant relation with students' academic performance. Furthermore, Gooding (2001) at Iowa state university used standardized test scores to investigate the relationship between parental educational level and academic success of college freshman and the findings indicated that parent educational level, family structure/marital status, and income range have a positive influence on students' academic potential and performance. Gooding's (2001) finding further indicated that students whose parents had higher educational levels performed higher on standardized tests than parents with lower educational levels.

**3.8.3 Interviews:** To make the study more rigorous, semi- structured interview was conducted with purposefully selected instructors, department heads, college deans and other leaders of the university because semi-structured interview allows the informants freedom to express their views in their own terms (Cohen and Crabtree, 2006). Likewise, as stated in Wood (2012) and Morse and Richards (2002) semi-structured interview is a form of one-on-one interviews that involve open-ended questions and generate detailed narrative data on an individual's unique knowledge and experience.

In addition, in the semi-structured interview, the interviewers has a set of questions on an interview schedule and free to probe interesting areas that arise from participants' interests or concerns and ask follow-up questions that will elucidate and illuminate particular topic and finally lead to obtain a rich data (Patton, 2002). Therefore, within each topic, the interviewer is free to conduct the conversation as he/she thinks fit, to ask the questions he/she deems appropriate in their own words, ask for clarification if the response is not clear and to establish his/her own style of conversation (Corbetta, 2003).

#### **3.8.4 Focus Group Discussion (FGD):**

Upon the completion of interview sessions, focus group discussion was conducted with purposefully selected regular graduating class students to get a rich data and to compare results among different groups (Freitas, Oliveira, Jenkins and Popjoy, 1998; Neuman, 2007; Dilshad and Latif,2013; Masadeh, 2012) and triangulate interview and questionnaire results (Cohen, et al., 2000). Furthermore, as indicated in Morrow (2010), Coenen, Stamm, Stucki and Cieza (2012) and Dilshad and Latif (2013) focus groups may serve as a rich data source by exploring people's inner feelings and attitudes through group interaction as compared to other data gathering tools, such as, questionnaire, observation and so on. Likewise, as indicated in Kumar (2011) using

focus group interview, the researcher explores the perceptions, experiences and understandings of a group of people who have some experiences in common with regard to a situation or event.

Moreover, focus group brings respondents together in a group situation to discuss the research questions in an interactive group setting (Greene and Harris, 2011). And the interaction between individuals will lead to a shared understanding of the questions posed by the researcher (Gay and Mills, 2012). Thus, the focus group participants present their own views and experiences, but they also hear from other people (Ritchie and Lewis, 2003). Morgan (1997) urges that focus groups create a concentrated amount of data in a very short span of time and builds confidence in those who are unwilling and afraid to be interviewed alone (Owen, 2001). By the same token, as explained by Greene and Harris (2011) in some cases, focus group alleviates the pressure that will be created by a one-to-one interview by offering a more supportive, non-threatening climate for respondents, because some individuals may be more confident in a group and find the focus group a more comfortable encounter than individual interview.

According to Casey and Krueger (2000) focus group provides a more natural environment than that of individual interview because participants are influencing and influenced by others view. Hence, the researcher can observe session participants, while interacting and sharing specific attitudes and experiences about the topic (Berg, 2001). In general, "focus groups create opportunities for participants to build on others' insights, contradict them, or refine them, generating insight that would not emerge through individual interviews" (Wood, 2012, p.3).

However, in focus group discussion, one of the most important considerations is group size. Different focus group texts and research materials advice different group size for focus group discussion. With few differences, many authors (for example, Neuman, 2007; Morgan,

1997; Patton, 2002; Stewart and Shamdasani, 1990) suggest that the optimum group size to focus group discussion is six to twelve members in a room with a moderator to discuss about the topic. They argued that if focus group discussants are less than six, it is difficult to provide the synergy required and the information gained may not be rich and adequate enough and one or two persons may attempt to dominate the whole conversation.

While a group with more than twelve participants is practically difficult to manage or moderate and the participants may not find adequate opportunities to talk. In relation to this, Bloor, *et al.* (2001) contend that too smaller size potentially results in limited discussion and are at risk of cancellation if just one or two participants fail to turn up and in a big group participant may feel that they have not had adequate time to express their views and opinions. Additionally, Billups (2012) argues that too few groups will deprive you of varying views while too large group voices may never be heard. Based on these assumptions, in this study, six to seven focus group discussants were participated in each university to discuss on the issues related educational service quality, their satisfaction and learning outcomes.

Another critical attention area in focus group is group composition. Most qualitative research scholars, for example, Morgan (1997); Patton (2002); Neuman (2007) suggests that focus group works better in homogenous groups than heterogeneous one. They argue that if the focus group participants belong to the same background, it will ensure the free flowing, open and sincere discussion among the participants. In addition, Bloor, *et al.* (2001) further contends that heterogeneous group may result in potential conflict and hence the particular topic is not dealt with in depth. Therefore, both group size and composition are critical in shaping the group dynamics and determining how, and how well, the group process works (Ritchie and Lewis,2003). Taking these scholars' thoughts into consideration, in the present study, three focus

group discussions were conducted with mere regular graduating class students in each sampled university.

Finally, the other imperative concern in focus group discussion is the place of focus group. The focus group should be conducted in conducive and welcoming environment. This is because when students are participating in comfortable and familiar surroundings, they are more likely to be candid and relaxed in their conversation (Billups, 2012). In addition, selecting suitable environment plays an important role to conduct successful focus group. In connection to this, Billups (2012) explained that the key to a successful focus group session is choosing welcoming environment. Based on these perspectives, in the study; therefore, care was taken while choosing a focus group place and focus group discussion sessions with students were conducted in a conducive environment.

### **3.9 Data Gathering Procedures**

Before conducting the study, permission should be obtained from the selected universities for the study. To do so, first, the researcher has received an official letter of cooperation from Addis Ababa University (the university where the researcher has been currently attending his doctoral education) to sampled universities. Then after, the researcher completed the permission process with each sample university to conduct the study. Afterwards, the data gathering process was conducted turn by turn with the study participants.

#### **3.9.1 Quantitative Data Collection Procedures**

Before formal dissemination of the questionnaire, the instrument's validity and reliability was subject to pilot testing because piloting the questionnaire principally increases the reliability, validity and practicality of the instrument (Cohen, Manion and Morrison, 2007).As indicated in Ghazali (2016) ensuring the validity and reliability of the instrument is an important procedure in

any research as valid instrument measures what the questionnaire supposed to measure and reliable instruments are consistent.

***Quantitative Instrument Validation:***Content validity is used to ascertain whether the content of the questionnaire is appropriate and relevant to the study purpose (Parsian and Am, 2009). In addition, content validity is important to check whether the designed items measure or represent the intended study objective or content area (Creswell, 2012). And it is mainly conducted by experts. Each reviewer independently will rate the relevance of each item using a 4-point Likert scale (1=not relevant, 2=somewhat relevant, 3=relevant, 4=very relevant). Then the Content Validity Index [CVI] is used to estimate the validity of the items (Lynn, 1996).

In order to conduct content validation, the researcher selected his colleagues from Arba Minch University [AMU], School of Pedagogical and Behavioral Sciences [SPBS]. The experts were chosen based on their teaching experiences in HEIs, research experiences and well-informed knowledge of the discipline of Educational Planning and Management. The following Table 11 shortly summarizes the profile of content validity evaluators.

*Table 11 Profile of Content Validity Evaluators*

<i>Content Validity Evaluators [CVE]</i>	<i>Teaching Experience in HEIs (in years)</i>	<i>Title</i>	<i>Field of Study</i>	<i>Highest Academic Rank</i>	<i>Current Position</i>
CVE1	19 Years	PhD	Educational Policy and Leadership	Assistant Professor	Head, Department of Pedagogical Sciences
CVE2	31 Years	PhD	Educational Policy and Leadership	Assistant Professor	Assistant Professor of Pedagogical Sciences
CVE3	7 Years	MA	Special Need and Inclusive Education	Assistant Professor	Institutional Quality Assurance Coordinator
CVE4	6 Years	MA	Educational Leadership and Management, Special Need and Inclusive Education	Assistant Professor	Higher Diploma Programme [HDP] Coordinator
CVE5	6 Years	MA	Educational Leadership and Management	Lecturer	PhD Candidate

*Source: Researcher's own work*

**Where:** CVE=Content Validity Evaluator; HEIs=Higher Education Institutions

Upon the completion of experts' selection process, the questionnaire was administered to content validity evaluators. The questionnaire consists two parts. The first part of the questionnaire contains information for experts about content validity and their demographic information. While, the second part of the questionnaire contains items pertaining to the education service quality. A total of 124 items were administered to the content evaluators. The response options were gauged in a four-point rating scales ranging from (1) Not Relevant [NR] (2) Somewhat Relevant [SR] (3) Relevant [R] and (4) Highly Relevant [HR] as a thought of Lynn (1996). Apart from rating each item, the experts are encouraged to provide verbal and written comments to improve the relevance of items to the targeted domain.

***Content Validation Results:*** Upon administering the questionnaire to the selected content validity assessors, the researcher followed two major techniques to validate the contents of the questionnaire. Firstly, the researcher contacted face-to-face with each content validity evaluator while collecting filled questionnaire. The researcher orally discussed the content validity of the questionnaire with each content validity assessor. The researcher considered some comments forwarded from content validity evaluators.

The main comments raised during oral discussion with each content validity evaluator were: length of the directions, repetition of items, items that are not reflecting main and subtitles, proposing new items to be added, consistency and ordering of items, unnecessary use of conjunctions and length of the directions. After considering content evaluators' comment as an input, the researcher thoroughly re-read all items and identified some potential errors. The consistency and ordering of items, unnecessary use of conjunctions in items and length of the directions were corrected. Two new items that pertain to students with disability services were also designed and added in under general campus infrastructure dimension. Secondly, the researcher quantitatively analyzed the content validity of the instrument using Item Content Validity Index [I-CVI] and Scale Content Validity Index [S-CVI]. The subsequent section details the quantitative analysis of content validity of the present instrument.

***Calculating Content Validity Index:*** On top of an input received via oral discussion with content validity evaluators, the researcher also statistically checked the content validity of the questionnaire. As indicated earlier, the researcher administered questionnaire to five content validity evaluators who selected from AMU, School of Pedagogical and Behavioral Sciences [SPBS]. All content validity evaluators rated the relevancy of each educational service quality item and returned back to the researchers.

The content validity of the questionnaire was calculated using Content Validity Index [CVI]. In principle, CVI used to measure content validity quantitatively by calculating cumulative agreement of experts in each item. The experts' decision in each construct is important to either include, exclude or revise the items ( Polit and Beck, 2006).

In the literature, researchers suggest the acceptance level of content validity based on the numbers of experts. The acceptance rate of content validity rate varies according the number of content validity evaluators involved in the content evaluation of the questionnaire. The following Table 12 shortly summarizes scholars' recommendation with regard to the acceptance range of content validity index of the items.

*Table 12 Summary of Cut-off Score for Content Validity Index [CVI]*

<i>Number of Experts</i>	<i>Acceptable CVI Values</i>	<i>Source</i>
Two experts	At least 0.80	Davis, 1992
Three to five experts	Should be 1	Denise, <i>et al.</i> , 2007
At least six experts	At least 0.83	Denise, <i>et al.</i> , 2007
Six to eight experts	At least 0.83	Lynn, 1986
At least nine experts	At least 0.78	Lynn, 1986

*\*Source: Researcher's own work*

The content validity index can be measured in two ways (1) Item Level Content Validity Index [I-CVI] and Scale-Level Content Validity Index [S-CVI]. The I-CVI can be mathematically calculated as the number of experts' agreements in each item is divided by the total number of expert raters. For example, for the first item that read as 'My Lecturers/Professors have a positive attitude towards students', all five content validity assessors ranked as 4=Highly Relevant [HR]. Thus, the I-CVI of this item calculated as:  $5 \div 5 = 1$ . In this study, the result of CVI was judged according to Denise, *et al.* (2007) recommendation: If three to five experts are involved in the content validation of the questionnaire, the acceptable values of CVI should be 1. On the other hand, S-CVI is calculated as adding each acceptable I-CVI result or total relevant divided by the total number of items. In this study, items yielded

acceptable (1) I-CVI were included to calculate the S-CVI and items scored 0.8 I-CVI were further improved and items scored 0.4 I-CVI were totally removed from the questionnaire. The following Table 13 shows I-CIV result of each item and S-CIV/Ave result.

*Table 13 Content Validity Index of Education Service Quality Questionnaire*

<i>Items</i>	<i>Experts in Agt.</i>	<i>I-CVI</i>	<i>Items</i>	<i>Experts in Agt.</i>	<i>I-CVI</i>	<i>Items</i>	<i>Experts in Agt.</i>	<i>I-CVI</i>	<i>Items</i>	<i>Experts in Agt.</i>	<i>I-CVI</i>
1	5	1	35	2	0.4	69	5	1	103	2	0.4
2	5	1	36	5	1	70	5	1	104	5	1
3	5	1	37	5	1	71	5	1	105	5	1
4	5	1	38	5	1	72	5	1	106	5	1
5	5	1	39	2	0.4	73	5	1	107	5	1
6	5	1	40	5	1	74	5	1	108	5	1
7	5	1	41	5	1	75	2	0.4	109	5	1
8	5	1	42	5	1	76	5	1	110	5	1
9	5	1	43	2	0.4	77	5	1	111	2	0.4
10	5	1	44	5	1	78	5	1	112	5	1
11	5	1	45	5	1	79	5	1	113	5	1
12	5	1	46	5	1	80	4	0.8	114	5	1
13	5	1	47	5	1	81	2	0.4	115	5	1
14	4	0.8	48	5	1	82	5	1	116	2	0.4
15	5	1	49	5	1	83	5	1	117	5	1
16	5	1	50	5	1	84	5	1	118	5	1
17	5	1	51	5	1	85	5	1	119	5	1
18	4	0.8	52	5	1	86	5	1	120	5	1
19	5	1	53	5	1	87	5	1	121	5	1
20	5	1	54	5	1	88	5	1	122	5	1
21	5	1	55	5	1	89	5	1	123	5	1
22	5	1	56	5	1	90	5	1	124	5	1
23	5	1	57	5	1	91	5	1			
24	5	1	58	5	1	92	5	1			
25	5	1	59	5	1	93	5	1			
26	5	1	60	5	1	94	5	1			
27	5	1	61	5	1	95	5	1			
28	5	1	62	5	1	96	5	1			
29	5	1	63	5	1	97	5	1			
30	5	1	64	5	1	98	5	1			
31	2	0.4	65	2	0.4	99	5	1			
32	5	1	66	5	1	100	5	1			
33	5	1	67	5	1	101	5	1			
34	1	1	68	5	1	102	5	1			
Total Relevant= 113.4			Proportional Relevant [S-CVI/Ave]=113.4÷124=0.914								

*\*Source: Researcher's own work*

**Where;** *I-CVI=Item Level Content Validity Index; S-CVI/Ave=Scale Level Content Validity Index; Agt.=Agreement*

As mentioned earlier, a total of 124 items that intended to measure education service quality were administered to content validity evaluators. As we can see from the above Table 12, I-CVI was conducted for each item. The items yielded I-CVI acceptable value (1) and moderate value (0.8) were retained and the items that yielded low I-CVI (0.4) were removed from the questionnaire.

Accordingly, a total of 114 items yielded I-CVI (1) acceptable value and three items yielded moderate (0.8) were retained. However, three items yielded moderate I-CVI (0.8), necessary improvements and re-structuring were made in the major questionnaire. On the other hand, 10 items that yielded a low I-CVI (0.4) were totally dropped from questionnaire. After making intensive revisions on each item, 114 yielded acceptable I-CVI and 2 corrected items and totaling 116 items were retained.

In addition, based on the written comments forwarded by content validity evaluators, the other two new items that reflecting students with disability services were added in under the Quality of General Infrastructure Subsection. Therefore, a total of 118 items that intended to measure Ethiopian Higher Education Service Quality were ready for pilot testing. The following Table 14 shortly summarizes item's revision based I-CVI result.

*Table 14 Summary of Items Revision*

<i>Items</i>	<i>Revisions Made after I-CVI Result</i>	<i>Corrections Made</i>
Q14 & 18	These items describe the same thought	Merged together and constructed as a single item
Q31	Hiddenly repeated in the same subtitle ‘Academic Resources and Facilities’	Removed from the questionnaire
Q35 & 39	Are hiddenly repeated in the same Sub-section entitled ‘Academic Program Issues’	Removed from the questionnaire
Q43	Doesn’t reflect the subtitle that intended to measure ‘Quality of Instructional Practices’	Removed from the questionnaire
Q65	Doesn’t reflect the subtitle that supposed to measure ‘Quality of Library Services’	Removed from the questionnaire
Q75	Hiddenly repeated in the same Sub-section i.e., Administrative Staffs’ Attitude and Behavior and removed from the questionnaire	Removed from the questionnaire
Q80	Unnecessarily asked in under ‘Quality of Administrative Process and Procedures’ Sub-section	Necessary corrections were made and moved to ‘Non-Academic Staffs’ Competence’ Sub-section
Q81	Doesn’t reflect the subtitle that supposed to measure ‘Quality of Administrative Process and Procedures’	Removed from the questionnaire
Q103	Hiddenly repeated in the same subtitle that read as ‘Quality of Support Services and Facilities’	Removed from the questionnaire
Q111	Repeatedly asked in under Quality of Students’ Welfare Services’ subtitle that already asked in under ‘Quality of Support and Facilities’ subtitle	Removed from the questionnaire
Q116	Doesn’t reflect the subtitle that intended to measure ‘University Access to Students’	Removed from the questionnaire

*\*Source: Researcher’s own work*

*Where; Q=Question; I-CVI=Item Level Content Validity Index*

### **Pilot Testing**

Once the content validation of an instrument has been completed, the questionnaire was piloted to ensure the readability, reliability and further improvement of the validity of items (Gay and Mills, 2012; Saunders, 2009). Based on this premise, the researcher conducted a pilot study at Hawassa University (one of the research universities in Ethiopia). In the literature, there is no consistent number of participants for the pilot study. Different scholars suggest a different number of participants for the pilot study. For example, Gay and Mills (2012) and Johnson and Christensen (2014) suggest a minimum of 5 to 10 groups of people for piloting the instrument. Others like Saunders (2009) say the number of people with whom you pilot depends on your research question(s), the size of your research project, the time and money resources you have available, and how well you have initially designed your questionnaire. In addition, Mulusa (1990) recommends that piloting should involve at least 10 percent of the sample size for the main study.

By taking the above scholars' suggestions into consideration, the researcher conducted a pilot study on forty (40) regular undergraduate GC students at Hawassa University as per Mulusa (1990) who recommends that piloting should involve at least 10 percent of the sample size for the main study. Of which twenty-five (25) were male respondents and the remaining fifteen (15) were female ones. The participants for the pilot study were purposefully selected from different departments. Afterwards, the researcher and his research assistants properly disseminated the questionnaire to the pilot study participants.

Brief orientation about the purpose of the study and how to fill the questionnaire clearly introduced to the participants who voluntarily involved in the pilot study. The study participants' suggestion for time of returning the filled questionnaire to the researchers was considered and

their informed consent was also secured. Since the questionnaire sections were somewhat lengthy, a one-week period was given to them to return the questionnaire back to the researchers.

The questionnaire was prepared in English language. Brief introduction and instruction were clearly stated in the questionnaire. The questionnaire has two parts. The first part of the questionnaire contains respondents' demographic information and general direction on how to fill the questionnaire. The second part of the questionnaire includes items pertaining to the educational service quality questionnaire. All of them filled out the questionnaire and returned the questionnaire back to the researchers. The following Table 15 shows the detail information about the response rate from a pilot study.

*Table 15 Response Rate from Pilot Survey (N=40)*

<i>Group of Respondents</i>	<i>Program</i>	<i>Program Level</i>	<i>Sample (n)</i>	<i>Responses (n)</i>	<i>Responses (%)</i>
Graduating Class students	Regular	Undergraduate	40	40	100%

*\*Source: Researcher's own work*

**Where; N=Number**

**Reliability Analysis:** After collecting the questionnaire from pilot study participants, the reliability analysis was conducted in order to further check internal consistency of the items. The reliability was checked at Cronbach's alpha 0.5 using Statistical Package for Social Sciences [SPSS] v.20. The reliability of each main dimension and sub dimension were checked. The reliability result was judged according to George and Mallery (2003) rule of digit: > 0.90 = Excellent, 0.80 - 0.89 = Good, 0.70 - 0.79 = Acceptable, 0.60 - 0.69 = Questionable, 0.50 - 0.59 = Poor, <0.50 = Unacceptable. The data in below Table 16 show the reliability coefficient of HESQM main dimensions and sub dimensions. The reliability analysis result confirms that the internal consistencies of the items were very strong. The following Table 16 clearly summarizes the reliability result of the questionnaire.

*Table 16 Reliability Results of Education Service Quality Questionnaire (N=40)*

<i>Higher Education Service Quality Facets/Dimensions</i>	<i>NO. of Items</i>	<i>Deleted Items</i>	<i>Cronbach's \Alpha Result</i>	<i>Leveled as George &amp; Mallery (2003)</i>
<b>Main Facet-1: Academic Service Quality</b>				
<b>Sub Dimensions</b>				
Academic Staffs' Attitude and Behavior	10	-	.813	Good
Academic Staffs' Competence	9	-	.800	Good
Academic Facilities and Resources	12	-	.912	Excellent
Academic Program Issues	5	-	.845	Good
Quality of Instructional Practices	18	-	.905	Excellent
Quality of Library Services	7	-	.868	Good
<b>Sub Total</b>	<b>61</b>		<b>.962</b>	<b>Excellent</b>
<b>Main Facet-2: Administrative Service Quality</b>				
<b>Sub Dimensions</b>				
Admirative Staffs' Attitude and Behavior	10	-	.902	Excellent
Quality of Admin. Processes and Procedures	3	-	.879	Good
Administrative Staffs' Competence	5	1	.843	Good
<b>Sub Total</b>	<b>17</b>		<b>.928</b>	<b>Excellent</b>
Main Facet -3: Quality of General Infrastructure	11	1	.927	Excellent
Main Facet-4: Quality of Support Services and Facilities	12	-	.912	Excellent
Main Facet- 5: Quality of Students' Welfare Services	5	-	.796	Acceptable
Main Facet- 6: University Access to Students	5	-	.846	Good
Main Facet: 7: University Reputation	6	-	.917	Excellent
<b>Full Scale</b>	<b>116</b>	<b>2</b>		

*\*Source: Researcher's own work*

*Where; N=Number*

The above Table 16 presents the reliability results of educational service quality questionnaire. As summarized in table, the reliability results indicate that majority of the of facets of education service quality were yielded acceptable alpha value, except for two items that

explaining the attributes of the non-academic staffs' competence and quality of the general infrastructure. These two items yielded unacceptable alpha result (0.46 and 0.48 respectively) according to George and Mallery (2003) and were dropped from the questionnaire. After making all these corrections, a total of one hundred sixteen (116) items were retained and disseminated to regular undergraduate graduating class students for final data collection.

***Administration of the Questionnaires:*** After ensuring the content validity and reliability of the instrument, the researcher followed a scientific procedure to administer the questionnaire to students. The research ethical issues were maintained before administering the questionnaire. Through classroom instructors, department heads and student union representatives, the researcher and his research assistant selected some students from randomly selected graduating class who facilitate the quantitative data collection process as well as collect quantitative data. In addition, the researcher conducted a preliminary meeting with graduating class students in each sample university who randomly selected from sample universities to orient the purpose of the study, obtain informed consent and how to fill and when to return the questionnaire.

The researcher oriented the purpose of the study and obtained their written informed consents (see the consent form, Appendix-F). After securing the students' written consent, the questionnaires were distributed to randomly selected graduating class students. In the preliminary page of the questionnaire, the purpose of the research, confidentiality of the information and general directions on how to fill the questionnaire were explained. Since the questionnaire is somewhat lengthy, a one-week period was given to properly fill and return the questionnaire back to the data collectors who assigned in each sample university.

***Generation of Document Data:*** As mentioned in the previous section, document analysis was used to gather quantitative data on students' academic performance. In this study, the

students' current semester Cumulative Grade Point Average [GPA] was employed to measure students' academic performance. Students' data on current semester CGPA were collected from students themselves. In the questionnaire, students were asked to state their current semester CGPA in order to collect data on their academic performance. In addition, for the accuracy and reliability of information on students' academic performance, the researcher also collected quantitative data on students' academic performance from each sample university registrar office. Before collecting data on students' current semester CGPA from registrar offices, the researcher informed about the confidentiality of information to registrar office workers, such as associate registrars and registrar directorate directors. Afterwards, through sample universities' registrar directorate directors and associate registrars, the researcher properly collected the reliable data on students' current semester CGPA.

### **3.9.2 Qualitative Data Collection Procedures**

***Qualitative Instrument Validation:*** The content validity of qualitative data collection tools was checked before final data collection. The selected content validity evaluators who evaluated the quantitative instrument and the researcher's supervisors were asked to evaluate the content validity of the qualitative data gathering tools that employed in the study. The evaluators were encouraged to forward their written feedbacks and oral comments on the relevance, language clarity, and appropriateness of the qualitative items to study objectives.

***Qualitative Validation Results:*** The content validity assessors and the researcher supervisors provided valuable oral and written comments on both semi-structured interview and focus group guides. The assessors mainly commented on the length of the items, repetition of items, and language clarity. Based on their comments, necessary amendments were made.

***Semi-structured Interview:*** Following the qualitative instrument validation, the interview session was conducted with purposefully selected participants. The interview participants were mainly chosen based on the teaching, leadership and management experiences in higher education institutions, knowledge of educational services provided in the university, and participants' management positions that directly related to the students' services. Semi-structured interview consisted of six items were developed to examine the respondents' perception towards education service quality. The interview items mainly focus on the overall status of the higher education service quality. The interview participants were asked about how they express the overall education service quality of their respective university, poorly offered services, and students complain with regards to education service quality. In addition, the participants were also encouraged to respond how they compare their respective university performance in educational service quality with other Ethiopian universities. The interview participants were also asked about the impact of education service quality on students' learning and the strengths and weaknesses of the university in provision of educational services.

***Administration of the Interview:*** Individual interview sessions were conducted with purposefully selected participants in each sample university. As the researcher did in quantitative data collection procedure, the purpose of interviewing was well communicated with all interview participants. Besides, ethical issues were also maintained and their informed consents were secured before formal interviewing sessions. Interviews were conducted with twenty (20) respondents. Of which seventeen (17) male participants and the remaining three (3) were female ones.

In interviewing sessions, the researcher established a relationship of trust, not as a professional, but as a person via several meetings as a thought of Corbetta (2003) in order to

obtain the interviewee's full cooperation. In addition, while conducting interview, the research was careful about some necessary interviewing skills, for instance, listening attentively to their views respectfully and using neutral body language such as eye contact, nodding head, smiling, looking interested and making encouraging noises (e.g., 'mmm') and probing remarks to recount their experiences as fully as possible, without unnecessary interruptions as suggested by Gill, Stewart, Treasure and Chadwick (2008). During interview sessions, the researcher took detail notes and their response was recorded via tape recorder in order to reduce the loss of audio information. The interview session was lasted for 1:30hr with each participant, including break time as advised by researcher like Siedman (2006).

***Focus Group Discussion:*** Upon the completion of interview session, focus group discussion was conducted with purposefully selected students in three sampled universities. Through student union representatives, department heads and classroom instructors, six (6) to seven (7) participants were selected from each sample university who can able to provide information regarding the educational service quality. Besides, the focus group discussants were selected from different campuses and departments so as to compare the differences in provision of service quality across campuses and departments. The focus group guides consisted of seven questions were developed to obtain in-depth data on higher education service quality. The focus group guiding items principally focus on the level of higher education service quality, students' satisfaction with education service quality and the relationship between education service quality and students' learning.

The students were asked about how they describe the education service quality of their respective university, how do they feel the university education service quality with the

expectation that they have before joining higher education, including their level of satisfaction with regard to education service quality.

In addition, focus group participants were asked about which education services are properly offered in their university and how do they compare the education service quality of their university with other Ethiopian universities. Finally, students were also asked about how does the university education service quality affect their learning, including academic performance and which dimensions of education service quality needs further improvement or needs more focus.

***Administration of the Focus Group Discussion (FGD):*** The focus group was conducted with graduating class students who are purposefully selected from three study universities. Focus group was conducted with nineteen (19) participants consisting of fourteen (14) male and five (5) female students. The formal focus group session was started with some transitional periods like welcoming the focus group discussants, setting ground rules, thanking the participants for coming and volunteering their time to provide inputs and stating the purpose of the focus briefly and why they are selected for the focus group as recommended by Dilshad and Latif (2013) to make all study subjects feel welcomed and relaxed (See Focus Group Script in Appendix-D). Furthermore, starting the focus group with introductory sessions and ice-breaking exercises, play a useful role in warming up the participants (Greene and Harris, 2011).

The focus group discussion sessions were categorized into three, such as FGD-1, FGD-2 and FGD-3. The first focus group discussion session was conducted at Arba Minch University, the second one at Wolaita Sodo University and finally the third one conducted at Jinka University. The researcher arranged the discussants' sitting in a circular manner as per Hennink's (2007) recommendation to establish interactive group dynamics. The focus group discussion

process was conducted in Amharic language so as to encourage them in focus discussion and reduce communication block. The focus group was coordinated by two facilitators, namely moderator and note taker as advised by Mack, *et al.* (2005) in order to make the focus group sessions more effective.

The researcher played a researcher's role in encouraging the discussion open and interactive; preventing dominance and steer the group away from irrelevant ideas as per the suggestion of Ritchie and Lewis (2003) to make the focus group smooth. Furthermore, the researcher also partly shares the responsibility of some moderator's role like taking additional notes and recording discussants' response to reduce information gap. In order to maintain confidentiality in the focus group, the researcher implement name substitution and assign numbers to each participant before formal FGD sessions.

### **3.10 Data Analysis Method**

Data analysis techniques are used to answer the research questions or to test the hypotheses that are derived from the research questions and hence using valid data analysis techniques is critical in conducting valid research (Sampson, 2012). As suggested by Sampson (2012) two elements of data analysis validity such as congruence (rationale that shows how the data analysis method for both quantitative and qualitative research fits the questions being asked or the hypotheses being examined) and accuracy (providing evidence that the analytical techniques used in the research provide correct answers to the research questions being asked or the hypotheses being posed) should be highly considered while planning to analyze the collected data. Thus, congruence helps the reader determine if the analytical techniques are appropriate for the research design and the measures used to represent the variables in the dissertation, whereas

accuracy helps the reader to judge whether or not the findings obtained in the dissertation can be trusted.

Based on the above premise, in the study, both quantitative and qualitative data analysis method was employed. With the help of SPSS v.20, descriptive and advanced inferential statistics was employed to analyze the quantitative data. Descriptive statistics such as frequency and percentage were used to describe respondents' demographic characteristics, whereas mean and Standard Deviation (SD) was used to examine internal stakeholders' perspectives towards higher education service quality. Independent samples t-test was used to examine the perception difference between male and female participants regarding education service quality. Pearson's correlation coefficient was used to examine the relation between educational service quality and students' satisfaction. The strength and direction of correlation coefficient or R-value was judged according to Gay's and Mills's (2012) range: between +0.35 and -0.35 = weak or none, between +0.35 and +0.65 or between -0.35 and -0.65 = moderate, between +0.65 and +1.00 or between -1.00 and -0.65 = strong. Furthermore, multiple linear regression analysis was employed to determine the relationship among three variables, such as education service quality, students' satisfaction and their academic performance.

On the other hand, qualitative data were analyzed qualitatively using the following procedures. Firstly, the read all the interview and focus group transcripts thoroughly many times to sense major related ideas that raised in both interview and focus group discussion sessions and evaluated whether they are related to my study objectives or not. Secondly, in my personal computer, the researcher adjusted two columns word processor and typed all interview and focus group transcripts in the left column from hard copy. Thirdly, the researcher identified and labeled

the major related ideas from interview and focus group transcripts via highlighting those using different colors.

Fourthly, the researcher reviewed and examined the labeled concepts or categories critically to identify whether related concepts are cluster together or divide the existing concepts into sub-dimensions. Fifthly, the researcher coded major concepts in the right column that derived from each interview and focus group transcripts using descriptive coding system based on participants pseudo name and the number assigned to them as suggested by Saldaña (2009). Let us see how the researcher coded one of interview transcripts using descriptive coding system as an example: “in our university, for example, most teachers respect their professional ethics, but some teachers have disciplinary problems. Most of the time, female students face sexual harassment challenges by teachers who have disciplinary problem” (Male, Interview Participant-4) =**Teachers’ Professional Ethics**

Sixthly, the researcher organized and grouped these major related concepts as major and sub-themes that emerged from the interview and focus group transcripts. Finally, the researcher described and analyzed dominant and sub themes along with quantitative data to compare or relate quantitative findings using verbatim and direct quotations. The interpretation of the data was done with reference to the research objectives and the results are presented in the following chapter four. The following Table 17 shortly summarizes data analysis methods that followed in this research.

*Table 17 Summary of Data Analysis Method*

<i>Variables</i>	<i>Method of data analysis</i>
Respondents' Demographics or Profile	Descriptive statistics such as frequency and percentage were employed
<b>Basic Research Questions</b>	
1. What are internal stakeholder perceptions of education service quality in Ethiopian public higher education?	Data collected via interview and focus group were analyzed qualitatively using verbatims and direct quotations. In addition, descriptive statistics were used.
1.1 Is there a statistically significant perception difference between male and female students regarding the facets of education service quality?	Independent Samples t-test was used to compare perception difference between males and females
1.2 Is there a statistically significant perception difference between male and female students regarding he overall education service quality?	Independent Samples t-test was used to compare perception difference between males and females
1.3 How does educational service quality affect students' learning, including their academic performance?	Mainly analyzed via qualitatively using verbatims and direct quotations
2. What is the relationship between education service quality and students' satisfaction	Pearson's correlation coefficient or r value was employed
2.1 Which dimensions of educational service quality is highly correlated with students' satisfaction?	Pearson's correlation coefficient or r value was employed
2.2 To what does education service quality predict students' satisfaction?	Multiple linear regression was analysis used
3. Is there a statistically significant effect of education service quality on students' academic performance via students' satisfaction?	Multiple linear regression analysis was used
3.1 To what does educational service quality predict students' academic performance via their satisfaction?	Multiple linear regression analysis was used
4. Which dimensions of education service quality are highly correlated with students' academic performance through the mediating role of their satisfaction?	Multiple linear regression analysis was used

*\*Source: Researcher's own construct*

### **3.11 Ethical Considerations**

Ethical considerations play a paramount role in all research studies involving human or animal subjects, participants, or partners (Given, 2008; Denzin and Linkon, 2018; Gay and Mills, 2012) because it pervades the whole process of research and an important element for the negotiation of access to people and organizations and the collection of data (Cohen, 2007; Saunders, 2009). Hence, ethical issues (principles and practices) must be considered when designing a research study with human participants such as recruitment of participants, informed consent and debriefing procedures, the use of deception, potential psychological or physical harm to the participant, confidentiality, participant vulnerability, and privacy (Davis, 2003; Gay and Mills, 2012; Hennink, 2007).

Based on the above premise, this study adhered to ethical considerations. The main ethical principles that were considered in conducting this research study are: obtaining permission from sample universities, where the study was conducted, respondent's informed consent, confidentiality and protection from harm. Accordingly, an official letter was sent to sample institutions in order to get permission to conduct the study. Then, respondent's informed consent and information sheet was secured by informing the purpose of the study. In addition, the information obtained from study subject will be kept confidential and individually focused report will never occur in any parts of the paper. Finally, the researcher debriefed nothing will harm the study subjects by being a participant of the study.

## CHAPTER FOUR

### 4. DATA PRESENTATIONS, ANALYSIS AND INTERPRETATION

#### 4. 1 Introduction

This chapter deals with data presentation, analysis and interpretation. The primary objective of this study was to examine the relationship between educational service quality and students' academic performance in Ethiopian public universities located in Southern Part of Ethiopia via a mediating role of student satisfaction. To this end, data were collected from both primary and secondary sources. As mentioned in chapter three, quantitative data were collected via self-developed questionnaire and document analysis, whereas qualitative data were collected via interviews and focus group discussions.

The quantitative data were collected basically from regular undergraduate GC students. The self-developed questionnaire consisting of one hundred sixteen (116) items was distributed to a total of four hundred sixty (460) graduating class students to increase response rate and collect required number, i.e., four hundred (400). The following Table 18 shows the response rate from the distributed questionnaire.

*Table 18 Response Rate from Distributed Questionnaire*

<i>Name of Sample Universities</i>	<i>Total Number of Distributed questionnaires</i>	<i>Rationale</i>	<i>Total Number of Returned questionnaires</i>	<i>Response Rate (%)</i>	<i>Total Number of Required Number</i>
AMU	192	-to in ncrease response rate and collect required number	185	96%	172
WSU	187	>>	178	95%	167
JKU	81	>>	70	86%	61
<b>Total</b>	<b>460</b>		<b>433</b>	<b>94%</b>	<b>400</b>

*\*Source: Researcher's own work*

*Where; AMU= Arba Minch University; WSU= Wolaita Sodo University; JKU=Jinka University*

As it has been presented in the above Table 18, from the total number of four hundred sixty (460) questionnaires distributed to graduating class students, majority of the questionnaires 433 (94%) were returned back to the researcher. The total number of returned questionnaires exceeds the total number of the required number in the study, i.e. four hundred (400). However, necessary checking and evaluations were made on the quality of the returned questionnaire till the questionnaire reaches the minimum required number and before making the questionnaire ready to enter into SPSS. Accordingly, straightly filled and incomplete questionnaires that not contained all parts were totally cancelled from the returned questionnaire. The following Table 19 shows the summary of revision made on the returned questionnaire.

*Table 19 Summary of Revisions Made on the Returned Questionnaires*

<i>Name of Sample Universities</i>	<i>Total No. of Distributed Questionnaires</i>	<i>Total No. of Returned Questionnaire</i>	<i>Total No. of Cancelled Questionnaire</i>	<i>Rationale</i>	<i>Total No. of Required Number</i>
AMU	192	185	13	-Straightly filled	172
WSU	187	178	9	- Straightly filled and incomplete	167
JKU	81	70	11	- Straightly filled incomplete	61
<b>Total</b>	<b>460</b>	<b>433</b>	<b>33</b>		<b>400</b>

*\*Source: Researcher's own work*

*Where; AMU= Arba Minch University; WSU= Wolaita Sodo University; JKU=Jinka University*

As we can see from the above Table 19, from the total of four hundred thirty-three (433) returned questionnaire, a total of thirty-three (33) questionnaires which consist straightly filled and incomplete were cancelled. The remaining required number; four hundred (400) were properly entered into SPSS for statistical calculation.

In addition, the qualitative data were collected to compare or relate with the quantitative data using interview and focus group discussion. The semi-structured interview was conducted

with university instructors, department heads, college deans, student service directorate directors, student deans, student union presidents and vice presidents, student association representatives, registrars and associate registrars, and general facility workers, whereas, focus group discussion was conducted with some selected graduating class students in three sampled universities.

The presentation of data is guided by the research objectives and the statistics are reflections of the responses from respondents who answered the questionnaire and provided interviews. As mentioned earlier, this study was aimed to examine the relationship between educational service quality and academic performance in Ethiopian public universities located in the Southern Part of Ethiopia via a mediating role of student satisfaction. In order to meet this objective, the following research questions were developed to guide the study:

The analyses of the data are presented based on the research questions as enumerated above. This chapter is divided into four parts. The first part deals with the demographic characteristics of the respondents. The second part presents and discusses data on the internal stakeholders' perception towards educational service quality in Ethiopian public higher education institutions. The third part treats the relationship between education service quality and students' satisfaction and finally, the last part of this chapter deals with the relationship among three variables, namely, educational service quality, students' satisfaction and their academic performance. The following subsequent sub sections deal the data on each part that collected from the study participants.

## 4.2 Respondents' Demographic Characteristics

In the first part of questionnaire, the respondents were asked about their general background information. This information includes sex, age, study or sample university, program division, year of entry, college/institute/school, department, university choice, whether the respondents are transferred from another institution or whether they are planning to transfer to another institution and current semester CGPA. The results in the Table 20a & Table 20b below highlight the demographic characteristics of the respondents.

*Table 20a Students' Demographics by Sex, Age, Study University, Program Division and Year of Entry (N=400)*

<i>Demographic</i>	<i>Category</i>	<i>(F)</i>	<i>(%)</i>	<i>Valid (%)</i>	<i>Cumulative (%)</i>
Sex	Male	285	70.9	71.3	71.3
	Female	115	28.6	28.8	100
	<b>Total</b>	<b>400</b>	<b>99.5</b>	<b>100</b>	
Age	25 & below	315	78.4	78.8	78.8
	26-30	78	19.4	19.5	98.3
	31-35	4	1.0	1.0	99.3
	36-40	2	.5	.5	99.8
	41 and above	1	.2	.3	100
	<b>Total</b>	<b>400</b>	<b>99.5</b>	<b>100</b>	
Study University	AMU	172	44.0	44.3	44.3
	WSU	167	42.8	43.0	87.3
	JKU	61	12.7	12.8	100
	<b>Total</b>	<b>400</b>	<b>99.5</b>	<b>100</b>	
Program Division	Regular	400	99.5	100	100
	<b>Total</b>	<b>400</b>	<b>99.5</b>	<b>100</b>	
Year of Entry	2010 E.C	7	1.7	1.8	1.8
	2011 E.C	59	14.7	14.8	16.5
	2012 E.C	334	83.1	83.5	100
	<b>Total</b>	<b>400</b>	<b>99.5</b>	<b>100</b>	

*\*Source: Researcher's own work*

*Where; AMU=Arba Minch University; WSU=Wolaita Sodo University; JKU=Jinka University; E.C=Ethiopian Calendar*

The result of the above Table 20a presents the demographic characteristics of respondents. There were 285 (70.9 %) male respondents and the rest 115 (28.6%) were female participants, indicating that majority of respondents were male students. As we can see the respondents' age composition, majority of study subjects were in between 25 and below and 26-30 years old 315 (78.4%), followed by 78 (19.4%) and few of them were in between 31-35 years old 40 (10.8%), showing that many study participants were adults.

Regarding respondents' study university, program division and year of entry, majority of respondents 172 (42.8%) and 167 (41.5%) were participated in the study from Arba Minch and Wolaita Sodo Universities, respectively and few of them 61(15.2%) were participated from Jinka University and all participants 400 (100) were regular undergraduate students. In addition, most participants 334 (83.1%) were joined the university since 2012E.C, showing that majority of study participants were fourth year students. Since the study participants' demographics concerning the department is somewhat lengthy, the researcher not indicated the department statistics in the above table. Although the study participants' department is not indicated in the above table, the data show that students from more than sixty (60) departments were participated in the study (*See Appendix-G*), showing that students from various departments have got chance to participate in the study.

*Table 20b Students' Demographics by College, University Choice and Current Semester CGPA, Transfer from another institution and Plan to transfer another institution*

<i>Demographic</i>	<i>Category</i>	<i>F</i>	<i>%</i>	<i>Valid (%)</i>	<i>Cumulative (%)</i>
College/Institute/ School	CBE	70	17.4	17.5	17.5
	CNCS	64	15.9	16.0	33.5
	CAS	39	9.7	9.8	43.3
	CMHS	44	10.9	11.0	54.3
	SPBS	15	3.7	3.8	58.0
	SL	16	4.0	4.0	62.0
	AMIT	17	4.2	4.3	66.3
	AWIT	11	2.7	2.8	69.0
	SVM	3	.7	.8	69.8
	SI	9	2.2	2.3	72.0
	CE	17	4.2	4.3	76.3
	CEBS	5	1.2	1.3	77.5
	CSSH	90	22.4	22.5	100
	<b>Total</b>		<b>400</b>	<b>99.5</b>	<b>100</b>
When I entered this institution, it was my:	First Choice	130	32.3	32.5	32.5
	Second Choice	88	21.9	22.0	54.5
	Third Choice or lower	182	45.3	45.5	100
	<b>Total</b>		<b>400</b>	<b>99.5</b>	<b>100</b>
Transfer from another institution	Yes	34	8.5	8.5	8.5
	No	366	91.0	91.5	100
	<b>Total</b>		<b>400</b>	<b>99.5</b>	<b>100</b>
Plan to transfer another institution	No	400	99.5	100	100
	<b>Total</b>		<b>400</b>	<b>99.5</b>	<b>100</b>
Current Semester CGPA	2.00-2.49	97	24.1	24.3	24.3
	2.5-2.99	116	28.9	29.0	53.3
	3.00-3.49	114	28.4	28.5	81.8
	3.5 and above	73	18.2	18.3	100
	<b>Total</b>		<b>400</b>	<b>99.5</b>	<b>100</b>

*\*Source: Researcher's own work*

**Where;** CBE=College of Business and Economics; CNCS=College of Natural and Computational Sciences; CAS=College of Agricultural Sciences; CMHS=College of Medicine and Health Sciences; SPBS=School of Pedagogical and Behavioral Sciences; SL=School of Law; AMIT=Arba Minch Institute of Technology; AWIT=Arba Minch Water Institute Technology; SVM=School of Veterinary Medicine; SI=School of Informatics; CE=College of Engineering; CEBS=College of Education and Behavioral Studies; CSSH=College of Social Sciences and Humanities; CGPA= Cumulative Grade Point Average

According to the above Table 20b, study participants were replied their respective colleges, institutes and schools. Among seven colleges, two institutes and four schools, many participants 90 (22.4%) were from College of Social Sciences and Humanities, 70 (17.4%) were from College of Business and Economics, 64 (15.9%) were from College of Natural and Computational Sciences 64(15.9%), followed by College of Medicine and Health Sciences 44(10.9%) and College of Agricultural Sciences [CAS] 39(9.7%) and few of them 3 (.7%) and 5(1.2) were from School of Veterinary Medicine and College of Education and Behavioral Studies, respectively, revealing that most study participants were from social sciences and humanities business and economics and health sciences field of the study.

As we can see from the above table, the respondents' demographics regarding university choice, transfer from another institution and plan to transfer another institution, majority of participants 182 (45.3%) were replied third or lower choice, showing that most students are placed to universities out of their choice. Among study participants, majority of respondents, 366 (91%) were not transferred from another institution, whereas few of them 34 (8.5%) were transferred from another institution. On the other hand, all study respondents 400 (100%) have no plan to transfer another institution.

Finally, when we look at the respondents' current semester CGPA, majority of students 116 (28.9%) were in between 2.5-2.99 and 114 (28.4) were in between 3.00-3.44 and few of them 73 (18.2%) were (3.5 and above), indicating that top scorer students were very minimal in study universities.

### **4.3 Profile of Interview and Focus Group Participants**

Before conducting formal interview and focus group discussion sessions, the respondents were asked about their general background information. The interview participants were primarily asked about their college, department, academic rank, service year in HEIs and finally current position at the university. The interview was conducted with eight participants at AMU, six participants at WSU, followed by six participants at JKU. Hence, an interview was conducted with a total of 20 participants in three sampled universities. Of these, seventeen (17) were male participants and the remaining three (3) were female ones.

In addition, three focus group discussions were conducted with regular undergraduate graduating class students. Three focus group discussion sessions were conducted in three sampled universities. The three focus group discussion sessions are categorized as FGD Session one [FGD-S1], FGD Session two [FGD-S2] and FGD-Session three [FGD-S3]. Each focus group consists six to seven students. The focus group discussion was conducted with a total of twenty (20) participants in three sampled universities. Of which fifteen (15) were male participants and the rest five (5) were female ones. The focus group participants were purposefully selected from different sexes, campuses, colleges, and departments. This is because; the provision of educational service quality is not similar in all campuses as there are old campuses and newly established campuses. It is projected that in old campuses the provision of service quality is better as compared with newly opened campuses. Thus, recruiting FG participants from different background is important to compare and relate the status service of delivery across campuses, sexes and departments. The following Table 21 and Table 22 shortly summarizes the profile of interview and focus group participants in three sampled universities.

Table 21 Profile of Interview Participants at the Study Universities

<b>Profile of Interview Participants at Arba Minch University [AMU]</b>							
<i>Assigned Numbers</i>	<i>Participants' Pseudo Name</i>	<i>Sex</i>	<i>College /Inst. /School</i>	<i>Department</i>	<i>Academic Rank</i>	<i>Service Year in HEIs</i>	<i>Current Position</i>
1	Kebede	M	CNCS	Geology	Lecturer	12years	Instructor
2	Mihiretu	M	SPBS	Pedagogy	Ass. Prof.	17years	Dept. Head
3	Tegegn	M	CNCS	Mathematics	Lecturer	15 years	Instructor
4	Tadewos	M	SPBS	AELL	Lecturer	12years	Dean, SPBS
5	Aklilu	M	SPBS	SNIE	Ass. Prof.	12 years	IQAC
6	Terefech	F	CAS	DVM	Lecturer	10 years	APO
7	Mathewos	M	CMHS	CN	Ass. Prof.	13 years	AR
8	Tamiru	M	CSSH	English	Student		SA Rep.
<b>Profile of Interview Participants at Wolaita Sodo University [WSU]</b>							
<i>Assigned Numbers</i>	<i>Participants' Pseudo Name</i>	<i>Sex</i>	<i>College /Instit. /School</i>	<i>Department</i>	<i>Academic Rank</i>	<i>Service Year in HEIs</i>	<i>Current Position</i>
1	Kebede	M	CEBS	Psychology	Lecturer	7 years	Dept. Head
2	Kibru	M	CEBS	EdPM	Lecturer	11 years	Instructor
3	Tademe	M	CSSH	Law	Student	5 <sup>th</sup> year	SU V/P
4	Fikre	M	CAS	Agroeco.	Student	4 <sup>th</sup> year	SU Pres.
5	Tsedale	F	CEBS	EdPM	Student	4 <sup>th</sup> Year	SAR
6	Mihiret	F	Admin.	Admin.Staff	B.A Degree	12 Years	DST Leader
<b>Profile of Interview Participants at Jinka University [JKU]</b>							
<i>Assigned Numbers</i>	<i>Participants' Pseudo Name</i>	<i>Sex</i>	<i>College /Instituti on /School</i>	<i>Department</i>	<i>Academic Rank</i>	<i>Service Year in HEIs</i>	<i>Current Position</i>
1	Kebede	M	CSSH	Psychology	Lecturer	3 years	Instructor
2	Belete	M	CSSH	Civ.ES	Lecturer	5 years	Instructor
3	Nebiyu	M	CSSH	Geography	Lecturer	5 years	Dean, CSSH
4	Nigusie	M	CANRM	DVM	Lecturer	5Years	SSDD
5	Madebo	M	CNCS	Mathematics	Lecturer	5 <sup>th</sup> Years	AR
6	Zekarias	M	CANRM	Economics	Student	4 <sup>th</sup> Year	SU Pres.

\*Source: Researcher's own work

**Where;** CEBS=College of Education and Behavioral Studies; CSSH=College of Social Sciences and Humanities; CAS=College of Agricultural Sciences; Admin.=Administrative; EdPM=Educational Planning and Management; B.A Bachelor of Art; Dept.=Department; CANRAM=College of Agriculture and Natural Resource Management; CNCS=College of Natural and Computational Sciences; Adult Education and Lifelong Learning; Special Needs and Inclusive Education; DVM=Department of Veterinary Medicine; CN=Clinical Nursing; Cvi.ES=Civics and Ethical Studies

Table 22 Profile of Focus Group Discussion [FGD] Participants at the Study Universities

<b>Profile of FGD Participants at Arba Minch University [FGD-Session One]</b>						
<i>Assigned Numbers</i>	<i>Participants' Pseudo Name</i>	<i>Sex</i>	<i>Campus</i>	<i>College</i>	<i>Department</i>	<i>Year</i>
1	Simon	M	Chamo	CSSH	Law	5 <sup>th</sup>
2	Abayneh	M	Main	AMIT	Electrical Engineering	5 <sup>th</sup>
3	Bezabih	M	Abaya	CNCS	Physics	4 <sup>th</sup>
4	Bruktawit	F	Chamo	CSSH	Sociology	4 <sup>th</sup>
5	Mesay	M	Abaya	CNCS	Sport Science	4 <sup>th</sup>
6	Anjulo	M	Main	AWIT	Mechanical Engineering	5 <sup>th</sup>
7	Aman	M	Chamo	SPBS	Psychology	4 <sup>th</sup>
<b>Profile of FGD Participants at Wolaita Sodo University [FGD-Session Two]</b>						
<i>Assigned Numbers</i>	<i>Participants' Pseudo Name</i>	<i>Sex</i>	<i>Campus</i>	<i>College</i>	<i>Department</i>	<i>Year</i>
1	Solomon	M	Main	CAS	Veterinary Medicine	5 <sup>th</sup>
2	Abebech	F	Techno	SI	Computer Science	5 <sup>th</sup>
3	Shewangizaw	M	Techno	CE	Civil Engineering	5 <sup>th</sup>
4	Tesfaye	M	Main	CNCS	Physics	4 <sup>th</sup>
5	Mamo	M	Main	CSSH	PAC	4 <sup>th</sup>
6	Mihiret	F	Main	CAS	Plant Science	4 <sup>th</sup>
<b>Profile of FGD Participants at Jinka University [FGD-Session Three]</b>						
<i>Assigned Numbers</i>	<i>Participants' Pseudo Name</i>	<i>Sex</i>	<i>Campus</i>	<i>College</i>	<i>Department</i>	<i>Year</i>
1	Fistum	F	JKU	CNCS	Biology	4 <sup>th</sup>
2	Adane	M	JKU	CBE	Economics	4 <sup>th</sup>
3	Endrias	M	JKU	CSSH	History	4 <sup>th</sup>
4	Elias	M	JKU	CANRM	Agrobusiness	4 <sup>th</sup>
5	Markos	M	JKU	CSSH	Geography	4 <sup>th</sup>
6	Feven	F	JKU	CSSH	English	4 <sup>th</sup>

*\*Source: Researcher's own work*

**Where;** CSSH=College of Social Sciences and Humanities; AMIT=Arba Minch Institute of Technology; CNCS=College of Natural and Computational Sciences; AWIT=Arba Minch Water Institute Technology; CAS=College of Agricultural Sciences; SI=School of Informatics; CE=College of Engineering; CBE=College of Business and Economics; CANRM=College of Agricultural and Natural Resource Management; PAC=Public Administration and Communication

#### 4.4 Internal Stakeholder Perception towards Educational Service Quality

In this sub section, the researcher examined the internal stakeholders' perception towards educational service quality using questionnaire, interviews and focus group discussion. The data collected from respondents were presented and analyzed in the following sections.

##### 4.4.1 Academic Service Quality

In the first part of the questionnaire, the study participants were asked to indicate their level of agreement about the academic service quality of their university. There are six sub dimensions that explain academic service quality were identified. These include: academic staff's attitude and behavior, academic staff's competence, academic facilities and resources, academic program issues, quality of instructional practices, and finally the quality of library services. In the following subsequent sub section, the data collected regarding academic service quality was presented, analyzed, and interpreted using descriptive statistics.

*Table 23 Students' Perception towards Academic Staff's Attitude and Behavior (N=400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Positive attitude towards students	400	1.00	5.00	2.4625	1.08237
2	Understand the needs of their students	400	1.00	5.00	2.8800	1.23060
3	Interest in solving students' problems	400	1.00	5.00	2.9875	1.15788
4	Welcome students' questions	400	1.00	5.00	3.0650	1.25087
5	Provide consultations to students	400	1.00	5.00	2.9800	1.20965
6	Provide students with feedback	400	1.00	5.00	2.9350	1.23879
7	Provide expected knowledge	400	1.00	5.00	3.4100	1.16632
8	Willing to help students	400	1.00	5.00	3.3450	1.16161
9	Encourage students to do their best	400	1.00	5.00	3.4200	1.16059
10	Fair and impartial in grading	400	1.00	5.00	2.8825	1.36321
	Valid N (listwise)	400				
<b>Grand Mean</b>					<b>3.03675</b>	<b>1.202189</b>

*\*Source: Researcher's own work*

**Where; N=Number**

As shown in the above Table 23, students responded with their level of agreement with regard to academic staff's attitude and behavior towards students. As per the above table results, the grand mean ( $M = 3.03675$ ;  $SD = 1.202189$ ) is slightly above the average mean value of 3, showing that students have somewhat positive perceptions of academic staff's attitude and behavior towards their students. However, except for a few items, many items yielded below-average mean values of three (see item 1, 2, 3, 5, 6, and 10), revealing that students disagreed with the many variables associated with the academic staff's attitude and behavior towards students. This finding confirms that the majority of the variables or items explaining the attributes of academic staff's attitude and behavior towards students were perceived by students to be very poor.

In addition, an independent-samples t-test was conducted to compare the mean value scores for males and females. As per the Table 23 results below, there was no statistically significant difference in mean scores for males ( $M = 3.1298$ ,  $SD = 1.14786$ ) and females ( $M = 3.2957$ ,  $SD = 1.03427$ ;  $t(400) = -1.34$ ,  $p = .180$ , two-tailed). The magnitude of the differences in the means (mean difference =  $-.16583$ , 95% CI:  $-.4083$  to  $.07666$ ) was none. This finding reveals that both male and female students perceive no difference in the academic staff's attitude and behavior towards their students. The following Table 24 shortly summarizes independent samples t-test results for male and female students.

*Table 24 Independent Samples t-Test Results of the Academic Staff's Attitude and Behavior*

<b>Group Statistics</b>									
Academic Staffs' Attitude and Behavior	Sex	N	Mean	SD	SE Mean				
	Male	285	3.1298	1.14786	.06799				
	Female	115	3.2957	1.03427	.09645				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% Confidence Interval of the difference	
								Lower	Upper
Equal Variances Assumed	.545	.46	-1.34	398	.180	-.16583	.1233	-.4083	.07666
Equal Variances not Assumed			-1.40	232	.161	-.16583	.1180	-.3983	.06667

***\*Significant at  $p < 0.05$***

*Source: Researcher's own work*

The qualitative data, mainly collected from study participants, also strengthens the above quantitative findings. The focus group discussants disclosed some teachers' poor perceptions of their students. One of the focus group participants and a fifth-year student in the Department of Electrical Engineering at Arba Minch University shared that:

In my personal view, students' responses regarding teachers' perceptions of their students may vary from one department to another. Honestly speaking, there are some good and role-model lecturers in every department. However, the majority of university lecturers do not respect students. Some teachers even insult students, and they do not treat students in a good manner. When we ask questions, they are not properly responding to our questions (*male, FDG-Participant 2*).

Furthermore, the interview participants were also sharing issues related to teachers' professional ethics problems. One of the interview participants at Arba Minch University has felt that:

Frankly speaking, some teachers are not professionally ethical. Teachers who have ethical problems are not respecting and providing support for students who need their special assistance. It is clear that teachers' professional ethics play a significant role in students' learning. Thus, we have to respect our professional ethics and students as teachers (*Male, Interview Participant 5*).

Another interview participant and student association representative at Wolaita Sodo University was raising teachers' disciplinary problems in the universities. His interview response, extracted from the interview transcript, reflects others' views: "in our university, for example, most teachers respect their professional ethics, but some teachers have disciplinary problems. Most of the time, female students face sexual harassment problems by teachers who have disciplinary problems" (*Male, Interview Participant, 4*).

The other interview participant and classroom representative in the Department of Psychology at Wolaita Sodo University was further describing some teachers' weak role in providing guidance and counseling services to students. His response, excerpted from the interview transcript, represents others' perspectives.

Some teachers are not providing proper guidance and counseling services for students who need support. Many students are academically weak at our university. For example, in this academic year, 1,200 freshman students registered in warning for the upcoming semester. It is a fact that students' academic performance is determined by various factors. However, teachers play a lion's share in improving students' academic performance. (*Male, Interview Participant-4*).

Based on the above findings, we can deduce that some teachers have a poor attitude towards their students, on the one hand, and some other teachers have disciplinary problems, on

the other hand. More specifically, as evidenced in both qualitative and quantitative findings, some teachers are not showing sincere interest in solving students' immediate problems in the universities. In addition, other teachers are also not providing academic guidance and counseling services to students and regular feedback on students' academic progress. Not only that, but also other teachers are not fair and impartial in their grading system.

*Table 25 Students' Perception towards Academic Staff's Competence (N=400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Theoretical and practical knowledge	400	1.00	5.00	2.6750	1.18655
2	Knowledgeable in their areas of specialization	400	1.00	5.00	2.8775	1.25356
3	Excellent communication skills	400	1.00	5.00	3.3775	1.16119
4	Prominent researchers	400	1.00	5.00	2.8375	1.11544
5	Use latest technologies while teaching	400	1.00	5.00	3.7600	1.17296
6	Passionate and committed in teaching	400	1.00	5.00	3.4650	1.05668
7	Being professional and ethical	400	1.00	5.00	2.9000	1.19942
8	Confident in their understanding of a course	400	1.00	5.00	3.6150	1.08615
9	Capacity to solve students' problems	400	1.00	5.00	3.3450	1.20607
	Valid N (listwise)	400				
<b>Grand Mean</b>					<b>2.88525</b>	<b>1.043802</b>

*\*Source: Researcher's own work*

The above Table 25 depicts the descriptive statistics for items related to teachers' academic competence. As it has been shown in the table, the grand mean value ( $M = 2.88525$ ,  $SD = 1.043802$ ) is below the average mean value of 3, showing the respondents' negative responses. This finding suggests that students have a poor perception of teachers' academic competence.

On the other hand, an independent-samples t-test was conducted to compare the academic staff's competence mean scores for male and female students. As we can see from Table 25 below, there was a statistically significant difference in scores for males ( $M = 2.7053$ ,  $SD = 1.14947$ ) and females ( $M = 2.9652$ ,  $SD = 1.15417$ ;  $t(400) = -2.045$ ,  $p = .042$ , two-tailed), showing that female students positively ranked their level of agreement towards academic staff's

competence as compared with their male counterparts. The following Table 26 shortly summarizes independent samples t-test results for male and female students.

*Table 26 Independent Samples t-Test Results of the Academic Staff's Competence*

<b>Group Statistics</b>									
Academic Competence	Sex	N	Mean	SD	SE Mean				
	M	285	2.7053	1.14947	.06809				
	F	115	2.9652	1.15417	.10763				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
								Lower	Upper
Equal Variances Assumed	.14	.708	-2.04	398	.042	-.2599	.1271	-.5098	.01001
Equal Variances not Assumed			-2.04	210.00	.042	-.2599	.1273	-.5110	.00889

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

Although there was a statistically significant difference between male and female students in the academic staff's competence, the qualitative findings support the quantitative one. Through a focus group and interview sessions, the study subjects disclosed the competency level of teachers who have been teaching in universities. Among focus group participants, a fifth-year student in the Department of Electrical Engineering at Arba Minch University explained some teachers' poor academic competence. In his own words, "although there are academically competent and professionally ethical teachers, there are also academically incompetent teachers who don't deserve the university lecturer position" (*Male, FGD Participant, 2*).

Another focus group discussant and a fourth-year student in the Department of Physics at Arba Minch University was also stressing on teachers' academic competence. His says:

Although students' views vary from one department to another regarding teachers' academic competence, academically incompetent teachers are found in every department. For example, if you take our department case, teachers' academic competence is somewhat good, but still, there are some academically incompetent teachers (*male, FGD participant, 3*).

The other focus group participant and a fourth-year student in the Department of Sport Science Department at Arba Minch University compare the university teachers' academic competence with that of secondary school teachers.

As other students described from the main campus, I also have similar concerns regarding university teachers' quality. When I compare some of my department's teachers with the secondary schools' teachers, the secondary school teachers are much better than them. The main benefit that I obtained from university was experience sharing with my friends. As we know, Ethiopia is a collection of different cultures, languages, religions, nations, and nationalities. Since I am from a homogenous culture, I got the chance to meet students with diverse cultures, languages, and religions (*male, FGD participant 5*).

Another focus group participant and a fourth-year student in the Department of Sociology and Social Anthropology at Arba Minch University was comparing the university service with his expectations before joining the present institution. His response taken from the focus group transcript typically summarizes others' perspectives:

The university service didn't meet the expectations that I had before joining this institution. Since the university is a kind of training center, I expected to obtain high experiences from teachers and other stakeholders. However, the experiences, necessary knowledge, skills, and attitude that I obtained from the teachers are not comparable to my

expectations. Some university teachers come to the classroom with laptops, read PowerPoint slides, and leave the class. What knowledge and experiences can I get from such a teacher? Amazing! (*Female, Interview Participant, 4*).

Moreover, the interview participants, mainly at Jinka University, were sharing the professional qualities of their university teachers. Among interview participants, an instructor in the Department of Psychology at Jinka University shared that:

In our university, the teaching and learning process is good, but I have reservations about quality education. To be honest, we have a shortage of experienced and high-ranking teachers. Still, there are many B.A Degree holder faculty members are teaching in many departments. For example, in the department of Hotel and Tourism Management, all teachers are B.A degree holders, and they have been teaching undergraduate students (*male, interview participant 1*).

Similarly, an instructor in the Department of Civics and Ethical Studies also shared the shortage of skilled manpower at Jinka University. His response, taken from the interview transcript, briefly summarizes others' views:

Since our university is one of the Ethiopian fourth-generation universities, there is a shortage of skilled manpower. For example, in the College of Natural and Computational Sciences and partly in the College of Social Sciences and Humanities, most teachers are B.A. degree holders. In addition, presently, we have been launching various M.A. programs without available skilled manpower. In order to launch M.A. programs, the departments should have at least one assistant professor and two PhD holders. How do M.A. degree holders teach M.A. candidates, and/or how long do guest professors teach

M.A. candidates? I think we are compromising education quality in the name of program expansion (*male, interview participant 2*).

In general, as evidenced by the above empirical findings, some teachers are not academically competent to teach in Ethiopian universities. Moreover, there are shortages of highly experienced, educated, and skilled manpower in the fourth-generation universities. In concurrent with this finding, Girmaw (2014) and Elizabeth (2017), in their study, also observed that since the government is aggressively working on the expansion of higher education, in most Ethiopian universities there is a shortage of well-experienced and highest-ranking staff members.

*Table 27 Students' Perception towards the Quality of Academic Facilities and Resources*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Classrooms are modern and up-to-date	400	1.00	5.00	2.7750	1.23214
2	Classrooms are equipped with teaching aids	400	1.00	5.00	2.7900	1.26090
3	Classrooms are well ventilated and comfortable	400	1.00	5.00	3.0500	1.31408
4	Classrooms have functional lighting	400	1.00	5.00	3.0300	1.24014
5	Classrooms have enough tables and chairs	400	1.00	5.00	3.6025	1.13698
6	Classrooms have enough sitting space	400	1.00	5.00	3.6300	1.17753
7	University has adequate conference halls	400	1.00	5.00	3.2775	1.22033
8	University has adequate lecture rooms	400	1.00	5.00	3.5775	1.13896
9	University has adequate laboratory facilities	400	1.00	5.00	2.6675	1.23927
10	University has adequate internet facilities	400	1.00	5.00	2.8175	1.24421
11	University has quiet places to study	400	1.00	5.00	3.4675	1.18425
12	University has adequate teaching tools	400	1.00	5.00	2.9475	1.25246
	Valid N (listwise)	400				
<b>Grand Mean</b>						<b>3.13604 1.2201041</b>

*\*Source: Researcher's own work*

As shown in the above Table 27, the grand mean ( $M = 3.13604$ ;  $SD = 1.2201041$ ) is somewhat above the average mean value of three, showing to a degree that students have positive reflections regarding the availability of some academic facilities and resources at their university. Although the grand mean value exceeded the average mean value, students disagreed on the items related to the quality of the classroom environment, the adequacy of laboratory equipment, the quality of internet services, and the adequacy of teaching tools. These findings

confirm that the majority of the variables or items explaining the attributes of academic facilities and resources were perceived by students to be very poor.

Furthermore, an independent sample t-test was also carried out to examine the perception difference between male and female students. The independent sample t-test results in below Table 28 show there was no statistically significant difference in mean scores for males (M = 3.3053, SD = 1.12657) and females (M = 3.5304, SD = 1.11073;  $t(400) = -1.817$ ,  $p = .070$ , two-tailed). The magnitude of the differences in means (mean difference:  $-.22517$ , 95% CI:  $-.46887$  to  $.01852$ ) was none, showing that both male and female students have no perception difference in the quality of university academic facilities and resources. The following Table 28 shortly summarizes independent samples t-test results for male and female students.

*Table 28 Independent Samples t-Test Results of the Academic Facilities and Resources*

<b>Group Statistics</b>									
Academic Facilities and Resources	Sex		N	Mean	SD	SE Mean			
	M		285	3.3053	1.12657	.06673			
	F		115	3.5304	1.11073	.10358			
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
								Lower	Upper
Equal Variances Assumed	.061	.806	-1.81	398	.070	-.225	.123	-.468	.01852
Equal Variances not Assumed			-1.82	213	.069	-.225	.123	-.468	.01770

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

Consistent with quantitative findings, study subjects in focus group and interview sessions disclosed poor quality of classroom environment, inadequate supply of laboratory equipment and teaching tools, and poor internet access in their universities. Among FGD

participants, a fifth-year student in the Department of Electrical Engineering at Arba Minch University explained that:

The classrooms are equipped with some necessary teaching tools, principally white and black boards. However, the ventilation service is very poor in the classrooms. Although ventilators are available in each classroom, most of them are not functional. Since Arba Minch has a hot air condition, we can't properly attend the classes, mainly in the afternoon sessions (*male, FGD Participant-2*).

Another focus group participant and a fifth-year student from the Department of Mechanical Engineering agree with the thoughts of the earlier participant. He further added that:

Even though the classroom sizes are somewhat good, the classrooms are not equipped with the necessary teaching tools. For example, there are permanent liquid crystal displays [LCDs] in each class, but the majority of them are not functional. In addition, the other functional permanent LCDs and socket outlets that are found in the classrooms are not functional (*male, FGD participant 6*).

Furthermore, the other study participant and a fourth-year student in the Department of Sociology and Social Anthropology were further sharing the nature of classroom buildings. She felt that:

The classroom buildings are not considered for students with disabilities. As a result, students with different disabilities are not properly attending the regular classes. In addition, there are no toilets near classrooms. Due to that reason, we are forced to go to our dorm to use toilets or washrooms while attending classes (*female, FGD Participant-4*).

In addition, most interview participants consistently raised the lack of smart classrooms. One of the interview participants at Arba Minch University explained that:

We (the three institutional quality assurance coordinators) always monitor the quality of classrooms. The class size is good, but the classrooms are not smart. On our campus, for example, there is a shortage of smart classrooms as compared with the College of Medicine and Health Sciences [CMHS] campus. Due to that reason, most teachers are unable to use different teaching methods in the classroom, like demonstrations (*Male, Interview Participant 5*).

The other interview participant and department head at Abra Minch University compares the classroom condition of his university with that of other Ethiopian universities. In his own words, ‘we lack smart classrooms as compared with other Ethiopian universities. For example, at Adama Science and Technology University [ASTU], there are available smart classrooms as compared with our university’’ (*Male, interview participant 2*).

Similarly, the other interview participants at Wolaita Sodo and Jinka Universities also explained the lack of smart classrooms in their universities. One of the interview participants and an instructor in the Department of Educational Planning and Management [EdPM] at Wolaita Sodo University says:

Our university is one of the applied universities in Ethiopia. However, there are no smart classrooms. In addition, the classroom buildings are not inclusive of all students. And hence, students with various disabilities are unable to get services easily (*male, interview participant, 2*).

Furthermore, one of the Student Service Directorate Director Office experts at Jinka University also expressed a similar concern: He explained that:

Our university classrooms are not well equipped with the necessary equipment. There are shortages of tables and chairs in the classrooms. In addition, there are no permanently installed LCD projectors in the classrooms. In many universities, there are permanently installed LCD projectors. For example, at Injibara University (one of the fourth-generation universities like ours), there are many permanently installed LCD projectors. We attempted this technology in the classrooms, but all permanently installed LCD projectors are non-functional. I don't know the reason behind it! (*Male, Interview Participant-4*).

Most study participants also shared the unavailability of computer labs and poor internet services on their campuses. One of the study participants and a fourth-year student in the Department of Sociology and Social Anthropology at Arba Minch University felt that:

For example, our university is one of the research universities in Ethiopia. However, there are no available computer laboratories on campus. In addition, many computers are not functional, and students are unable to access necessary educational materials while seeking services. Besides, even though there is a lack of computer laboratories, we cannot get an opportunity to enter the computer laboratories at any time because the computer laboratories didn't provide a 24-hour service (*Male, FGD Participant-4*).

In the same vein, focus group participants at Wolaita Sodo University were also explaining the problem of computer laboratories. Among focus group participants, a fourth-year student in the Department of Computer Sciences described that:

On our campus, there are four computer laboratories, such as CS1, CS2, CS3, and CS4. However, almost 50% of computers are non-functional. It is clear that computer laboratories play a paramount role in practical education. Although it is not fair to

compare our university with science and technology universities like Adama Science and Technology, the university should make functional computers available in each computer laboratory (*Female, FGD participant, 2*).

The other focus group and interview participants shared the poor internet access on campus. Among the focus group participants, the student association representative at Arba Minch University provided a comprehensive view that represents others' view. He felt that:

Frankly speaking, the internet connection is poor on some campuses. Since I am a student union representative, I have information regarding the quality of internet services on different campuses. For example, internet access is better in Main, Abaya, and Nech Sar campuses as compared with Chamo and Kulfo campuses (*male, FGD Participant 1*).

In addition, the other focus group participants at Wolaita Sodo and Jinka Universities also described the lack of internet access on their campuses. One of the focus discussants and a fourth-year student in the Department of Agricultural Business at Jinka University explained the poor connection of internet services in Wireless Fidelity [Wi-Fi] service centers. His response, taken from the focus group transcripts, typically summarizes others' thoughts:

Not only our university, but also the internet service is poor in most Ethiopian universities. For example, we have three Wi-Fi centers on campus, but in all Wi-Fi centers, the internet network connection is very weak. This time, there is a registration, but due to a weak internet connection; we still didn't register students for the upcoming semester (*male, FGD Participant-4*).

The interview participants also shared the problem of information and communication technology (ICT) services at their respective universities. Among interview participants, an instructor at Arba Minch University in the Department of Mathematics explained that:

Arba Minch University has improved its ICT services over the last three years. However, nowadays, the ICT service is lagging behind as compared with other universities. Wi-Fi is not available on campus in all places; for example, around classrooms, students' residences (dormitories), and laboratory rooms. In addition, the Wi-Fi service is also poor around the teachers' office and their residence. The ICT experts relate everything to purchasing different ICT materials. For me, the ICT-related challenge is not beyond the capacity of the university. The university pays a lot of money to Telecommunication for the Wi-Fi package. There are some minor problems that affect the Wi-Fi's functioning. If we replace wires and cables in some Wi-Fi centers, the problem can be easily fixed (*Male, Interview Participant, 3*).

Another interview participant and Dean at Arba Minch University further added ICT-related services. His interview response, taken from interview transcripts, typically summarizes others' views:

Arba Minch University had a strong ICT service for the last six years. For example, other Ethiopian universities like Jimma and Hawassa shared the ICT service experience with AMU, but at present, our ICT service is declining. Those universities that shared ICT service experiences with AMU have brought about a significant change in ICT service. For example, if you go to Hawassa University, there is one ID card system. The student can get any service via the ID card system. Students are not expected to use different ID cards to use the library, cafeteria, and other related services. In addition, at our university, the information in the system is not updated. There is a shortage of IT equipment. Besides, the employees who are working in the ICT sector lack the necessary skills, and

some of them are even unable to fix even simple problems (*male, interview participant 4*).

Likewise, the other interview participants at Wolaita Sodo and Jinka Universities were consistently responding to the quality of internet services. One of the student union representatives at Wolaita Sodo University during interview sessions described that:

Honestly speaking, the internet service is poor on the campus. The internet services are not available in the dormitories, campuses, classrooms, and libraries, but they are somewhat good in the offices, computer laboratories, and student lounges. There is no outdoor internet service on the campus. Our university has a vision to be an e-university in 2022 E.C. To achieve this vision, the internet service plays a paramount role (*male, interview participant 3*).

Besides, an instructor at Jinka University in the Department of Civics and Ethical Studies also shared that ‘‘the internet access is weak on the campus. The internet service is accessible sometimes and not accessible at other times. The university simply provides an on-and-off kind of internet service to the university community’’ (*Male, Interview Participant-2*). Additionally, one of the Student Service Device Directorate experts at Jinka University also explained how Jinka University internet access is poor as compared to other fourth-generation universities. He felt that ‘‘the internet service is poor at our campus as compared with other Ethiopian universities. For example, I observed the internet service of Bonga University (one of the fourth-generation universities like ours), but their ICT service is much better than ours’’ (*Male, Interview Participant-4*).

In addition, study participants, mainly in the interview sessions, disclosed the inadequacy of teaching tools in universities. An interview participant and one of the student union representatives at Wolaita Sodo University expressed that:

In higher education institutions, laptop computers and LCD projectors play a significant role in facilitating the teaching and learning process. If there are shortages of these instruments, it is hardly possible for teachers to deliver the assigned courses in a well-mannered manner. In our university, for example, there are shortages of necessary teaching equipment like laptop computers, LCD projectors, and gowns for teachers (*Male, Interview Participant-4*).

Similarly, one of the Clinical Nursing Department instructors and Associate Registrar at Arba Minch University further added that:

On our campus, most teachers have no laptops. If you have no laptop computer, it is hardly possible for those teachers to smoothly run the teaching and learning process and share educational materials with students. In addition, in previous years, the university provided stationery materials like pens, A4 papers, and other materials to teachers, but recently there has been no supply of such materials from the side of the university (*Male, Interview Participant 7*).

In addition, an instructor and teachers' representative at Jinka University described that:

In our university, there is a shortage of available teaching tools, such as LCD projectors, markers, and dusters, except laptop computers. Laptop computers are available to all teachers; however, the quality of the laptop computer is very poor. The laptop computer seems new, but it takes a long time to open. There is also a shortage of LCD projectors. Although LCD projectors are not mandatory for all programs, they are mandatory for

colleges like agricultural sciences, health sciences, and engineering. In addition, copying and duplicating machines are not that available on campus, mainly during exam times (Male, Interview Participant 2).

As a whole, educational inputs are the most important element to facilitate the teaching and learning process. The shortage of necessary educational inputs directly and/or indirectly affects students' learning, including their performance. As we can see from the above findings, there is a lack of necessary educational input in the universities. The classrooms are not equipped with necessary teaching tools, such as permanently installed LCDs, ventilators, etc. In addition, there is poor internet access and a shortage of computer laboratories on the campus. Not only that, but there are also shortages of necessary teaching tools in universities, such as laptop computers, LCD projectors, gowns, and stationery materials.

*Table 29 Students' Perception towards the Nature of Academic Program Issues*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Has flexible and satisfactory syllabus	400	1.00	5.00	3.2225	1.08671
2	Provides reputable academic programs	400	1.00	5.00	3.0925	1.16289
3	Displays professional image	400	1.00	5.00	3.4050	1.08809
4	Defined course content objectives	400	1.00	5.00	3.7350	1.02097
5	Courses develop students' KSA	400	1.00	5.00	3.3850	1.20016
	Valid N (listwise)	400				
<b>Grand Mean</b>					<b>3.368</b>	<b>1.111764</b>

*\*Source: Researcher's own work*

**Where;** KSA= Knowledge, Skill and Attitude

According to the above Table 29, the grand mean (M = 3.368, SD = 1.111764) is above the average mean. In addition, the mean values for each item related to academic program issues were also above the average mean value of 3. This data indicates that students have a positive perception of the quality of academic programs.

Furthermore, an independent sample t-test was also conducted to examine the perception difference between male and female respondents. The independent sample t-test results in below

Table 30 show there was no statistically significant difference in mean scores for males (M = 3.4386, SD = 2.11315) and females (M = 3.5478, SD = 1.06987;  $t(400) = -.527, p = .598$ , two-tailed). The magnitude of the differences in means (mean difference  $-.10923$ , 95% CI:  $-.5163$  to  $.29791$ ) was none, revealing that both male and female students have no perception difference in the quality of university academic program issues. The following Table 30 shortly summarizes independent samples t-test results for male and female students.

*Table 30 Independent Samples t-Test Results of the Academic Program Issues*

<b>Group Statistics</b>									
Academic Program Issues	Sex	N	Mean	SD	SE Mean				
	M	285	3.4386	2.11315	.12517				
	F	115	3.5478	1.06987	.09977				
<b>Independent Samples Test</b>									
Levene 's Test		t-test for Equality of Means							
	F	Sig	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
		.						Lower	Upper
Equal Variances Assumed	.52	.46	-.527	398	.598	-.10923	.20710	-.5163	.29791
Equal Variances not Assumed			-.682	378.707	.495	-.10923	.16007	-.4239	.20550

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

However, qualitative data show inconsistent findings with regard to academic program issues. The interview participants at Wolaita Sodo University shared poor academic program expansion as a weakness of the university. The study subjects discussed program expansion as a strength of Jinka University. Among the interview participants, an instructor and department head at Wolaita Sodo University described that:

Another critical challenge at our university is the poor expansion of academic programs.

In terms of academic program expansion, our university is weak as compared with other universities, like Dilla and Wollega Universities. We design curriculum for different

postgraduate [PG] programs, including PhD programs, but the university rejects new programs without strong justification (*Male, Interview Participant-1*).

Likewise, one of the student union representatives at Wolaita Sodo University also expressed that, “although there are many undergraduate [UG] programs, our university should still work on program expansion. There are other decisive programs that support the country’s development. For example, we have no software engineering departments” (*Male, Interview Participant-4*).

Moreover, another student union representative at Wolaita Sodo University further stressed the weak expansion of academic programs. His interview response that was extracted from interview transcripts represents others’ response:

In program expansion, our university is weak, particularly in opening or launching new academic programs at the undergraduate level, as compared with other Ethiopian universities. The students must join the programs in which they have an interest in learning. For example, students highly want programs like theatrical arts, chemical engineering, textile engineering, and software engineering. However, you couldn’t find such academic programs at our university (*Male, Interview Participant 3*).

On the other hand, other interview participants at Jinka University were explaining the academic program expansion as a strength of the university. One of the interview participants and an instructor in the Department of Civics and Ethical Studies shared that:

Our university has been working on academic program expansion. For example, the university has opened weekend programs at the UG level in different distance centers and launched a regular MA program in some departments like agricultural economics, social anthropology, and so forth. Since the surrounding community members lack access to

higher education, the academic program expansion has its own role in making higher education accessible to all surrounding community members who need further education  
*(Male, Interview Participant 2).*

Furthermore, another interview participant and Registrar Directorate Director Office expert at Jinka University was explaining academic program expansion as a strong side of the university. His response, taken from interview transcripts, briefly summarizes others' views:

In the last four years, eleven new fourth-generation universities were opened in different parts of the country. All those eleven fourth-generation universities have started the teaching and learning process with fourteen academic programs. Presently, our university runs twenty-nine programs, including six postgraduate programs. In addition, since the surrounding communities have a high need for education, the university runs seven distance centers in seven different places, such as Konso, Basketto, Gelila, Meither, Koybe, Jinka, and Laska. Among the distance centers, Koybe and Laska are near Jinka University, and teachers provide the education each weekend. In the remaining distance centers, the teachers provide the education once every three weeks *(male, interview participant 5).*

In general, students have a positive perception of the academic program issues at their universities. However, the qualitative findings confirmed that Wolaita Sodo University is weak in both undergraduate and graduate program expansion as compared with other Ethiopian universities. The departments design curriculums for new programs at the undergraduate and graduate levels; however, the university rejects those programs without strong justification. On the other hand, Jinka University is aggressively working on program expansion. The study participants were raising program expansion as one of the strengths of the university.

Table 31 Students' Perception towards the Quality of Instructional Practices (N=400)

SN	Items	N	Min.	Max.	Mean	SD
1	Follow good teaching	400	1.00	5.00	3.3475	1.12021
2	Encourage students' active participation	400	1.00	5.00	3.5625	1.06956
3	Provide regular feedback	400	1.00	5.00	2.9200	1.16490
4	Follow curriculum strictly	400	1.00	5.00	3.0250	1.29172
5	Complete the syllabus on time	400	1.00	5.00	2.8375	1.2384
6	Demonstrate adequate preparation for the lessons	400	1.00	5.00	3.5275	1.01579
7	Provide course outlines	400	1.00	5.00	3.9075	.99570
8	Stimulate students thinking	400	1.00	5.00	3.5700	1.04299
9	Provide clear expectations on course work	400	1.00	5.00	3.5700	1.05017
10	Ensure they complete the syllabus	400	1.00	5.00	3.3950	1.05202
11	Set assessment tasks	400	1.00	5.00	2.7475	1.29148
12	Integrate both theory and practice	400	1.00	5.00	2.8050	1.13145
13	Grades that reflect individual students' ability	400	1.00	5.00	3.4425	1.21671
14	Provides students' placement services on time	400	1.00	5.00	3.3150	1.24283
15	Informs exam schedules on time	400	1.00	5.00	3.6925	1.13630
16	Registration takes place timely	400	1.00	5.00	3.7275	1.05405
17	Classes take regularly	400	1.00	5.00	3.5600	1.13341
18	Releases examination results on time	400	1.00	5.00	3.4700	1.20321
	Valid N (listwise)	400	<b>Grand Mean</b>		<b>3.35680</b>	<b>1.13616</b>

\*Source: Researcher's own work

As we can see from Table 31, the grand mean value ( $M = 3.35$ ,  $SD = 1.13616$ ) shows the grand mean is above the average mean value, showing that as a whole, students' perceptions towards the quality of instructional practices were good. However, when we see the mean value of each item, students' responses to some items were below the average mean value. For example, the mean values for items three, five, eleven, and twelve ( $M = 2.9200$ ,  $SD = 1.16490$ ), ( $M = 2.8375$ ,  $SD = 1.2384$ ), ( $M = 2.7475$ ,  $SD = 1.29148$ ), and ( $M = 2.8050$ ,  $SD = 1.13145$ ), respectively, were below the average mean value. This data shows that students disagreed that teachers provide regular feedback on students' progress, complete the syllabus on time, integrate theory and practice while teaching, and set assessment tasks that challenge students to learn.

On the other hand, an independent sample t-test was also conducted to examine the perception difference between male and female respondents. The independent samples t-test results in below Table 31 show there was a statistically significant difference in mean scores for males (M = 3.4088, SD = 1.10190) and females (M = 3.5826, SD = 1.01754,  $t(400) = -2.299$ ,  $p = .022$ , two-tailed), indicating that female students positively rated the quality of the universities' instructional practices as compared with their male counterparts. The following Table 32 shortly summarizes independent samples t-test results for male and female students.

*Table 32 Independent Samples t-Test Results of the Quality of Instructional Practices*

<b>Group Statistics</b>										
Quality of Instructional Practices [QIP]	Sex	N	Mean	SD	SE Mean					
	M	285	3.3088	1.10190	.0652					
	F	115	3.5826	1.01724	.0948					
<b>Independent Samples Test</b>										
Levene's Test		t-test for Equality of Means								
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference		
								Lower	Upper	
Equal Variances Assumed	.88	.34	-2.2	398	.022	-.2738	.1191	-.5080	-.0396	
Equal Variances not Assumed			-2.3	227	.018	-.2738	.1151	-.5007	-.0469	

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

Although there was a statistically significant perception difference between male and female students regarding the quality of instructional practices, the qualitative findings strengthen the quantitative findings. Most study participants during interview and focus group sessions shared that some teachers are not providing regular feedback on students' academic progress, not completing the assigned course based on the academic calendar, and not constructing tests that measure students' learning objectives.

One of the focus group discussants and a fourth--year student in the Department of Public Administration and Communication at Wolaita Sodo University responded that “some teachers are not providing frequent feedback on students’ academic progress. In addition, they are not properly scoring the exam papers and ultimately release grades that didn’t reflect individual students’ abilities” (*Male, FGD Participant 5*).

The other focus group and interview participants shared challenges associated with delays in covering semester courses. Among FGD participants, a fourth-year student in the Department of Sociology and Social Anthropology at Arba Minch University felt that:

Some teachers are not properly completing courses according to the semester schedule. For example, we have only one week left for the final the final examination, but one teacher has completed only three chapters out of eight. I don’t know what we shall do for the remaining five chapters (*Female, FGD Participant-4*).

Another fifth-year student from the Department of Law shares similar concerns. His response excerpted from focus group transcripts, transcripts, typically summarizes others’ thoughts:

Many teachers start and complete courses according to the academic calendar. However, some teachers didn’t properly start and complete courses on time. Those teachers enter the classroom two or three times a week and complete the whole semester course (*male, FGD participant 1participant 1*).

In addition, during interview sessions, the interview participants consistently raised some teachers’ time management problems in completing courses assigned for a given academic semester. Among interview participants, an instructor at Arba Minch University in the Department of Mathematics felt that “some teachers start the courses at the end of the semester.

They jump regular classes and rush to complete the course, give assignments, tests, and term papers. This condition creates an unnecessary burden on students’’ (Male, Interview Participant 3).

Another instructor from the Department of English shared a similar concern. His interview response extracted from his interview transcript represents others’ thoughts:

Frankly speaking, some teachers are not following the academic calendar. Let me tell you from my experience: In the least year, I taught one common course at the main campus for a semester. I successfully completed the course when I had one week left for the final examination. After finishing the course, I asked the students who wanted to take tutorial classes, but students replied that we were occupied and would start another new course tomorrow. From this, I noticed that there are teachers who never start the assigned courses on time (Male, interview participant 8).

Moreover, interview participants at Arba Minch University were also explaining the lack of a monitoring and evaluation system as the reason why teachers are not completing the assigned course on time or based on the academic schedule. Among the interview participants, an instructor in the Department of Geology described that:

In our university, there is a motto called ‘*First Day, First Class*’. The idea of ‘*First Day Day, First Class*’ is quite interesting. However, if we can’t properly follow up on this, the idea has paper value. On each campus, for example, there are institutional quality assurance coordinators; however, they are not properly following the first day, first class, as well as the whole semester teaching and learning process. For example, some teachers complete a course containing 12 chapters within one month, which is assigned for a semester or four to five months. In addition, the institutional quality assurance

coordinators are not following up on the assessment's procedures, exam cheating, and related issues. Students consider cheating a right. How? I think institutional quality assurance coordinators have no authority to influence the department (Male, interview participant 1).

Another interview participant and a Mathematics Department instructor at Arba Minch University further added that the institutional quality assurance coordinators' weak follow-up system affects the teaching and learning process. His interview response taken from the interview transcript briefly summarizes the other interview participants' views:

In my observation, at the campus level, the institutional quality assurance coordinators' performance is very low. Most quality institutional quality assurance coordinators are simply following the following the '*First Day, First Class*' teaching and learning process. They forget their task after '*First Day, First Class*'. In my view, there are many tasks that are expected from institutional quality assurance coordinators; however, there is a perception problem among teachers. The teachers consider this position simple and only follows the '*First Day, First Class*'. However, for me, the reverse is true. In the teaching and learning process, there are four important elements:: teachers, students, curriculum, calendar, and educational inputs. All these elements demand monitoring and evaluation system. In my personal observation, the follow--up mechanism from the side of IQAC is very weak at the campus. For example, no one follows up on what extent the teachers cover the assigned courses based on the semester schedule, to what extent tutorial classes have been given for female and academically weak male students, how continuous assessments have been applied in the departments, and to what extent the

curriculum is relevant to the country's market demand. These issues need strong work from institutional quality assurance coordinators (*Male, Interview participant 3*).

The other study subjects also described the balance between theoretical and practical education. Most study participants in three sampled universities shared that practical education is poor as compared with theoretical education. Focus group participants at Arba Minch University discussed the delivery of practical lessons as a weakness of the university. Among focus group participants, a fifth-year student in the Department of Mechanical Engineering felt that:

On the main campus, laboratory equipment is available because students from other universities come to our university for field visits. However, on our campus, there is a shortage of skilled laboratory assistants to provide practical lessons. The laboratory assistants have poor experience and a weak academic background. I think all of them are diploma holders (*Male, FGD participant 6*).

Similarly, another focus group participant and a fourth-year student in the Department of Sport Science at Abaya Campus shared a problem associated with a practical lesson. In his own words:

We can't properly learn practical education. For example, the Department of Sport Science is located at the Abaya Campus, but many training centers and materials are found at the Main and Nech Sar Campuses. For example, sport gymnasiums [GYM] and handball stadiums are found on the Nech Sar Campus, while tennis, swimming, basketball, and athletics centers are located on the Main Campus. As you know, Abaya Campus is far away from Main and Nech Sar Campuses. So, how can we properly attend the practical lesson in this situation? It is very difficult! (*Male, FGD Participant 5*).

The other focus group participants at Wolaita Sodo and Jinka Universities were raising issues related to laboratory equipment. One of the focus group participants and a fourth-year student in the Department of Physics at Wolaita Sodo University shared that:

In my department, for example, there are adequate laboratory materials. However, many laboratory materials are not functional due to minor problems associated with cables. If the maintenance workers adjust the cables, I think all laboratory materials can be functional and provide services to students (*Male, Focus Group Participant 4*).

In addition, a fourth-year student at Wolaita Sodo University in the department of plant sciences has also shared poor delivery of practical education. In her own words, “the delivery of practical lessons is low as compared to practical lessons. For example, in one laboratory, there are about thirty-four computers, but among them, two or three are functional and the remaining are not functional” (*Female, FGD Participant-6*).

The interview participants further added that the shortage of laboratory equipment is a challenge to delivering practical education. During interview sessions, an instructor at Arba Minch University in the Department of Geology was explaining the imbalance between theoretical and practical education. His interview response which was extracted from the interview transcript typically summarizes others’ thoughts about those involved in the interview session at Arba Minch University:

In my opinion, practical education is poor as compared to theoretical education, principally in field-based or practical-based departments like biology, chemistry, physics, geology, sports science, and so on. There is an inadequate supply of laboratory apparatus and chemicals. For example, in laboratory technology departments, education is not demanding demonstration; rather it is more experimental. In addition, in departments like

geology, the department that I also belong to, there are eight courses that demand practical education, namely practical igneous, practical sedimentary, practical metamorphic, practical economic geology, practical paleontology, and practical mapping. For each practical course, there is one credit hour and sixteen contact hours. If there is an inadequate supply of laboratory chemicals, how will students smoothly attend practical lessons? Although mineral testing tools like plates, glass, and acid are adequate as compared with other universities, laboratory microscopes have been bought since 2004 E.C. It needs the replacement of some parts of the microscope, like the lens and lamp, cleaning, and re-installation (*Male, Interview Participant 1*).

One of the interview participants and the college dean at Jinka University also explained the poor delivery of practical education to students. He felt that:

We are somewhat effective in theoretical teaching on the one hand and poor in practical education on the other. Most undergraduate programs demand practical education; however, due to a shortage of laboratory equipment and workshop centers, we are unable to provide practical education to students. For example, colleges like agricultural sciences, health sciences, the college of technology, and the college of natural sciences need a high level of practical education. In addition, social science colleges also need practical education. For example, in the college of business and economics, there are various practical courses that demand software training. Due to a shortage of computers and installed software, we are unable to provide those trainings to our students (*Male, Interview participant, 3*).

The other focus group and interview participants also explained the problems related to the way of assessing students. Focus group discussants at Jinka University shared teachers' test

construction problems. Among focus group participants, a fourth-year student in the Department of Economics at Jinka University felt that “some teachers construct tests that are not related to lessons delivered in the classrooms or learning objectives. Those teachers download standardized tests from the internet and administer those tests to students” (*Male, FGD Participant-2*).

The other focus group participant, a four-year student at Wolaita Sodo University in the Department of Public Administration and Communication, described that:

Exam items are mainly dependent on modules and are totally constructed from modules. There are no conceptual items. If you miss “is” or was in short or essay answer items, your response is totally wrong because the teachers who construct exam items from modules compare your response with what is stated in the modules (*Male, FGD Participant-5*).

Another focus group participant and a fourth-year student at Arba Minch University in the Department of Psychology explained the challenges associated with test construction. Her response represents others’ views.

For example, I am from the Department of Psychology. We have learned how to prepare and administer examinations in the “Educational Measurement and Evaluation” course. According to the principle of educational measurement and evaluation, we need to construct exams containing various items, such as true or false items, matching items, multiple-choice items, fill-in-the-blank spaces or short answers, and essay items. If the exam type contains various items, all types of learners have a chance to pass the exam, and vice versa. However, if you look at our departments’ exam items, the exams are not inclusive enough. Amazing! The exams are not considering all learner types, namely, top learners, medium learners, and lower learners (*Female, FGD Participant-7*).

In addition, the other focus group and interview participants were sharing issues related to student placement services, the provision of educational materials, the academic calendar, and academic meetings. As we can see from the above table, the mean value for students' placement service was 3.3150 (SD = 1.24283), which exceeds the average mean value. This finding shows that the university provides students' placement services on time. Although the university provides placement services on time, the qualitative findings revealed that students complain regarding the placement services. Most interview participants described that, though placement services have been conducted in a systematic way, some students are not assigned to the department where they want to learn. Among the interview participants, an instructor at Arba Minch University in the Department of Special Needs and Inclusive Education and Institutional Quality Assurance Coordinator replied that:

Most students, particularly after completing a freshman course, complain about university placement services. The student complaints are related to the mismatch between what the student wants to learn and the assigned department. If the placement doesn't meet students' choice or interest, a very few students attend the education without interest, and some others even leave the university (*Male, Interview Participant, 5*).

Another interview participant and an instructor at Arba Minch University in the Department of Veterinary Medicine [DVM] shared that:

Freshman students mainly complain about issues related to placement. On our campus, for example, students choose departments like natural resource management, veterinary science, agricultural economics, and rarely plant science. Although the student placement services attempt to meet students' needs, the assignment is mainly judged based on entrance examination results and freshman course achievements. Due to that reason, all

students can't get the first or second choice. If students are not assigned to the department that they are interested in studying, the student retention rate at the university is low (*Female, Interview Participant-6*).

The other interview participant and a Registrar Directorate Director Office expert at Jinka University shared similar concerns. The interview response extracted from his interview transcripts represents others' views:

Most students do not choose departments like statistics, mathematics, physics, animal science, English, and history as their first choice. If students are assigned to these departments without their interest, they are frequently complaining about wanting to change departments. Although student placement services are based on students' interests and choices, students' achievements in the entrance exam and freshman course play a significant role in getting into the department that they want to study in. If some students' achievements are low enough to get into the chosen departments, they are forced to join other departments without their choice or interest. In a few departments like Law, Doctor of Veterinary Medicine [DVM], and Clinical Nursing [CN], there is no complaint because students who have good achievement immediately choose the mentioned departments after completing the first semester freshman course (*Male, Interview Participant 5*).

The focus group and interview participants additionally shared different issues pertaining to the quality of instructional practices, such as the provision of educational materials, following the academic calendar, and attending academic meetings. Most study subjects described that some teachers do not provide the necessary educational materials on time. Among the focus

group participants, a fourth-year student at Arba Minch University in the Department of Sociology and Social Anthropology described that:

Some teachers are not providing necessary educational materials on time to students. They provide some educational materials while exams are approaching. If they give course materials ahead of time, we thoroughly read to acquire the necessary knowledge, work on assignments, and prepare ourselves for examinations. If we get materials while exams are approaching, we cannot do anything, and this affects our learning, including academic performance (*Female, FGD Participant-4*).

The other focus participant, a fifth-year Veterinary Medicine Department student at Wolaita Sodo University, felt that:

Most students have limited access to educational materials. Since we are from a poor family background, most students have economic problems to even duplicate the modules. The other Ethiopian universities create different mechanisms to help economically needy students who are unable to duplicate or photocopy modules. For example, Haramaya University reduces some extra meals from students' budgets, duplicates modules, and makes necessary educational materials available to all students (*Male, FGD Participant -1*).

Most interview participants also shared students' low access to educational materials. Among the interview participants, the department head at Arba Minch University explained a shortage of educational material for students. His response, taken from interview transcripts, summarizes others' thoughts:

In our university, for example, educational materials like modules and handouts are not available to all students. As you know, there are many students who are from poor family

backgrounds, and those students can't afford costs related to photocopying and printing services (*Male, interview participant 2*).

Furthermore, another interview and focus group, participants shared the problem of strictly following the academic calendar and the frequency of conducting academic meetings. Among focus group participants, a fourth-year student at Arba Minch University in the Department of Sociology and Social Anthropology explained that ‘our university is not properly following the academic calendar as compared with other universities. For example, Bahir Dar and Dilla universities are strictly following the academic calendar. (Female, FGD Participant-4). In addition, an interview participant and department head at Arba Minch University admitted that:

We are not properly following an academic calendar. The outbreak of the COVID-19 pandemic affected the academic calendar. For example, we have changed the semester schedule according to students' needs. Based on students' complaints, we decided that next year's graduating class students should complete their education this academic year (*male, interview participant 2*).

Similarly, another interview participant and college dean at Jinka University expressed how the COVID-19 pandemic affected the academic calendar. His interview response, extracted from interview transcripts, typically represents others' views:

Due to the COVID-19 pandemic, we have completed three semesters in one academic year. The fourth-year students complain about the academic calendar because they have an exit exam at the end of this academic year. Since they have not properly attended last year's education, graduating class students are mainly raising complaints regarding how to take exit exams in this academic year (*Male, Interview Participant 3*).

The study subjects were further asked to share whether their respective universities organize academic meetings with students regarding academic issues. Most FGD participants explained that academic meetings are not common in universities. One of the focus group participants and a fifth-year Civil Engineering Department student at Wolaita Sodo University shares how the lack of academic meetings affects the teaching and learning process. His interview response, taken from focus group transcripts, briefly summarizes others' views:

Academic meetings focusing on teaching and learning are not conducted with students to improve teaching and learning. We are unintentionally called to attend informal meetings when political-related issues are happening inside and outside of the campus. If we take, for example, Bahir Dar and Dilla Universities, they regularly conduct academic meetings with students a minimum of twice a year. And take appropriate action on the challenges facing the teaching and learning process. In our case, there is no such trend, and that affects teaching and learning, including properly following the academic calendar (*male, FGD participant 3*).

In addition, an instructor at Wolaita Sodo University in the Department of Psychology described students' complaints with regard to the academic calendar and academic meetings. His response, which was extracted from the interview transcript, represents other interview participants who were involved at Wolaita Sodo University.

As an instructor, I got the chance to hear students complain regarding the quality of instructional practices. Our university is not conducting an academic meeting with students except for some peace and security problems that are happening on campus. If there are academic meetings with students, we have an opportunity to hear their voices. Due to that reason, the university didn't properly follow the academic calendar and did

not properly manage challenges related to teaching and learning. The university always raises the issue of COVID-19 for inappropriate use of the academic calendar. Indeed, COVID-19 has affected the normal functioning of different organizations, including higher education. However, it is not fair to relate everything to COVID-19 (*male, interview participant 1*).

To sum up, even though it is difficult to define the quality of instructional practices, there are many indicators of the quality of instructional practices. In the current study, the study subjects reflected their perceptions of the quality of instructional practices at their universities. As explained in the above findings, in Ethiopian universities, some teachers are not providing immediate feedback on students' progress and completing courses on time. In addition, some other teachers are not integrating theory with practice while teaching and are poor at designing assessment modes.

*Table 33 Students' Perception towards the Quality of Library Services (N=400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Has comfortable chairs and tables	400	1.00	5.00	2.9400	1.20833
2	Has adequate and latest academic resources	400	1.00	5.00	2.8175	1.21980
3	Provides a conducive environment for study	400	1.00	5.00	3.4350	1.17227
4	Has convenient opening and closing hours	400	1.00	5.00	3.5275	1.18649
5	Facilitates access to internet resources	400	1.00	5.00	2.8450	1.31159
6	Staff are friendly and helpful	400	1.00	5.00	2.4450	1.14027
7	Staff provide prompt services to students	400	1.00	5.00	2.7925	1.24028
	Valid N (listwise)	400				
<b>Grand Mean</b>					<b>2.9717</b>	<b>1.21129</b>

*\*Source: Researcher's own work*

As shown in above Table 33, there are a total of seven items were constructed to investigate students' perception of the quality of library services. As we notice from the table, the grand mean (M=2.9717, SD=1.21129) is below the average mean value. This data shows that students have a poor perception of the quality of library services except for very few items associated with study environment and the library opening and closing hours.

Moreover, an independent samples t-test was also conducted to examine the perception difference between male and female respondents. The independent samples t-test results in below Table 34 shows there was no statistically significant difference in mean scores for males (M=3.0421, SD=1.33413) and females (M=2.8087, SD=1.35009;  $t(400) = 1.578$ ,  $p = .115$ , two-tailed). The magnitude of the differences in means (mean difference .23341, 95% CI: -.0573 to .52416), indicates none. This finding suggests that there were no perception differences between male and female students regarding the quality of the university library services. The following Table 34 briefly summarizes independent samples t-test results for male and female students.

*Table 34 Independent Samples t-Test Results of the Quality of Library Services*

<b>Group Statistics</b>									
Quality of Library Services [QLS]	Sex	N	Mean	SD	SE Mean				
	M	285	3.0421	1.33413	.07903				
	F	115	2.8087	1.35009	.12590				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference Lower Upper	
Equal Variances Assumed	.17	.67	1.578	398	.115	.23341	.14789	-.0573	.52416
Equal Variances not Assumed			1.570	208.541	.118	.23341	.14864	-.0596	.52645

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

In addition, the study participants during the interview and focus group discussion sessions were also expressing the quality of library services. Although similar issues don't exist in all sampled universities and campuses, the study subjects shared some common challenges that affect the quality of library services. In all sampled universities, study participants explained

that the libraries found in their respective universities are not equipped with updated and necessary educational materials and there is poor internet access in the library.

During the focus group discussion session at Arba Minch University, the focus group discussants were raising the shortage of reference materials. Among FGD participants, a fifth-year student in the Department of Law Department shared that:

At the beginning of each semester, the course teachers provide course outlines before starting the course. In the course outline, there are many references. Our teachers order us to read those reference books. However, we cannot find those reference materials in the library. Therefore, there is a shortage of reference materials in the library (Male, FGD Participant-1).

In addition, an instructor in the Department of Psychology at Wolaita Sodo University shared that:

There are four libraries on the campus, such as Main Library, Social Science Library, Natural Science Library, Female Library and Technology Library. However, the libraries are not equipped with the necessary educational materials. If you go to the library, you cannot find recent educational materials, but you will find outdated materials (Male, Interview Participant 1).

Similarly, one of the student union representatives at Wolaita Sodo University felt that: ‘‘the library service is relatively good in our university. However, you can’t find local books in the library. Many books are foreign authored books and there is also a shortage of latest reference materials in the library’’ (Male, Interview Participant-3).

Another interview participant and a Psychology Department instructor at Jinka University also shared:

There is only one library on the campus, but that library is also not equipped with the necessary reference materials. There are educational materials in the library as a sample, but they are old and outdated. The purchased reference materials do not align with references indicated in the course outlines (Male, Interview Participant-1).

In addition, the focus group discussants were raising the lack of internet access in the library. Among focus group discussants, a fourth-year in the Department of Sociology and Social Anthropology at Arba Minch University felt that: “the internet connection is not only poor in the library but also poor on the whole campus. We cannot access necessary educational materials using our Smartphones due to internet connection problems” (Female, FGD Participant-4). The other a fifth-year student in the Department of Mechanical Engineering also agrees on the poor connection of internet services on the campus. She adds that:

Although the internet connection is poor on the campus, we cannot freely use the internet services by our Smartphones at the night time. Most of the time, the internet service is not active after 4:00 pm local time at night. On the other hand, security workers do not permit students who use internet services on the campus to use their Smartphones during the night even up to 4:00 pm local time (Male, FGD Participant-6).

One of the focus group participants and fourth-year students in the Department of Psychology department at Arba Minch University response typically summarizes others’ thoughts: “The internet connection is very poor in the library. We cannot easily access and download the necessary materials. Since the internet connection is weak in the library, we kill our time while struggling with poor network connection” ( Male, Interview Participant-7).

The interview participants in different sampled universities also disclosed the poor internet connection in the library. Among interview participants, an instructor in the Department of Special Needs and Inclusive Education at Arba Minch University explained that:

Indeed, we provide 24-hour library service to students. The library service is somewhat good, but still different issues that should be addressed. For example, our library is not digitalized and students cannot easily access educational materials. In digitalizing the library services, we are lagging as compared to other universities. The campus students use ICT centers to download educational materials instead of the library (Male, Interview Participant-5).

Another interview participant and an instructor at Jinka University also shares similar thought. His interview quote typically summarizes others' thought. In his own words:

There is weak internet service and shortage of available computers in the libraries. For example, in the university that I have attended my first and second degrees, there are computer classes in the library. In the lower steers, there are well organized computer classes, while the upper steers are equipped with necessary educational materials. I don't see such trend in our university (Male, Interview Participant, 1).

The other interview participants at Arba Minch and Jinka Universities shared the size of libraries, the number of libraries and duration of library services. One of interview participants and school dean at Arba Minch University shared that:

One of the students' complaints regarding library service was the size of the library. In our campus, the size of the library was small. Since the size of the library was small, you can observe students over crowdedness in the library. At present, this problem is

somewhat reduced because the new library has been started the service (Male, Interview Participant-4).

Another interview participant and instructor in the Department of Civics and Ethical Studies at Jinka University explains students complain regarding the library services. His interview excerpts typically summarize others' view:

We have Software Requirements Specification [SRS] for library management system. Through SRS, student can access some educational materials out of the campus and it works at about 1.5kms. However, most students complain services related with the quantity of library and duration of library services. There is only one library on the campus and unable to properly serve all students, principally during exam times. Not only that, but also the library not provide service for 24hrs, including public holidays (Male, Interview Participant-2).

As we can notice from the above study findings, the quality of library service is poor in the universities. The libraries that found in the universities are not equipped with updated and necessary educational materias. In addition, there is a poor internet access in the libraries. As a result, students are unable to easily download neccessary educational materials in the library. This findings concurs with the most recent empirical study that conducted by the Ethiopian Ministry of Education found that in most Ethiopian universities there are shortages of text and reference books and poor internet access in the libraries (MOE, 2018). In general, descriptive statistics was computed to show students' overall perception towards academic service quality. The following Table 35 shortly summarizes students' level of agreement on the overall academic service quality.

*Table 35 Summary of Students' Overall Response on the Academic Service Quality (N=400)*

<i>SN</i>	<i>Sub Dimensions</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Academic Staffs' Attitude and Behavior	400	1.00	5.00	3.036	1.20219
2	Academic Staffs' Competence	400	1.00	5.00	2.885	1.0438
3	Academic Facilities and Resources	400	1.00	5.00	3.136	1.2201
4	The Nature of Program Issues	400	1.00	5.00	3.368	1.11176
5	Quality of Instructional Practices	400	1.00	5.00	3.3568	1.13616
6	Quality of Library Services	400	1.00	5.00	2.9717	1.21129
Valid N (listwise)		400	<b>Grand Mean</b>		<b>3.1257</b>	<b>1.154218</b>

*\*Source: Researcher's own work*

Data summarized in Table 35 show that students have somewhat positive reflections on some variables and elements that describe academic service quality as the grand mean (M=3.1257, SD=1.154218) somewhat exceeds the average mean value. However, as indicated in the above table, the mean values for academic staff's competence and quality of library service are below average mean value three, showing students have poor perception towards academic staff's competence and quality of library service.

Furthermore, as mentioned in the earlier section, students disagreed on the majority of items that explain the attributes of academic service quality. Consistent with these findings, Solomon, *et al.* (2018) in their study observed that Ethiopian higher education students have a poor perception of academic service quality and that is reflected in low satisfaction scores. In addition, qualitative findings strengthened that Ethiopian universities provide poor services that are associated with academic service quality. In studying the historical challenges and opportunities of Ethiopian higher education, Alemayehu and Solomon (2017) found that the expansion of the country's higher education mainly affected the academic service quality of the universities.

#### 4.4.2 Non- Academic or Administrative Service Quality

In the second part of the questionnaire, the study participants were asked about the non-academic service quality of their respective universities. Three sub-dimensions that explain academic service quality were identified. These include administrative staff's attitude and behavior, the quality of administrative processes and procedures and non-academic staff's competence. In the following subsequent sub-section, the data collected regarding non-academic service quality were presented, analyzed and interpreted.

*Table 36 Students' Perception towards Non-academic Staffs' Attitude and Behavior (N=400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Have positive attitude towards the students	400	1.00	5.00	3.2125	1.12939
2	Have good communication with students	400	1.00	5.00	3.2025	1.16614
3	Provide caring and individualized attention	400	1.00	5.00	3.2100	1.13760
4	Show interest in solving students' problems	400	1.00	5.00	3.1975	1.16700
5	Guarantee the confidentiality of information	400	1.00	5.00	3.3200	1.11387
6	Provide prompt and accurate services	400	1.00	5.00	3.2100	1.11760
7	Pay attention to detail of the services	400	1.00	5.00	3.1300	1.16253
8	Are courteous and willing to help students	400	1.00	5.00	3.1500	1.14708
9	Are friendly and approachable	400	1.00	5.00	3.2150	1.19681
10	Are accessible during office hours	400	1.00	5.00	3.2300	1.17923
Valid N (listwise)		400	<b>Grand Mean</b>		<b>3.20775</b>	<b>1.15173</b>

*\*Source: Researcher's own work*

As shown in above Table 36, students were asked to rate their perception of administrative or non-academic staff's attitude and behavior. As we can notice from the table, the overall grand mean (M=3.20775, SD=1.15173) was above the average mean value. In addition, in all items that are associated with non-academic staff's attitude and behavior, the yielded mean values exceeded the average mean value. These findings suggest that students' overall perception is positive of non-academic staff's attitude and behavior.

Moreover, an independent samples t-test was also conducted to further examine the perception difference between male and female respondents. The independent samples t-test results in below Table 37 show there was no statistically significant difference in mean scores for

males (M=3.2035, SD=1.19888) and females (M=3.3739, SD=1.12749;  $t(400) = -1.30, p = .191$ , two-tailed). The magnitude of the differences in means (mean difference  $-0.17040$ , 95% CI:  $-0.4264$  to  $0.08563$ ), was none, showing that there was no perception difference between male and female students about administrative staff's attitude and behavior towards students. The following Table 37 shortly summarizes independent samples t-test results for male and female students.

*Table 37 Independent Samples t-Test Results of the Non-Academic Staffs' Attitude and Behavior*

<b>Group Statistics</b>									
Administrative Staffs' Attitude and Behavior	Sex	N	Mean	SD	SE Mean				
	M	285	3.2035	1.19888	.07102				
	F	115	3.3739	1.12749	.10514				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
								Lower	Upper
Equal Variances Assumed	.295	.587	-1.30	398	.191	-.170	.13023	-.426	.08563
Equal Variances not Assumed			-1.34	223	.181	-.126	.12688	-.420	.07962

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

However, during focus group and interview sessions the study participants, mainly at Wolaita Sodo and Jinka Universities were describing challenges associated with students' clinic services. Among focus group participants, a fifth year in the Department of Computer Science at Wolaita Sodo University shared health professionals' poor attitude toward students. His response taken from focus group transcripts represents others' thoughts:

In our university, the student clinic not only provides poor service but also zero service.

Most student clinic health professionals are not available during working hours. Not only

that they have also disciplinary problems. The health professionals are not showing a welcoming face to students and provide improper service. When students knock on the clinic door, they simply say get in and don't want even to look at students. They don't know who is entering the room because they don't want to look at students (Female, FGD Participant-2).

Another focus group participant and fourth year in the Department of Economics at Jinka University also expressed weak service delivery of students' health clinics. In his own words:

The student's health clinic service is also poor at our university. The university ambulance does not provide a stand-by service when students are referred to hospitals for further medication. In addition, the university hides the information when death records occur on the campus (Male, FGD Participant-2).

Furthermore, interview participants were also explaining the students' clinic services. One of the interview participants and student union representative at Wolaita Sodo University felt that:

There is a student clinic on the campus, but the service provision is the worst as compared with other services. In the first place, the health workers have disciplinary problems. They are unable to give proper health services to students. They do not show a welcoming face to students, rather they insult students (Male, Interview Participant-3).

The other interview participant and student union representative at Wolaita Sodo University stressed on health professionals who are working in the students' clinic. His interview response excerpted from the interview transcript shortly reflects others' views:

The student clinic does not provide fully functional service in our university. Students always raise complaints regarding the service delivery of student clinics. Sometimes, I

get the service, but the service delivery is very poor. The workers in the student clinic are not friendly and they have no welcoming face when students come to get health services (Male, Interview Participant-4).

The other interview participants at Jinka University further added improper medication and the shortages of skilled health professionals as challenges to providing better health services. One of the interview participants and students' union representative felt that:

The health service is poor at our university. The health professionals tell similar treatment results for all students who have different medical problems. How do all students have similar diseases? The health professionals relate all medical cases with weather conditions and food. How it could be? (Male, Interview Participant-6).

Another interview participant and a Psychology department instructor provided a comprehensive response regarding the university's health service and his interview response taken from the interview transcript summarizes others' views:

Frankly speaking, our university provides a poor health service to students. On one hand, the health professionals are not highly skilled and experienced, and they are also not always available during working hours on the other hand. Since the health professionals are diploma holders and not well experienced, they write referrals to hospitals for minor health-related problems (Male, Interview Participant-1).

In general, the universities provide poor health services to their students. As we can notice from the current study findings, there is a severe shortage of medicines in the students' clinics in general and a lack of highly skilled health professionals to provide medical services to students in particular. In addition, some health professionals have poor attitudes toward students and they don't show sincere interest in providing proper medical services to students.

*Table 38 Students' Perception towards Administrative Processes and Procedures (N=400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Bureaucracies and useless difficulties	400	1.00	5.00	2.8575	1.18774
2	Well-structured administrative procedures	400	1.00	5.00	3.3425	1.10147
3	Transparency of official procedures	400	1.00	5.00	3.2950	1.18384
	Valid N (listwise)	400				
<b>Grand Mean</b>					<b>3.165</b>	<b>1.1576833</b>

*\*Source: Researcher's own work*

As we can see from above Table 38, students were asked to indicate their level of agreement with three questions that related to administrative processes and procedures. As we can notice from the table, the grand mean ( $M=3.165$ ,  $SD=1.1576833$ ) is somewhat above the average mean. Furthermore, when we see the mean value of each item, the mean values for two and three ( $M=3.3425$ ,  $SD=1.10147$ ) and ( $3.2950$ ,  $SD=1.18384$ ) respectively were above the mean value. This information suggests that students' perceptions of administrative processes and procedures are somewhat positive. Although students' overall perception is positive towards administrative processes and procedures, they disagreed on the first item ( $M=2.8575$ ,  $SD=1.18774$ ) stating that administrative processes and procedures are not that bureaucratic to get needed services. This finding suggests that students face bureaucracies and unnecessary difficulties in getting needed services from the side of administrative workers.

On the other hand, an independent samples t-test was also conducted to examine the perception difference between male and female respondents. The independent samples t-test results in below Table 39 shows there was a statistically significant difference in mean scores for males ( $M=3.2351$ ,  $SD=1.16469$ ) and females ( $M=3.6178$ ,  $SD=1.02240$ ;  $t(400) = -3.07$ ,  $p=.002$ , two-tailed). This finding confirms that female respondents have a positive impression of the quality of administrative processes and procedures as compared with male counterparts. The

following Table 39 shortly summarizes independent samples t-test results for male and female students.

*Table 39 Independent Samples t-Test Results of the Administrative Processes and Procedures*

<b>Group Statistics</b>									
Administrative Processes and Procedures	Sex		N	Mean	SD	SE Mean			
	M		285	3.2351	1.16469	.06899			
	F		115	3.6178	1.02240	.09534			
<b>Independent Samples Test</b>									
Levene 's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference Lower Upper	
Equal Variances Assumed	3.06	.08	-3.07	398	.002	-.38230	.12437	-.6268	-.1378
Equal Variances not Assumed			-3.24	238	.001	-.38230	.11768	-.6141	-.1504

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

Consistent with this quantitative finding, interview participants in different study universities explained bureaucracies and unnecessary difficulties in getting some services. An interview participant and a Geology Department instructor at Arba Minch University described that:

The role of administrative service is to support the academic wing. However, there is a high bureaucracy in finance. As a result, we can't easily get the necessary educational materials on time. Our university is poorly delivering even stationery materials like pens, dusters, A4 papers and gowns for teachers (Male, Interview Participant-1).

Another interview participant and Mathematics Department instructor at Arba Minch University expressed unnecessary delay in finance to get money. His response taken from the interview transcript shortly summarizes others' views:

As you know, in the university, there are overtime payments and research grants, but you are not paid in the needed time. Except for salary, other payments stay in finance for about a couple of months. For example, if I teach an overload course this semester, probably I will be paid at the end of the second semester. In addition, there is also a similar problem for research grants. If the granted research proposal has passed all reviewing processes, the researcher (s) will wait for a couple of months until the release of the budget. Indeed, some financial-related challenges are beyond the capacity of experts and universities. Perhaps, the problem is associated with the country level as a whole. If there is a shortage of budget, how do the universities pay for the granted projects? It is difficult! Although sometimes the problem is beyond the university level, the experts as well as the university should work collaboratively to reduce unnecessary bureaucracies in finance (Male, Interview Participant-3).

Furthermore, interview participants at Jinka University also shared bureaucracies in purchasing procedures and processes as challenges to getting the necessary services on time. One of the interview participants and Registrar Directorate Director Office expert explained the duration of purchasing educational materials. His response was clear and direct. The following is his interview response extracted from the interview transcript:

The purchasing process takes a long period to get services. You can't get the necessary educational materials when you need them. We have a shortage of teaching tools like markers, dusters, LCD projectors and so forth. These tools seem simple, but they play an important role in facilitating the teaching and learning process. Thus, we have to get these teaching tools on time (Male, Interview Participant-5).

The other interview participant and Civics and Ethical Studies Department instructor further added unnecessary bureaucracies in the purchasing process. His response taken from the interview transcript reflects others' views:

At our university, there are unnecessary difficulties in the purchasing process at different levels. We request the university to purchase different educational materials, but we get the services after one year and/ or more. In addition, the administrative workers are not identifying non-functional materials, like printers, and copying machines in different offices to take appropriate measures (Male, Interview Participant-2).

Based on the above findings, we can conclude that administrative procedures and processes are bureaucratic to get needed services. There are unnecessary difficulties in getting services from experts who are working under the administrative wing. The financial issues and purchasing procedures take a long period amongst other administrative services.

*Table 40 Students' Perception towards Non-Academic Staffs' Competence (400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Are well experienced with university rules	400	1.00	5.00	2.7050	1.21930
2	Efficient in dealing with students' complaints	400	1.00	5.00	3.0125	1.17933
3	Maintains accurate and retrieval records	400	1.00	5.00	2.8075	1.20377
4	Provide service within reasonable time frame	400	1.00	5.00	2.9000	1.27439
	Valid N (listwise)	400				
<b>Grand Mean</b>						<b>2.85625</b>
<b>SD</b>						<b>1.2191975</b>

*\*Source: Researcher's own work*

According to above Table 40, students were asked to respond with their perception towards the non-academic staff's competence who has been working in the sampled universities. As we can see from the table the grand mean (M=2.85625, SD=1.2191975) is below the average mean value. In addition, in items related to non-academic competence, the mean value is less than the average mean value except for item two. This data confirms that the student's perception of the non-academic staff's competence is poor.

Moreover, the independent samples t-test results in below Table 41 show the non-academic staff's competence scores for males and females. There was no statistically significant difference in mean scores for males (M=2.8667, SD=1.15511) and females (M=3.0261, SD=1.32096;  $t(400) = -1.19, p = .232$ , two-tailed). The magnitude of the differences in means (mean difference  $-0.15942$ , 95% CI:  $-0.4211$  to  $0.10228$ ), was none, confirming that there was no perception difference between male and female students concerning the university's non-academic competence. The following Table 41 shortly summarizes independent samples t-test results for male and female students.

*Table 41 Independent Samples t-Test Results of the Non-Academic Staffs' Competence*

<b>Group Statistics</b>									
Non-Academic Staffs' Competence [NASC]	Sex		N	Mean	SD	SE Mean			
	M		285	2.8667	1.15511	.06842			
	F		115	3.0261	1.32096	.12318			
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference Lower Upper	
Equal Variances Assumed	.27	.100	-1.19	398	.232	-.15942	.13311	-.4211	.10228
Equal Variances not Assumed			-1.13	188	.259	-.15942	.14091	-.4373	.11854

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

Consistent with these quantitative findings, most interview participants also disclosed the non-academic staff's competence. Among interview participants, a Geology Department instructor at Arba Minch University explained non-the academic staff's skill gap as a challenge to discharge different tasks. His interview response taken from interview transcripts represents others' perspectives:

In my observation, most non-academic staff has a skill gap to carry out various duties and responsibilities. For example, some administrative workers have motivation to work; however, due to a lack of skill; they can't perform the assigned tasks properly in the needed time and expected quality. We need to provide motivational and professional training for them (Male, Interview Participant-1).

The other interview participants were stressed about the registrar service of their respective universities. Among interview participants, one of the Associate Registrars at Arba Minch University shared that:

Our university registrar service needs due attention because the documentation service is poor. We manually arrange graduated students' files, but we have a shortage of file cabinets. In addition, all graduated students' files are not properly filed and accessible in the center or main campus. On all working days, we handle "File Yikireb" or "provide file" requests from the university's main registrar office. The graduated students are unnecessarily killing their time, money and effort while moving from one campus to the other (Male, Interview Participant-7).

About alumni services, another interview participant and a Mathematics Department instructor at Arba Minch University further uncovered that:

The alumni service is poor as compared to other universities. Graduated students from a certain university have an opportunity to come back to his/ her previous university for various purposes likes as taking original degrees, official transcripts and attending further education. If a student graduates from AMU and comes to take an official transcript, he or she should wait for at least three to four consecutive days, because the alumni service is not automated and works in a traditional manual way. This trend consumes customers'

time and leads to unnecessary costs. Working in a traditional manual way has also another problem, i.e. the confidential students' data is on an individual's hand that creates tension for students. In addition, the manual way of handling students' documents leads to file loss, service delay and other related problems. Some universities have been attempting to automate alumni services. For example, if you take Addis Ababa University [AAU] the alumni services are automated. I think in this modernized system, there is no service delay and students can get services within a short period. In my view, making alumni service automated is not difficult for AMU. I think it is simple because to make the alumni service automatized, we need accurate student data (number of graduates), scanning all students' transcripts and temporaries and recruiting other technical workers (Male, Interview Participant-3).

The other interview participant at Arba Minch University was explaining thoughts associated with the problem of Student Management Information System [SMIS] services. The following is his interview response taken from interview transcripts.

The SMIS service is good technology, but I have reservations about this service. One of the problems of SMIS service is uniformity. For example, our university follows 50% of continuous assessment and the remaining 50% is covered by summative evaluation. However, some teachers do not follow this assessment procedure while using SMIS software. The teachers may change both assessment modes as they like. Another problem with SMIS service is students are never followed upon their academic performance. Students have an opportunity to see their grades at the end of the semester. Not only that but also experts in the registrar's office easily change students' grades. You can find students who have illegally graduated but are dismissed from the university. In addition,

all registrar workers are not familiar with SMIS service. There is a skill gap among experts (Male, Interview Participant 5).

Furthermore, interview participants at Wolaita Sodo and Jinka Universities were also sharing the registrar service. One of the interview participants and student union representative at Wolaita Sodo University says:

In my observation, the registrar's service is also poor as compared with other services. The registrar workers are not always available during office hours and do not properly serve students when they are available. There is a high bureaucracy in the registrar's service (Male, Interview Participant-3).

Another interview participant and Educational Planning and Management Department instructor at Wolaita Sodo University expressed the traditional way of recording services. His response was very direct and short: ‘‘In my perspective, our university’s recording services are not modernized. The university doesn’t properly follow Key Performance Indicators (KPIs). The recording service should be standard based’’ (Male, Interview Participant-2).

Although the recording services are somewhat poor at Wolaita Sodo and Arba Minch Universities, a Registrar Directorate Director at Jinka University was sharing somewhat good management of students’ data. In his own words:

The university properly manages students’ data in a computerized system. The students’ data management system protects forged or fake education documents because students’ documents are available in the cloud and on the university server. However, due to payment-related challenges, we can’t maintain students’ data on the cloud, but our students’ data are available on our university server. Thus, any employer can easily

identify forged or fake education documents using the students' data available on the university server (Male, Interview Participant 5).

Although students have a somewhat positive perception of non-academic staff's competence, the qualitative findings confirmed that administrative staff has a skill gap in carrying out different activities in the universities. In addition, the documentation service is also poor in the universities. Many universities manually document students' data and that ultimately prevents students from getting services within a short period. In general, descriptive statistics were also computed to show students' overall perception of administrative service quality. The following Table 42 shortly summarizes students' level of agreement on the overall administrative service quality.

*Table 42 Summary of Students' Overall Level of Agreement on Administrative Service Quality (N=400)*

<i>SN</i>	<i>Sub Dimensions</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Administrative Staffs' Attitude and Behavior	400	1.00	5.00	3.20775	1.15173
2	Administrative Processes and Procedures	400	1.00	5.00	3.165	1.15768
3	Non-Academic Staffs' Competence	400	1.00	5.00	2.85625	1.2192
Valid N (listwise)		400	<b>Grand Mean</b>		<b>3.07633</b>	<b>1.176203</b>

*\*Source: Researcher's own work*

Data summarized in Table 42 shows students' overall ratings on the non-academic service quality. As it has been presented in the above table, the grand mean value (M=3.076333, SD=1.176203) of students' level of agreement for non-academic service quality falls in average mean value, indicating that students have a somewhat positive perception towards non-academic service quality. However, as described in the previous section students' perception of elements that describe the non-academic service quality was poor and that reflected in low mean scores and qualitative findings.

### 4.4.3 Quality of General Infrastructures

In the third part of the questionnaire, students were asked to rate their level of agreement regarding the quality general infrastructure of their university. There are a total of ten items or constructs that explain the quality of general infrastructure are identified. The following section details the analysis of the data collected from students.

*Table 43 Students' Perception towards the Quality of General Infrastructure (400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Adequate water supply on the campus	400	1.00	5.00	3.52	1.314
2	Sufficient number of toilets students	400	1.00	5.00	3.39	1.327
3	Separate toilet for male and female students	400	1.00	5.00	4.01	1.182
4	Sufficient water supply in the toilets	400	1.00	5.00	3.24	1.434
5	Adequate electricity supply	400	1.00	5.00	3.84	1.123
6	Accessible internet services on your campus	400	1.00	5.00	2.84	1.338
7	Appearance of buildings are very nice	400	1.00	5.00	3.20	1.187
8	Suitable buildings for students with disability	400	1.00	5.00	2.99	1.318
9	Available transport facilities to students	400	1.00	5.00	2.86	1.356
10	Campus infrastructures are well maintained	400	1.00	5.00	3.26	1.254
Valid N (listwise)		400	<b>Grand Mean</b>		<b>3.317</b>	<b>1.2837</b>

*\*Source: Researcher's own work*

Students were asked to rate their perception of the general infrastructure of the university where they are pursuing their undergraduate programs. As shown in above Table 43, the grand mean ( $M=3.317$ ,  $SD=1.283775$ ) is above the average mean value, suggesting students have a positive attitude towards the general infrastructure of their respective universities. However, when we see the mean value of each item, constructs like six ( $M=2.8450$ ,  $SD=1.33808$ ), eight ( $M=2.9950$ ,  $SD=1.31883$ ) and nine ( $M=2.8600$ ,  $SD=1.35647$ ) respectively were below the average mean value. This finding assures that students disagreed on the variables related to the availability of internet access on the campus, suitability of buildings and facilities for students with disability, and availability of transportation services for students.

Moreover, an independent samples t-test was also conducted to examine the perception difference between male and female respondents. The independent samples t-test results in

below Table 44 shows there was no statistically significant difference in mean scores for males (M=3.2015, SD=1.10913) and females (M=3.4348, SD=1.08523;  $t(400) = -1.841$ ,  $p = .066$ , two-tailed). The magnitude of the differences in means (mean difference  $-.22426$ , 95% CI:  $-.46367$  to  $.01515$ ), was none, indicating that there was no perception difference between male and female students concerning the quality of the university's general infrastructure. The following Table 44 shortly summarizes independent samples t-test results for male and female students.

*Table 44 Independent Samples t-Test Results of the Quality of General Campus Infrastructures*

<b>Group Statistics</b>									
Quality of General Infrastructure [QGI]	Sex	N	Mean	SD	SE Mean				
	M	285	3.2105	1.10913	.06570				
	F	115	3.4348	1.08523	.10120				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
								Lower	Upper
Equal Variances Assumed	.006	.938	-1.84	398	.066	-.22426	.12178	-.4636	.01515
Equal Variances not Assumed			-1.85	215	.064	-.22426	.12178	-.4620	.01356

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

Similarly, qualitative findings also support the above quantitative finding. Among interview participants, an instructor in the Department of Special Needs and Inclusive Education [SNIE] felt that:

Our university's service delivery doesn't accommodate all students. For example, the buildings for toilets, dormitories and classrooms are not considering students with disability. I remember, three years back, one physically impaired student. He is physically impaired and moves from one place to another by using a wheelchair. Because

our campus buildings were not suitable for him, he transferred from our university to Wachamo University (Male, Interview Participant 4).

The other interview participant at Arba Minch University expressed the shortage of disability centers. In his own words:

In our university, the disability centers are not available on all campuses except the main campus. We mainly observe three forms of disabilities on the campus, such as blind, deaf and physically disabled students. If we have disability centers, we can provide services for many students who need special assistance. In our campus; for example, there are many deaf students. There is a lack of translators for deaf students. In principle, we have to assign translators for deaf students who provide translation services inside and outside of the classrooms. However, we have a lack of translators for deaf students in the classroom as well as out of the classroom. Some teachers use sign language while teaching, but out-of-the- classroom translation is very important for deaf students to properly get library services, dormitory services, health services and so on (Male, Interview Participant-5).

Furthermore, one of the academic program officers at Arba Minch University was describing the importance of creating a welcoming learning environment for all students. Her interview response excerpted from the interview transcript summarizes others' thoughts:

When we talk about the welcoming learning environment, most of the time people consider it as making the school environment green. For me, that is a wrong perception. Creating a welcoming school environment is not only making the school environment green but also includes serving and protecting students' needs, creating a welcoming school library, welcoming dormitory service, welcoming cafeteria services and so on. In

my evaluation, we need to work hard to make the school environment welcoming to all students, including students with different disabilities (Female, Interview Participant-6).

On the other hand, the other interview participants mainly at Wolaita Sodo and Jinka Universities explained the shortage of transportation services even for staff members. One of the interview participants and a Psychology Department instructor at Wolaita Sodo University was describing weak transportation service. The following is his interview response taken from the interview transcript and represents others' views:

In our institution, the academic and administrative employees do not work hand in hand. The main task of the administrative wing is to support the academic wing. For example, the transportation service is very weak in our university. Most employees are not arriving their office during working time due to weak transportation service (Male, Interview Participant-1).

Moreover, interview participants at Jinka University consistently raised transportation services as a weakness of the university. The interview participants and Registrar Directorate Director Office expert at Jinka University explaining transportation services as a big challenge to the university. His interview response taken from the interview transcript represents others' views:

In our university, the transportation service is poor as compared with other universities. The university has no bus because the university cannot purchase transportation buses on its budget. The university provides transportation service with a very limited-service bus. Those buses are also not the university buses, because the university has made a contractual agreement with individuals who have transportation buses. Presently, due to the shortage of budgets, the university even reduced some contract buses. In addition, in

our town, there is no taxi service except Bajaj and Motor Cycles. All these inconveniences have created a serious problem in transportation service (Male, Interview Participant-5).

However, most interview participants at Arba Minch University repeatedly raised transportation service as a strength of the university. One of the interview participants and a Mathematics Department instructor at Arba Minch University shared the encouraging transportation service. His response to my interview question reflects others' thoughts:

Our university's transportation service for both academic and administrative staff is encouraging. In my observation, I don't hear any complaints from academic and administrative staff regarding transportation service. This shows the transport service is better in our university as compared with other universities, mainly third and fourth-generation universities (Male, Interview Participant-3).

To summarize, as we can see from the above study findings there are shortages of necessary infrastructure in the universities. As explained many times, the internet access is poor in the universities. Furthermore, many buildings are not suitable for students with disabilities. The transportation service is also poor principally in the four-generation universities. Consistent with these findings, Girmaw (2014) and Elizabeth (2017) in their study also found that when the government aggressively worked on the expansion of higher education, universities struggled with an inadequate supply of necessary infrastructure. Similarly, another empirical study conducted by the Ethiopian Ministry of Education found that in most Ethiopian universities there are shortages of laboratory chemicals and workshop equipment (MOE, 2018).

#### 4.4.4 Quality of Support Services and Facilities

In the fourth part of the questionnaire, students were asked to rank their level of agreement regarding the quality of support services and facilities of their university. There are a total of twelve items or constructs that explain the quality of support services and facilities were identified. The following section explains the analysis of the data collected from students.

*Table 45 Students' Perception towards the Quality of Support Services and Facilities (N=400)*

<i>S N</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Sports and recreation facilities	400	1.00	5.00	2.7900	1.23884
2	Cafeteria infrastructure	400	1.00	5.00	3.1950	1.20649
3	IT facilities	400	1.00	5.00	3.2250	1.15008
4	Medical facilities	400	1.00	5.00	2.6850	1.26482
5	Hostel facilities	400	1.00	5.00	3.3125	1.17827
6	Photocopy and printing facilities	400	1.00	5.00	3.1700	1.25100
7	Extracurricular activities	400	1.00	5.00	3.2250	1.11242
8	Dormitory services	400	1.00	5.00	3.9675	1.12455
9	Pricing on campus	400	1.00	5.00	2.8950	1.28183
10	Counseling services	400	1.00	5.00	2.7350	1.25448
11	Quality of dormitory services	400	1.00	5.00	3.1325	1.25853
12	Students can access university internet	400	1.00	5.00	2.8700	1.34448
	Valid N (listwise)	400				
<b>Grand Mean</b>					<b>3.10020</b>	<b>1.2221491</b>

*\*Source: Researcher's own work*

Students were asked to rank the quality of support services and facilities that their university provides to students. As presented in above Table 45, the grand mean ( $M=3.10020$ ,  $SD=1.2221491$ ) is to some extent above the average mean value. This finding suggests that students somewhat positively ranked their level of agreement toward the quality of support services and facilities. Although students agreed on many items associated with the quality of support services and facilities, they also indicated their low agreement or disagreement on some items. As we can see from the above table, the mean values for items one, four, nine, ten and twelve, were below- average mean values. Students disagreed on items associated with the adequacy of sports and recreation facilities, medical facilities, reasonable pricing and quality of

food and refreshments on campus, quality of guidance and counseling services and finally students' access to university internet services. This finding confirms that there are shortages of sports and recreation and medical facilities in the universities. Besides, the universities are not providing quality guidance and counseling services to students or clients who need academic support.

On the other hand, an independent samples t-test was also conducted to examine the perception difference between male and female students. The independent samples t-test results in the following Table 46 show there was a statistically significant difference in mean scores for males (M=3.1965, SD=1.13367) and females (M=3.5043, SD=1.04608;  $t(400) = -2.512, p = .012$ , two-tailed), revealing that female students were positively rated their level of agreement towards the quality of the university support services and facilities as compared with male students. The following Table 46 shortly summarizes independent samples t-test results for male and female students.

*Table 46 Independent Samples t-Test Results of the Quality of Support Services and Facilities*

<b>Group Statistics</b>									
Quality of Support Services and Facilities [QSSF]	Sex	N	Mean	SD	SE Mean				
	M	285	3.1965	1.13367	.06715				
	F	115	3.5043	1.04608	.09755				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference Lower Upper	
Equal Variances Assumed	.66	.416	-2.51	398	.012	-.30786	.12255	-.5487	-.0669
Equal Variances not Assumed			-2.60	227	.010	-.30786	.11843	-.5412	-.0745

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

Likewise, the study participants in the interview and focus group discussion sessions explained the quality of different support services and facilities. Most interview participants mainly at Wolaita Sodo and Jinka University were sharing the quality of sports and recreation services. One of the interview participants and student union representative at Wolaita Sodo University has expressed that:

There are recreation centers on the campus, but the service delivery is weak. Although there are playgrounds for handball and volleyball, there is no football stadium on the campus. If you take; for example, Hawassa, Jimma, Haramaya and Arba Minch Universities, there is a big and SMART football stadium, but we have no such football stadium (Male, Interview Participant-3).

Another interview participant at Wolaita Sodo University shares a similar concern. His interview response extracted from the interview transcript shortly summarizes others' thoughts:

Indeed, there are some sports and recreation centers and organized clubs on the campus. Although there are recreation centers and organized clubs, there is a shortage of recreation centers that serve all students. For example, we have no large and standardized football stadium (Male, Interview Participant 4).

Moreover, interview participants at Jinka University were also expressing the quality of sports and recreation services. Among interview participants, a Student Union representative at Jinka University described that:

In different universities; for example, AMU, AAU and others, there are Inter Cup and GC Cup football games. The Inter Cup football game can be conducted among colleges, whereas the GC football game is among GC students. We have no such football games on

the campus because we have no football stadium on the campus (Male, Interview Participant-6).

The other interview participant and Student Service Directorate Director Office expert admitted the poor quality of sports and recreation services. His interview response taken from the interview transcript represents others' views:

We are trying our best to create a suitable environment for sports and recreation services. We have no football stadium on the campus. Even though we provide Tennis and Digital Satellite Television [DSTV] services, still we need to work more on building football stadiums and other playgrounds (Male, Interview Participant, 4).

Moreover, the interview participants in three sampled universities expressed the services associated with student clinics. One of the interview participants and students' union representative at Arba Minch University has shared that the shortage of medicines is a pressing challenge that limits students from getting proper medication at the university. His interview response taken from the interview transcript represents others' views:

In our university, there are available health professionals. However, there are shortages of medicines. The only medicines available at the student health center are painkillers, Malaria and Typhoid Medicines. We are ordered to purchase other medicines from outside Pharmacies. In addition, we observe the similarity of disease findings for all students. For example, Typhoid and Malaria are common disease findings for all students. How? (Male, Interview Participant-8).

Other interview participants at Wolaita Sodo and Jinka Universities also explained similar observations on student clinic service. Among interview participants, student union representatives described the shortage of budget as the reason for the medicine deficit in the

student clinic. His interview response extracted from the interview transcript represents others' thoughts who were involved in the interview session at Wolaita Sodo University. In his own words:

In our university, there is a severe shortage of medicines in the clinic. The only medicines that are available in the clinic are Amoxicillin and painkillers. The shortage of budget is another pressing challenge to our university. In my observation, the shortage of medicines in the student clinic is related to the budget deficit. If there is a budget deficit, the university is unable to purchase available medicines (Male, Interview Participant 3).

In addition, another interview participant and Student Service Directorate Director Office expert at Jinka University explained that the shortage of medicine in the student clinic existing challenge though different measures have been taken to reduce medicine-related problems. His interview response shortly summarizes others' views:

In our university, the health service is somewhat good, but there is a shortage of medicines in the student clinic. Although we agreed with Jinka Hospital to borrow medicines to reduce the problems related to medicine shortage, still the shortage of medicine is a persisting challenge at our university (Male, Interview Participant-4).

The focus group participants at Arba Minch and Jinka Universities have described that the price level is high on the campus to get different services as compared with outside of the campus. One of the focus group participants and a fourth-year Physics department student at Arba Minch University expressed how pricing for different services is high on the campus. His response taken from the focus group discussion transcript summarizes others' views:

There are two Shopping Centres on the campus. However, both of them provide service in a very limited. The Shopping Centre is not giving services for 24hrs. The price is not

fair to purchase necessary materials. We assume that on the campus shopping Centre, the amount of price is comparatively better than outside Shopping Centre. In our case; however, the reverse is true. The amount of price is comparatively better outside than in the campus Shopping Centre. In addition, the price of student lounge service is costly as compared with outside of campus. For example, we pay Ethiopian Birr [ETB] ten for one coffee on the campus, but it is ETB seven out of the campus (Male, FGD Participant-3).

Moreover, focus group participants at Jinka University were also explaining similar concerns. Among focus group participants and a fourth-year student in the Department of Geography says:

The service price on the campus is high as compared with outside of the campus. For example, if you want to get services like barberry, copying, etc. the prices are high on the campus. Outside of the campus, the barberry service for men is 30ETB, but on the campus it is 45ETB. The price for one item of soap is 35ETB outside of campus, but on campus it is 45ETB. The price for copying service is 1.5 cents per page out of the campus, while 3ETB per page on the campus (Male, FGD Participant-5).

In addition, in the three sampled universities the study participants, especially in the interviewing session explained poor delivery of guidance and counseling services to students.

One of the interview participants at Arba Minch University expressed that:

Our guidance and counseling service is not encouraging. Some counselors assigned to each campus are not psychology graduates rather they are graduated from fields like sociology and anthropology. Our university's performance in guidance and counseling services is poor compared with other universities. For example, in my observation, Bahir

Dar University is performing better results in this sector than ours as in Bahir Dar University, the counselors are professional (Male, Interview Participant-5).

Another interview participant and School Dean at Arba Minch University also shared similar concerns. His interview response taken from interview transcripts summarizes other interview participants' views:

The guidance and counseling sector provides many services to students. For example, the counselor provides services in the following vital areas: students' mental health, study habits, managing stress and reducing exam anxieties. However, the number of counselors is very few in our university. There is only one counselor assigned to each campus and they are also not accountable for the academic wing. As school dean, I can't force them to do tasks as they are accountable for the administrative wing. Thus, I don't see any fruitful results from a counselor assigned to our campus. The counselor always says "I couldn't find students who want counseling service". I don't believe this is a reality on the ground. We are working to reduce this problem. For example, as a school, we are trying to assign one male and one female counselor to each campus in collaboration with the psychology department. There should be male and female counselors as the client shares his/ her problem with a counselor of the same sex (Male, Interview Participant 4).

Likewise, an interview participant and student union representative at Wolaita Sodo University shared that:

In our university, the guidance and counseling service is very weak. Sometimes, the counselors provide orientation for freshman students once a year. Afterward, I don't see any clients or students who get counseling services. The guidance and counseling office is found in our building and I always see their closed office. I think the counselors are

unable to identify students who need guidance and counseling services. In addition, there is also a weak connection with student union and association representatives. If they have good interaction with us, we can easily find students who need counseling services, because we have frequent interaction with all students as student union representatives (Male, Interview Participant-3).

In general, the study findings confirmed that there are shortages of sports recreation services and medical facilities in the universities. In addition, the universities provide poor guidance and counseling services to students who are seeking special assistance.

#### 4.4.5 Quality of Students' Welfare Services

In the fifth part of the questionnaire, students were asked to rank their level of agreement regarding the quality of students' welfare services at their respective universities. There are a total of five items or constructs that explain the quality of students' welfare services were identified. The following section explains the analysis of the data collected from students.

*Table 47 Students' Perception towards the Quality of Students' Welfare Services (N=400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Adequate support for needy students	400	1.00	5.00	2.8400	1.06406
2	Promotes an independent students' union	400	1.00	5.00	3.3075	1.16462
3	Involves students in decision making	400	1.00	5.00	3.1550	1.08116
4	Equal treatment and respect to students	400	1.00	5.00	3.3075	1.18171
5	Provides enough security services to students	400	1.00	5.00	3.3100	1.25413
	Valid N (listwise)	400				
<b>Grand Mean</b>					<b>3.184</b>	<b>1.149136</b>

*\*Source: Researcher's own work*

As it has been presented in the above table, the grand mean (M=3.184, SD=1.149136) is slightly above the average mean value. In addition, all items' mean values were above the average mean value except for the first item which asks the availability of support services for needy students. This finding confirms that students have a somewhat positive attitude toward the quality of welfare services provided by their university.

On the other hand, an independent samples t-test was also conducted to examine the perception difference between male and female respondents. The independent samples t-test results in below Table 48 show there was a statistically significant difference in mean scores for males (M=3.0281, SD=1.24722) and females (M=3.3043, SD=1.20069;  $t(400) = -2.027$ ,  $p = .043$ , two-tailed), indicating that female students have positive perception regarding the quality of students' welfare services as compared with male students. The following Table 48 shortly summarizes independent samples t-test results for male and female students.

*Table 48 Independent Samples t-Test Results of the Quality of Students' Welfare Services*

<b>Group Statistics</b>									
Quality of Students' Welfare Services [QSWS]	Sex	N	Mean	SD	SE Mean				
	M	285	3.0281	1.24722	.07388				
	F	115	3.3043	1.20069	.11196				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
								Lower	Upper
Equal Variances Assumed	.03	.849	-2.02	398	.043	-.27628	.13633	-.5443	-.0082
Equal Variances not Assumed			-2.06	218	.041	-.27628	.13414	-.5406	-.0119

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

Furthermore, the qualitative findings collected from the interview and focus group participants also support the quantitative findings. Most study subjects discussed the peace and security status of their respective university. Among focus group participants, a fourth-year Sociology and Social Anthropology Department student at Arba Minch University shared that:

The students' welfare services are very good when we compare our university with other Ethiopian universities. To be honest, Arba Minch University as well as Arba Minch town is

surrounded by peace. We have no peace and security fear while studying on campus as well as out of campus (Female, FGD-Participant-4).

Another focus group participant and a fourth-year student in the Department of Psychology also supports others' views and his response typically represents other focus group discussants:

We are highly satisfied with the university's welfare services to students. Since Arba Minch is a safe town, the campus environment is also safe. All students are happy with the peace and security status of our university, including students' family members (Male, FGD Participant-7).

Similarly, focus groups and interview participants at Wolaita Sodo University also shared the peace and security issues by comparing with other universities. One of the focus group participants and a fifth-year Computer Science Department student explained that:

In peace and security, our university is doing a great job. If you consider the current situation of our country, there are peace and security problems in different parts of the country, including educational institutions. In other Ethiopian universities; for example, Dilla, Wachamo and Worabe Universities there are peace and security related problems, but presently, there is no such case in our university (Female, FGD Participant-2).

Another interview participant and student union representative at Wolaita Sodo University's response shares others' views. Here is his interview quote taken from interview transcript:

Our university is a role model university for other Ethiopian universities, particularly in peace and security. Since the university is a small Ethiopia, student diversity is the most common in Ethiopian universities. However, our university properly manages student diversity, because

the university's top management works closely with students, local elders and local government. I remember, in 2012 E.C there was a peace and security problem at our university, but the university easily managed that problem and sustained the teaching and learning process. Presently, the university is quite peaceful and secure as an educational institution. There are no inappropriate actions that disturb students on the campus. Most students feel the university as their home (Male, Interview Participant-4).

In addition, the interview and focus group participants at Jinka University also expressed encouraging services provided by the University for Students' Welfare. Among focus group participants, a fourth-year student in the Department of History has explained that:

In our university, student diversity is the most well-known. Besides, the surrounding community is also more diverse. As you know, there are 16 nations and nationalities and more than 34 languages spoken by the surrounding community. However, our university is known for peace and security. In addition, there is a security camera on the campus (Male, FGD Participant-3).

The other interview participant and an instructor in the Department of Psychology also support focus group participants' views regarding the university's performance on peace and security. His interview response that taken interview transcript represents others' views:

Our university is also good at maintaining peace and security as compared with other Ethiopian universities. For example, racial conflicts are the most common in other universities, e.g., Dire Dawa University, and Dembi Dolo University, but you can't observe such problems in our university. All students have been peacefully attending their education (Male, Interview Participant-1).

The quality of students' welfare services plays a vital role in students' learning as they attend the regular classes if their security is properly protected. Unless students are unable to properly learn on the campus. The present study confirmed that there is no peace and security problem in the universities. Since the universities are working collaboratively with local government and communities, students have no tension regarding the peace and security of their universities.

#### 4.4.6 University Access to Students

In the sixth part of the questionnaire, students were asked to rank their level of agreement regarding their university access to students. There are a total of five items or constructs that explain the university's access to students were identified. The following section explains the analysis of the data collected from students.

*Table 49 Students' Perception towards University Access to Students (N=400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Supports students' associations	400	1.00	5.00	3.2000	1.09453
2	Values and recognizes students' feedback	400	1.00	5.00	3.3000	1.07372
3	Simple service delivery procedures	400	1.00	5.00	3.3100	1.10995
4	Staff are easily contacted	400	1.00	5.00	3.3250	1.20749
5	Website is informative to students	400	1.00	5.00	3.5400	1.16696
	Valid N (listwise)	400				
<b>Grand Mean</b>					<b>3.335</b>	<b>1.13053</b>

*\*Source: Researcher's own work*

As shown in Table 49, the grand mean value (M=3.335, SD=1.13053) exceeds the average mean value. In addition, in all items that related to university access to students, the mean values were above the average mean value. This finding assures that students have a positive perception towards the quality of university access to students. On the other hand, an independent samples t-test was also conducted to compare mean scores of university access for male and female respondents. The independent samples t-test results in below Table 50 show there was a statistically significant difference in mean scores for males (M=3.2807, SD=1.18313)

and females ( $M=3.6087$ ,  $SD=1.04877$ ;  $t(400)=-2.590$ ,  $p=.010$ , two-tailed); indicating that female students were positively rated their level of agreement towards the university access to students as compared with male students. The following Table 50 shortly summarizes independent samples t-test results for male and female students.

*Table 50 Independent Samples t-Test Results of the University Access to Students*

<b>Group Statistics</b>									
University Access to Students [UAS]	Sex	N	Mean	SD	SE Mean				
	M	285	3.2807	1.18313	.07008				
	F	115	3.6087	1.04877	.19780				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
								Lower	Upper
Equal Variances Assumed	3.8	.05	-2.59	398	.010	-.32799	.1266	-.5769	-.0790
Equal Variances not Assumed			-2.72	236	.007	-.32799	.1203	-.5650	-.0909

*Source: Researcher's own work*

*\*Significant at  $p<0.05$*

#### **4.4.7 University Reputation**

In the seventh part of the questionnaire, students were asked to rank their level of agreement regarding their university's reputation. There are a total of six items or constructs that explain the university's reputation were identified. The following section explains the analysis of the data collected from students.

*Table 51 Students' Perception towards University Reputation (N=400)*

<i>SN</i>	<i>Items</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
1	Adequate human resources	400	1.00	5.00	2.8925	1.18932
2	Adequate campus facilities	400	1.00	5.00	2.6300	1.21317
3	Ideal campus location/layout	400	1.00	5.00	3.4400	1.03396
4	Maintains minimal class sizes	400	1.00	5.00	3.4025	1.14839
5	Produces easily employable graduates	400	1.00	5.00	3.3850	1.17269
6	Students are given fair amount of freedom	400	1.00	5.00	3.4425	1.24320
Valid N (listwise)		400				
<b>Grand Mean</b>					<b>3.19875</b>	<b>1.166788</b>

*\*Source: Researcher's own work*

Table 51 shows the items related to the university's reputation. As we can notice from the table, the grand mean value (M=3.19875, 1.166788) which is above the average mean value shows as a whole students have a positive attitude towards the university's reputation. However, the mean values for items one (M=2.8925, SD=1.18932) and two (M=2.6300, SD=1.21317) respectively were below the average mean value. Students disagreed on the items associated with the availability of experienced human resources and the adequacy of facilities on the campus. This finding indicates that there are shortages of skilled manpower and necessary facilities in the universities.

Moreover, an independent samples t-test was also conducted to examine the perception difference between male and female respondents. The independent samples t-test results in below Table 52 shows there was no statistically significant difference in mean scores for males (M=3.0947, SD=1.34589) and females (M=3.2435, SD=1.24669;  $t(400) = -1.021, p = .308$ , two-tailed). This finding shows that there was no perception difference between male and female students about university reputation. The following Table 52 shortly summarizes independent samples t-test results for male and female students.

Table 52 Independent Samples Test Results of the University Reputation

<b>Group Statistics</b>									
University Reputation [UR]	Sex	N	Mean	SD	SE Mean				
	M	285	3.0947	1.34589	.07972				
	F	115	3.2435	1.24669	.11625				
<b>Independent Samples Test</b>									
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
								Lower	Upper
Equal Variances Assumed	.653	.420	-1.02	398	.308	-.14874	.14563	-.4350	.13756
Equal Variances not Assumed			-1.05	226	.292	-.14874	.14096	-.4265	.12903

Source: Researcher's own work

\*Significant at  $p < 0.05$

Finally, the overall summary of descriptive statistics was provided to indicate the students' overall perception of educational service quality. The following descriptive statistics

Table 53 summarizes the students' overall perception towards education service quality.

Table 53 Summary of Students' Overall Perception towards Educational Service Quality [ESQ]

Facets of Education Service Quality	N	Min.	Max.	Mean	SD
Academic Service Quality	400	1	5	3.125	1.154218
Non-Academic Service Quality	400	1	5	2.856	1.2191975
Quality of General Infrastructure	400	1	5	3.317	1.283775
Quality of Support Services and Facilities	400	1	5	3.100	1.2221491
Quality of Students' Welfare Services	400	1	5	3.184	1.1491136
University Access to Students	400	1	5	3.335	1.13053
University Reputation	400	1	5	3.1987	1.166788
Valid N (listwise)	400	<b>Grand Mean</b>		<b>3.15945</b>	<b>1.189395</b>

\*Source: Researcher's own work

The above Table 53 summarizes the results on students' overall perspectives towards education service quality. As has been presented in the above table, the grand mean ( $M=3.15945$ ,  $SD=1.189395$ ) which was to a degree exceeds the average mean value, showing that students have a relatively positive level of agreement for some facets that describe educational service

quality. On the other hand, an independent sample t-test was also conducted to compare mean scores of overall educational service quality for male and female respondents. The independent samples t-test results in below Table 54 show there was a statistically significant difference in mean scores for males (M=2.7701; SD=0.5169603448) and females (M=2.9276; SD=0.4766537931);  $t(400) = 2.820$ ,  $p = .005$ , two-tailed), showing that female students were somewhat positively ranked their level of agreement towards the overall educational service quality as compared with male students.

*Table 54 Independent Samples t-Test Results of Overall Educational Service Quality [EdSQ]*

		<b>Group Statistics</b>							
Educational Service Quality	Sex	N	Mean	SD	SE Mean				
	M	285	2.7701	0.5169603448	0.030622069				
	F	115	2.9276	0.4766537931	0.0444481897				
		<b>Independent Samples Test</b>							
Levene's Test		t-test for Equality of Means							
	F	Sig.	T	Df	Sig. (2-tailed)	Mean d/ce	SE d/ce	95% CI of the difference	
								Lower	Upper
Equal Variances Assumed	1.2	.267	-2.820	398	.005	-18.2753	6.48108	-31.01678	-5.5339
Equal Variances not Assumed			-2.919	227	.004	-18.2753	6.26116	-30.61268	-5.9380

*Source: Researcher's own work*

*\*Significant at  $p < 0.05$*

## 4.5 Educational Service Quality and Students' Satisfaction

The key concepts in this study are education service quality, students' satisfaction and students' academic performance. The complete analysis was done in two stages. In stage 1, the correlation between education service quality and student satisfaction was examined. The rationale behind this was to see the relationship between education service quality and students' satisfaction before looking into the relation among three variables. In addition, stage one also

aimed to address the fourth research objective and its sub-objectives. In Stage 2, multiple linear regression analysis was used to measure the relationships among the three variables.

#### 4.5.1 The Relationship between Educational Service Quality and Students' Satisfaction

In the following section, the link between the overall education service quality and student satisfaction was conducted using Pearson's correlation coefficient or r value. In addition, the facets of each educational service quality with students' satisfaction were examined.

*Table 55 Correlation Analysis: Overall EdSQ and Students' Overall Satisfaction (N=400)*

		<i>Education Service Quality</i>	<i>Students' Overall Satisfaction</i>
<i>Education Service Quality</i>	Pearson Correlation	1	.844**
	Sig. (2-tailed)		.000
	N	400	400
<i>Students' Overall Satisfaction</i>	Pearson Correlation	.844**	1
	Sig. (2-tailed)	.000	
	N	400	400

*Source: Researcher's own work*

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

**Where; EdSQ=Education Service Quality**

The above Table 55 shows the correlation between overall service quality and students' satisfaction. As can be seen from the table, there is a statistically significant, high and positive correlation between service quality and students' satisfaction ( $r=.844$ ). This finding is consistent with many other earlier research findings (e.g., Baniya, 2016; Hanaysha, Abdullah & Warokka, 2011; Kara, Tanui & Kalai, 2016 and Kundi, Khan, et al., 2014) who examined the correlation between service quality and students' satisfaction and found a significant and positive correlation between service quality and students' satisfaction.

*Table 56a Correlation between Facets of EdSQ & Overall Students' Satisfaction (N=400)*

Facets of ESQ		Academic SERV.	Students' Satisfaction
Academic S. Quality	Pearson Correlation	1	.751**
	Sig.(2-tailed)		.000
	N	400	400
Students' Satisfaction	Pearson Correlation	.751**	1
	Sig.(2-tailed)	.000	
	N	400	400
		Admin. SERV	Students' Satisfaction
Administrative S. Quality	Pearson Correlation	1	.837**
	Sig.(2-tailed)		.000
	N	400	400
Students' Satisfaction	Pearson Correlation	.873**	1
	Sig.(2-tailed)	.000	
	N	400	400
		Infrastructure	Students' Satisfaction
Quality of Infrastructure	Pearson Correlation	1	.652**
	Sig.(2-tailed)		.000
	N	400	400
Students' Satisfaction	Pearson Correlation	.652**	1
	Sig.(2-tailed)	.000	
	N	400	400
		Support Services	Students' Satisfaction
Support Services	Pearson Correlation	1	.707**
	Sig.(2-tailed)		.000
	N	400	400
Students' Satisfaction	Pearson Correlation	.707**	1
	Sig.(2-tailed)	.000	
	N	400	400

*Source: Researcher's own work*

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

**Where;** SERV.=Service; EdSQ=Education Service Quality; Admin.=Administrative

*Table 56b Correlation between Facets of EdSQ and Students' Overall Satisfaction Continued.*

		Welfare Services	
Welfare Services	Pearson Correlation	1	.749**
	Sig.(2-tailed)		.000
	N	400	400
Students' Satisfaction	Pearson Correlation	.749**	1
	Sig.(2-tailed)	.000	
	N	400	400
		University Access	
University Access	Pearson Correlation	1	.734**
	Sig.(2-tailed)		.000
	N	400	400
Students' Satisfaction	Pearson Correlation	.734**	1
	Sig.(2-tailed)	.000	
	N	400	400
		University Reputation	
University Reputation	Pearson Correlation	1	.740**
	Sig.(2-tailed)		.000
	N	400	400
Students' Satisfaction	Pearson Correlation	.740**	1
	Sig.(2-tailed)	.000	
	N	400	400

*Source: Researcher's own work*

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

*Where; EdSQ=Education Service Quality*

The above Table 56a and Table 56b depict the correlation between dimensions of education service quality and students' satisfaction. As we can see from the table, all service quality variables have a strong and positive correlation with students' satisfaction. In addition, as summarized in the table, the seven facets of educational service quality influence students' satisfaction in the order of decreasing importance as follows: administrative service quality, academic service quality, quality of students' welfare services, university reputation, university access to students, quality of support services and facilities, and quality of general infrastructure. This result suggests that the university should focus on aspects of service quality that highly influence students' satisfaction.

#### 4.5.2 The Effects of Educational Service Quality on Students' Satisfaction

This section aimed to examine the effects of education service quality on students' satisfaction. The linear regression analysis was conducted to determine the effect of independent variables or facets of educational service quality on students' satisfaction. The analysis involved seven independent variables (predictors) of education service quality. The predictors were academic service quality (M =3.12575, SD=1.154218), administrative service quality (M = 3.07633, SD = 1.176203), quality of general infrastructure (M = 3.317, SD = 1.1283775), quality of support services and facilities (M = 3.10020, SD = 1.2221491), quality of students' welfare services, university access to student (M = 3.335, SD = 1.13053), and university reputation (3.19875, SD=1.166788). Students' satisfaction in the universities was the dependent variable (M = 3.19744, SD = 1.18061858) and the results are summarized in the following Table 57a &57b.

*Table 57a Multiple Linear Regression Analysis: Facets of EdSQ and Students' Satisfaction*

<b>Model Summary</b>						
<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>SE of the Estimate</i>		
1	.915	.838	.835	4.53508		
a. Predictors: (Constant), Academic Service Quality, Administrative Service Quality, Quality of General Infrastructure, Quality of Support Services and Facilities, Quality of Students' Welfare Services, University Access to Students and University Reputation						
b. Dependent Variable: Students' Satisfaction (SS)						
<b>ANOVA</b>						
<i>Model</i>		<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	41742.745	7	5963.249	289.943	.000 <sup>b</sup>
	Residual	8062.255	392	20.567		
	Total	49805.000	399			

*Source: Researcher's own work*

**Where;** EdSQ=Educational Service Quality

*Table 57b Coefficient Results of Multiple Linear Regression Analysis*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-2.070	1.376		-1.505	.133
Academic Service Quality	.042	.011	.126	3.765	.000
Administrative Service Quality	1.840	.115	.463	15.935	.000
Quality of General Infrastructure	.086	.039	.066	2.226	.027
Quality of Support Services and Facilities	.058	.039	.049	1.472	.142
Quality of Students' Welfare Services	.224	.093	.089	2.414	.016
University Access to Students	.270	.088	.110	3.079	.002
University Reputation	.426	.076	.176	5.575	.000

*\*Source: Researcher's own work*

Dependent Variable: Students' Overall Satisfaction

The results summarized in Table 57a reveal that the R-value of the multiple linear regression models is .915 with an adjusted R<sup>2</sup> of .835. Dimensions of education service quality therefore accounted for 83.5 % of the variations in students' satisfaction in the universities. To assess the statistical significance of the model, it was necessary to examine the ANOVA results. The results provide an F-test for the null hypothesis that none of the dimensions of education service quality is significantly related to students' satisfaction. The analysis revealed that the F-value ( $F_{7, 392} = 289.943$ ) and  $p = .000$ . The model was considered significant because  $p < 0.05$ . It was concluded that the dimensions of education service quality in the model had a significant combined effect on students' satisfaction in the universities.

Further, it was important to determine the relationship between each of the indicators of education service quality and students' satisfaction. This was achieved by assessing the standardized Beta coefficients (whether positive or negative) and the level of significance (Sig) or p values in the indicators of educational service quality in the model. According to Field

(2009), a positive standardized Beta coefficient conveys that there is a positive relationship between an independent variable and an outcome whereas a negative coefficient represents a negative relationship. Pallant (2005) explains that the significance or p-value indicates whether a variable is making a statistically significant unique contribution to the dependent variable.

The study used  $p < 0.05$  to determine the statistical significance of variables in the study. Data summarized in Table 56b show that academic service quality was directly and significantly related to students' satisfaction ( $\beta = .126$ ,  $p = 0.000$ ). An increase in the academic service quality in the universities was likely to result in a proportionate increase in students' satisfaction. The finding implies that students are likely to be more satisfied pursuing their education in universities that have adequate academic services. The finding concurs with Kara, et al. (2016) research conducted in Kenya public universities which found that there is a significant relationship between quality of academic resources and students' satisfaction. Furthermore, other past studies found a positive relationship between the attributes that explain academic service quality and students' satisfaction. For example, Arif, Ilyas and Hameed (2013) and Navarro, Iglesias and Torres (2005) found that the quality course and its organization affect students' satisfaction. Elliot and Healy (2001) and Helgesen and Nettet (2007) in their research found that the effectiveness of the instructional process influences students' satisfaction. O'Driscoll (2012) found that students' satisfaction is easily influenced by teachers' interaction with students.

Data summarized in Table 57b further show that there is a positive and direct relationship between administrative service quality and students' satisfaction in the universities ( $\beta = .463$ ,  $p = .000$ ). The finding implies that the provision of administrative service is equally important with that of academic service quality in predicting students' satisfaction. The finding concurs with

Kalim, et al. (2022) study in universities in Chinese which found that non-academic services aspects are as important as academic services when it comes to affecting student satisfaction.

The quality of general infrastructure also had a direct and significant relationship with students' satisfaction in the universities ( $\beta = .066$ ,  $p = .027$ ). The finding implies that the provision of quality general infrastructure was likely to result in a proportionate increase in students' satisfaction in the universities. Students are more likely to be satisfied in universities with providing adequate and quality infrastructures. This finding concurs with Sojkin, Bartkowiak, and Skuza (2012) and Sultan and Wong (2012) whose study found a positive relationship between campus climate and student satisfaction.

Students' ratings of the quality of support services and facilities ( $\beta = .049$ ,  $p = 0.142$ ) were not significantly related to students' satisfaction since  $p > .05$  controlling for other variables in the model. The finding implies that students were content with the provision of quality support services and facilities in the universities. This finding contracted with Maimunah, Kaka & Finch's (2009) study which found that students' satisfaction is predicted by support facilities. The quality of students' welfare services also had a direct and significant relationship with students' satisfaction in the universities ( $\beta = .089$ ,  $p = .016$ ). The finding implies that the provision of quality welfare service was likely to result in a proportionate increase in students' satisfaction in the universities. Students are more likely to feel secure and satisfied in universities with the provision of quality welfare services.

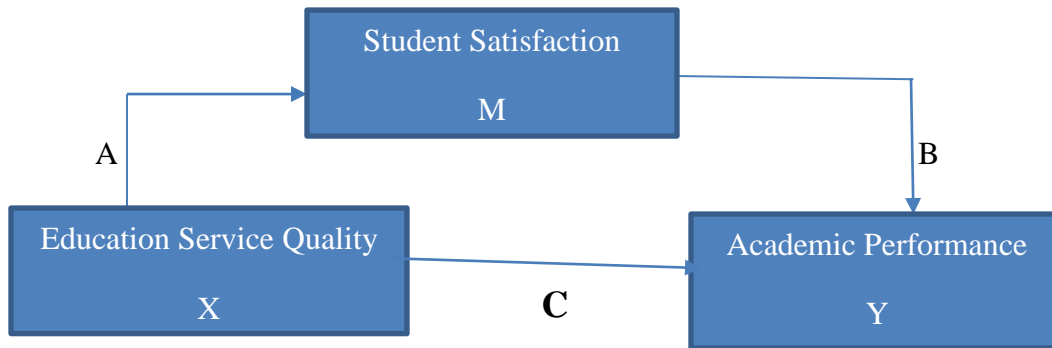
Students' ratings of university access to students ( $\beta = .110$ ,  $p = .002$ ) also had a direct and significant relation to students' satisfaction. This means that the university information access to students and involving students in decision-making processes was likely to enhance students' satisfaction in the university. Finally, the data summarized in Table 57b shows that university

reputation was directly and significantly related to students' satisfaction ( $\beta = .176, p = .000$ ). The university reputation was likely to result in a proportionate increase in students' satisfaction. The finding implies that students are likely to be more satisfied pursuing their education in universities that have well-experienced human resources, adequate campus facilities and equipment, and a university that produces easily employable graduates.

#### **4.6 The Effect of Educational Service Quality on Students' academic Performance through Their Satisfaction**

In this section, the relationship between education service quality and students' academic performance was analyzed using students' satisfaction as a mediating variable. The section is aimed to address the third and fourth research objectives. To show the interrelation among three variables, multiple linear regression models were employed. The regression analysis was conducted in four steps: in the first place, the researcher analyzed the direct relationship between the overall education service quality and students' academic performance, and then the link between overall education service quality and the mediating variable or students' satisfaction was also computed. Thirdly, the relationship among the overall education service quality, students' satisfaction and academic performance was analyzed. Finally, the indirect effect of educational service quality on students' academic performance was computed via student satisfaction using the Sobel Test. The following Figure 11 shows the mediation analysis model that followed in the study.

Figure 11 Mediation Analysis Model



Source: Summarized from intensive literature review  
Where; Path A and B=Indirect Effect; Path C=Direct Effect

Figure 11 summarizes three paths, namely, path A shows (the influence of ESQ on students' satisfaction), path B reveals (the influence of students' satisfaction on academic performance) and finally, the third path C shows (the indirect impact of ESQ on students' academic performance via their satisfaction). As mentioned earlier, in the first phase, the direct link between education service quality and students' academic performance was examined to check the total effect between the X and Y variables. If there is no statistical significance here, there is no point in conducting a mediation analysis. The following Table 58 summarizes the regression analysis of independent variable or education service quality and student academic performance.

Table 58 Regression Analysis: Overall Education Service Quality and Academic Performance

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
1	(Constant)	3.219	.159	20.186	.000
	Education Service Quality	.001	.000	.133	.008***

\*Source: Researcher's own work

a. Dependent Variable: Students' Academic Performance

Notes: Test of significance: Regression is significant at \*\*\*p-value  $\leq 0.01$  level

In the above Table 58, the regression analysis was computed to determine the relationship between education service quality and student academic performance. As recommended by Pallant (2005) evaluating the standardized Beta coefficients and the level of significance (Sig) or p values in the model are important to determine the relationship between two variables (one is independent and the other one is dependent). The regression analysis results summarized in Table 57 show that the overall education service quality was directly and significantly related to students' academic performance ( $\beta = .133$ ,  $p = 0.008$ ), showing that education service quality is making a statistically significant unique contribution to the student academic performance. An improvement in the education service quality in the universities was likely to result in a proportionate improvement in students' academic performance.

Now, the next step is conducting a regression analysis between education service quality and student satisfaction. In the earlier section, the regression analysis was already conducted to examine the dimensions of educational service quality on students' satisfaction (See Table 56b). As regression analysis results presented in Table 56b show education service quality is directly and significantly related to students' satisfaction.

Thirdly, the interrelation among three variables, such as education service quality, student satisfaction and academic performance was performed to examine the nexus between educational service quality and academic performance via student satisfaction. The following regression analysis in Table 60 shows the relationship among education service quality, students' satisfaction and academic performance.

*Table 60 Regression Analysis: Overall EdSQ, Students' Satisfaction and Academic Performance*

Model	Unstandardized		Standardized	T	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	3.595	.219		16.403	.000
1 Education Service Quality	.002	.001	.239	3.668	.000***
Students' Overall Satisfaction	.243	.098	.162	2.481	.014

Source: Researcher's own work

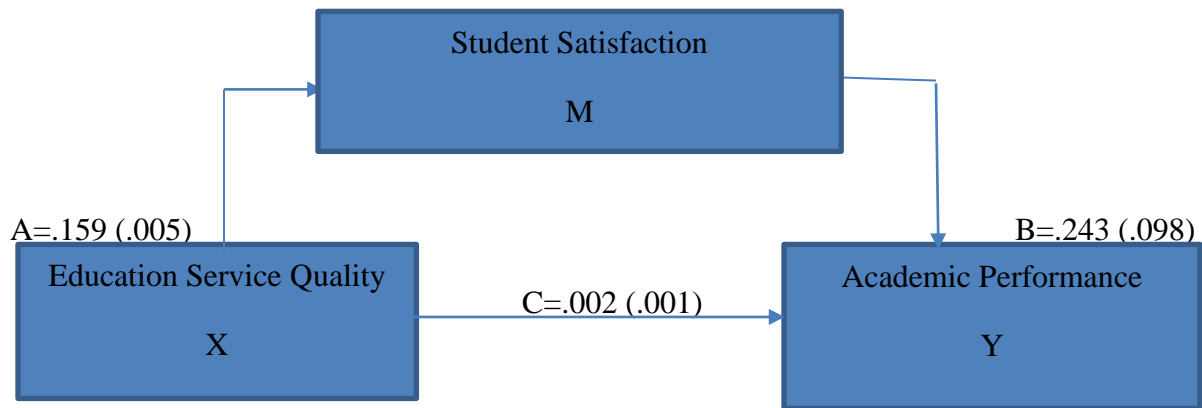
a. Dependent Variable: Students' Academic Performance

Where; EdSQ=Educational Service Quality

Notes: Test of significance: Regression is significant at \*\*\*p-value  $\leq 0.01$  level

The above Table 60 shows the regression analysis results on overall education service quality, students' satisfaction and academic performance. The unstandardized regression coefficients for prediction of Y (student academic performance) from ESQ is C path=0.002,  $t(400)=3.668$ ,  $p=0.000$ , showing that the overall effect of ESQ on academic performance is statistically significant. As shown in Table 56b, a regression analysis was also performed to predict the MV (student satisfaction) from ESQ. The regression results of the unstandardized A path coefficient were 1.59,  $t(400)=31.406$ ,  $p=0.000$ , indicating that the effect of ESQ on student satisfaction is also statistically significant. Finally, a regression analysis was performed to predict the outcome variable Y (student academic performance) from both X (ESQ) and M (student satisfaction). The regression provides estimates of the unstandardized coefficients for path B and also path C (the direct or remaining effect of X on Y when the MV has been included in the analysis. According to Table 59 above, path B=0.243  $t(400)=2.481$ ,  $p=0.014$ ; Path C=0.002  $t(400)=3.668$ ,  $p=0.000$ , revealing that the effect of ESQ on student academic performance is statistically significant via student satisfaction. The following Figure 12 summarizes the regression coefficients for mediation analysis.

Figure 12 Summary of Regression Coefficients for Mediation Analysis Model



Source: Recapped from the above Regression Model Table 57 and 58  
**Where;** Path A and B=Indirect Effect; Path C=Direct Effect

The last step is testing the indirect effect of educational service quality on students’ academic performance for statistical significance using the Sobel Test because the Sobel test is a useful method to estimate the statistical significance of indirect effect in mediation analysis (Sobel, 1982). The following Table 61 summarizes the indirect effect of educational service quality on students’ academic performance via satisfaction.

Table 61 Indirect Effect Analysis: EdSQ, Students’ Satisfaction and Academic Performance

Input		Test Statistics	Std. Error	P value	
A	.159	Sobel Test	31.5311573	0.00122536	0
B	.243	Aroian Test	31.53089124	0.00122537	0
Sa	.005	Goodman Test	31.53141623	0.00122535	0
Sb	.001				

\*Source: Researcher’s own work;

**Where;** EdSQ= Educational Service Quality

As presented in above Table 61, the indirect effect analysis results for X → M → Y using the Sobel Test are as follows: Test statistic = 31.5311573, Std. Error = 0.00122536, p-value = 0. This implies that there is an indirect effect of educational service quality on students’ academic performance via the mediating role of student satisfaction is statistically significant (p-value ≤ 0.05). This finding suggests that an improvement in educational service quality leads to students’ satisfaction and that could contribute to boosting their academic performance. This finding

concur with Ahmed, et al. (2010) who found that students who receive better services and are satisfied with those services perform high academic scores as compared with students who are dissatisfied with the university's service or receive low service. In addition, Ong (2013) noted that students who are dissatisfied with educational service delivery may cut back on the number of courses, perform low academic results, withdraw or drop out from an institution, re-enroll at another university and pass negative comments to their friends or relatives that affect the university's enrollment and retention of students.

Similarly, Dhaqane and Afrah (2016) also contend that students' satisfaction with the educational service quality promotes both academic performance and retention of the students in the university. Martin and Tracey (2001) assert that highly satisfied students in educational service quality are an achiever, who strives to achieve and are energetic to work and learn effectively because satisfaction builds enthusiasm in students and the student finds his/her learning to be more engaging and fruitful. The researcher also further investigated to what extent do educational service quality predicts students' academic performance via their satisfaction. The following Table 62 summarizes the results of regression analysis.

*Table 62 Regression Analysis: Facets of ESQ, Students' Satisfaction and Academic Performance*

<b>Model Summary</b>						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.642 <sup>a</sup>	.412	.404	4.69086		
<b>Annova</b>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5541.609	7	1108.322	50.369	.000 <sup>b</sup>
	Residual	7899.503	392	22.004		
	Total	13441.112	399			

*\*Source: Researcher's own work*

**Where;** ESQ=Educational Service Quality

a. Dependent Variable: Students' Academic Performance

b. Predictors: (Constant), Facets of Educational Service Quality

The results summarized in Table 62 reveal that the R-value of the multiple linear regression model is .412 with an adjusted R<sup>2</sup> of .404. Dimensions of education service quality therefore accounted for 40.4 % of the variations in students' academic performance in the universities via students' satisfaction. In other words, 60.4 % of the variation in students' academic performance cannot be explained by these seven independent variables of educational service quality. So, there must be other factors that are not incorporated in the model to explain students' academic performance.

To assess the statistical significance of the model, it was necessary to examine the ANOVA results. The results provide an F-test for the null hypothesis that none of the dimensions of education service quality is significantly related to student's academic performance. The analysis revealed that the F-value ( $F_{7, 392} = 50.369$ ) and  $p = .000$ . The model was considered significant because  $p < 0.05$ . It was concluded that the dimensions of education service quality in the model had a significant combined effect on students' academic performance in the universities via satisfaction.

Finally, the researcher is interested in looking into which dimensions of education service quality influence the students' academic performance via the mediating role of student satisfaction. The following regression analysis results in Table 63 summarize which elements of educational service quality influence students' academic performance.

*Table 63 Relationship among Facets of ESQ, Student Satisfaction and Academic Performance*

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	3.940	.197		20.04	.000
Academic Service Quality	.003	.001	.170	2.137	.033
Administrative Service Quality	.032	.013	.180	2.434	.015
General Infrastructure	.013	.004	.2010	3.008	.003
1 Support Services and Facilities	.003	.004	.193	2.812	.443
Students' Welfare Services	.009	.010	.079	.907	.365
University Access to Students	.002	.009	.021	.248	.804
University Reputation	.014	.008	.131	1.739	.083
Students' Overall Satisfaction	.256	.091	.193	2.812	.003

*\*Source: Researcher's own work*

*Where; ESQ=Educational Service Quality*

a. Dependent Variable: Students' Academic Performance

The above Table 63 presents the regression analysis of three variables, such as facets of education service quality, students' satisfaction and academic performance. As the regression analysis results presented in the table, the quality of general infrastructure ( $\beta=.2010$ ,  $p=.003$ ), administrative service quality ( $\beta.180$ ,  $p=.015$ ) and academic service quality ( $\beta=.170$ ,  $p=.033$ ) significantly influence the students' academic performance via the mediating role of student's satisfaction, because  $p<0.05$  and that followed by university reputation ( $\beta=.131$ ,  $p=.083$ , which is p-value less than 0.10).

On the other hand, the influence of quality of support services and facilities ( $\beta=.193$ ,  $p=.443$ ), quality of students' welfare services ( $\beta=.079$ ,  $p=.365$ ) and university access to students ( $=\beta.021$ ,  $p=.804$ ) were insignificant as the p-value  $>0.05$ . This result suggests that among the facets of educational service quality, quality of general infrastructure, administrative quality, academic quality and university reputation are highly influencing students' academic performance via the mediating role of students' satisfaction. In addition, as we can see from above Table 63, students' satisfaction statistically played a mediating role between education service quality and students' academic performance ( $\beta=.193$ ,  $p=.003$ ).

### Hypothesis Testing

In the study, seven hypotheses were developed to evaluate which facets of education service quality are highly related to students' academic performance. According to the above regression result the researcher reached to test the formulated alternative hypothesis. The following Table 64 reveals the decision of the hypothesis testing.

*Table 64 Summary of Hypothesis Testing*

<i>SN</i>	<i>Alternative Hypothesis (HA)</i>	<i>Decision</i>
HA1	Academic service quality significantly affects students' academic performance via their satisfaction	Confirmed
HA2	Administrative service quality significantly affects students' academic performance via their satisfaction	Confirmed
HA3	Quality of general infrastructure significantly affects students' academic performance via their satisfaction	Confirmed
HA4	Quality of support services and facilities significantly affects students' academic performance via their satisfaction	Disconfirmed
HA5	Quality of students' welfare services significantly affects students' academic performance via their satisfaction	Disconfirmed
HA6	University access to student significantly affects students' academic performance via their satisfaction	Disconfirmed
HA7	University reputation significantly affects students' academic performance via their satisfaction	Confirmed

*\*Source: Researcher's own work*

*Where; SN=Serial Number*

According to the above Table 64, the hypothesis test results supported the alternative hypothesis of four educational service quality facets, which states that academic service quality, administrative service quality, general campus infrastructure and university reputation play a statistically significant influence on student academic performance via their satisfaction. In contrast, the hypothesis test results do not support the alternative hypothesis of three education service quality facets, which states that the quality of support services and facilities, student welfare services and university access play a statistically insignificant influence on student academic performance via their satisfaction.

Consistent with these quantitative findings, the study participants particularly in the interview sessions were expressing how services associated with academic, administrative and infrastructures affect students' satisfaction and academic performance. Among interview participants, a Geology Department instructor at Arba Minch University shared that:

In our university, financial-related issues are not flexible. For example, our students leave Campus and go to different companies and industries for practical attachment courses. The university sends each student's per Diem via bank after the students leave the campus. As I told you earlier, the financial procedure is very bureaucratic and students waiting for per Diem for a couple of weeks. This dissatisfies students and ultimately reduces their motivation to learn. Look, at how dissatisfied and demotivated students can perform with good academic grades? Impossible! (Male, Interview Participant-1).

Another interview participant and an instructor in the Department of Mathematics at Arba Minch University was raising how the nature of buildings affects students' interest to learn, principally students with orthopedic disabilities. He says:

In our university, many buildings are not suitable for students with disability. This problem is not common only in our university, but also the existing problem in most Ethiopian universities. There are many types of students in the classroom. If the building doesn't consider students with disability, those students are unable to attend the lesson and that ultimately limits their interest in learning and performing good academic scores (Male, Interview Participant-3).

The other interview participant and student union representative at Arba Minch University further expressed that:

Our university has no its own hospitals and health centers. If hospitals and health centers are not available on the campus, medicine and health science students cannot properly learn practical attachment courses and vice-versa. Due to that reason, our students are forced to go to hospitals and health centers that are far away from the University for Practical Attachment Courses. This indirectly affects students' motivation to learn and academic performance (Male, Interview Participant-8).

Furthermore, interview participants at Jinka University described how students' placement services influence students' interest in learning and academic performance. One of the interview participants and registrar directorate director shared that although students' placement services are systematically conducted, still students raise complaints about this service. His interview response taken from interview transcripts shortly summarizes others' thoughts:

Students should attend the programs that they want to learn. For example, if you want to learn health programs and are assigned to engineering programs, your retention rate in the program will be probably low. Keeping students' interest is imperative to improve their motivation to learn. In my department; for example, many students joined the Mathematics department without their interest. For these students, we provide worksheets. The worksheets' information seems like exams. If we ask; for example, 2+3 in the worksheet, we will ask 5+4 in the exam. The intention is to improve students' interest to learn Mathematics discipline and academic performance. You cannot expect high academic scores from students who are assigned to a department that they have no interest in learning (Male, Interview Participant 5).

In addition, one of the interview participants and Department Head at Wolaita Sodo University shared that:

Honestly speaking, our university is poor in the provision of both academic and administrative services. This directly or indirectly affects students' academic performance. Indeed, there are academically higher scorer students in our university. That may be due to their personal quality. If the academic and administrative services are properly delivered to students, we can easily improve the academic performance of all students, including medium and lower-level learners (Male Interview Participant-1).

Another interview participant and Student Union representative at Wolaita Sodo expressed that the shortage of laboratory equipment influences students' practical courses. The student union representative had to say:

In our university, there is a shortage of laboratory equipment. Besides, there are many non-functional laboratory equipment in the laboratories. Due to that reason, we take our students to other universities for practical education as a field trip. For example, departments like Biotechnology and Geology take students to Wolkite and Arba Minch Universities. If there is a shortage of laboratories in the university, students cannot gain practical lessons and this in turn affects their academic performance mainly in practical courses (Male, Interview Participant-3).

Likewise, an instructor in the Department of Veterinary Sciences at Arba Minch University has shared that:

There is a shortage of laboratory equipment at our campus. In addition, there are also inadequate rooms for laboratory equipment. For example, our university has graduated students in three batches for three rounds in the veterinary science department. As a veterinary science department teacher, I am not confident enough that our graduates are trained in practical skills. In my perspective, if students are not attending the practical

lessons in well-organized laboratories, their academic performance in practical courses is weak (Female, Interview Participant-6).

The interview participants at Arba Minch University also shared the influence of weak feedback on students' academic progress and advice on students' academic performance. One of the institutional quality assurance coordinators had this to say:

In educational settings, teaching, assessment and feedback are interrelated concepts and the most important variables. In my observation, we are not strong in these critical areas. The continuous assessment is not properly implemented at our university. In addition, our feedback system is also not encouraging. Feedback is not only about returning exam papers to students. It is far behind that. We need to advise our students. In the universities, most students are scoring poor grades. If we properly teach, assess and provide feedback and academic advising services to students, we can improve their academic performance (Male, Interview Participant-5).

Another interview participant and Department Head at Wolaita Sodo University responded how the shortage of teachers' offices affects students' learning. He says:

There is a severe shortage of offices for teachers. In our university, for example, in the College of Business and Economics [CBE], there are a total of seven teachers in one office. Due to the shortage of offices, teachers are unable to properly advise students, and prepare themselves before entering the classrooms. See how even a shortage of offices affects students' learning? If the teachers properly teach and advise students, the student's learning outcomes will be enhanced (Male, Interview Participant-1).

The interview participants also expressed the indirect effect of the teachers' job satisfaction on students' academic performance. Among interview participants, a Student Union representative at Wolaita Sodo University explained that:

Teachers' job satisfaction is an imperative element to improve students' learning. In my observation, teachers seem dissatisfied in their jobs, because Ethiopian lecturers are the least paid in the world. In addition, there is also a delay in the overtime payment for teachers. This directly affects teachers' job satisfaction. Satisfied teachers play a key role in the teaching and learning process. In my view, satisfied teachers can properly teach students as compared to dissatisfied teachers. And thus, satisfied teachers also play a significant role in academic performance (Male, Interview Participant-4).

Similarly, in another interview, an Associate Registrar at Jinka University explained the link between teachers' job satisfaction and academic performance. His interview response typically summarizes others' thoughts:

In my observation, teachers are not satisfied with their job. Various factors affect teachers' job satisfaction. Among those factors, the benefit is the one. Our teachers are teaching while thinking about their day-to-day life. Since teachers play an important role in quality education, the government should work on the quality of life of university teachers. In my view, teachers' job satisfaction enhances their commitment and motivation to work. The motivated and committed teachers are properly teaching their students. If the students properly learn their education, their academic performance will be also improved (Male, Interview Participant-5).

In addition, an interview participant and Department Head at Wolaita Sodo University shared how low regard for the human element affects students' academic performance. His interview response summarizes others' opinions:

Frankly speaking, Wolaita University has been aggressively working on infrastructure. If you look at the physical environment of our university's three campuses, namely, Main, Otona and Technology, the physical environment is attractive and conducive to the teaching and learning process. However, the university gives low regard or consideration to the human element. There are experienced and high academic rank teachers in our university. However, some of them are intending to leave the institution. If experienced teachers leave this institution, no one cares about that. There is a well-go kind of environment. If students have no opportunity to learn from experienced teachers, students are unable to acquire the necessary knowledge, skills and attitude and that finally affects their academic performance (Male, Interview Participant-1).

In contrast with quantitative findings, the interview and focus group participants discussed the indirect impact of the quality of support services and facilities on students' academic performance. Among focus group discussion participants, a fifth year Civil Engineering department student at Arba Minch University shared that:

In our university; for example, the quality of food is not somewhat good. If the quality of the food is not good, students are vulnerable to health-related problems. If the students are not healthy, how one student can properly attend the education? Thus, the quality of food plays a significant role in students' health, study habits and ultimately academic performance (Male, Interview Participant -2).

Similarly, an interview participant and a Student Union representative at Jinka University expressed that:

Food is one of the most important basic needs for any individual. Students can properly learn when they fulfill this need. Most of the time, our students always raise complaints about the quality of cafeteria services and the provision of similar foods all the time. If the quality of the food is poor, that indirectly affects their health and learning (Male, Interview Participant-6).

Another interview participant responded that inflexible cafeteria service influences students' learning. One of the interview participants and an instructor in the Department of Psychology at Jinka University explained that:

The cafeteria service is not flexible in our university. There is only one hall for cafeteria service. All students irrespective of their religion get services in this one cafeteria hall. We can't begin classes at 2:00 am LT, because the lineup is too long and students are not available at class time. We spent about one hour while waiting for students. This indirectly affects students' learning (Male, Interview Participant-1).

In the same vein, among focus group discussants, a fifth-year student in the Department of Computer Sciences at Wolaita Sodo University explained that:

Honestly speaking, there are too long lineups to get cafeteria services. Due to that reason, we kill our class time. Some teachers do not allow students to enter the classroom after class time. Thus, students are forced to cancel the regular classes and that affects students learning, including their academic performance (Female, Focus Group Participant-2).

Furthermore, participants of this study during interview sessions explained how other forms of support services associated with health, sports and recreation services, guidance and

counseling and dormitories affect students' learning outcomes. The interview and focus group participants at Wolaita Sodo and Jinka Universities boldly shared the poor service delivery of health-related services and the influence of that service on students' health and academic performance. One of the focus group discussants and a fifth-year student in the Department of Computer Sciences at Wolaita Sodo University felt that:

In my understanding, students' health and learning are highly interconnected issues. If the students are not healthy, they cannot properly attend the regular classes and vice-versa. For example, the student clinic found on our campus doesn't give proper medical service to students and that directly affects students' learning and academic performance (Female, Focus Group participant-2).

Another interview participant and an instructor in the Department of Psychology at Jinka University shares similar thoughts. In his own words:

Students can properly learn and attend regular classes if and only if they are healthy enough. If students are not healthy, they can't attend the classes properly and achieve good academic performance. Thus, health services play an imperative role in students' health, and learning, including their academic performance (Male, Interview Participant-1).

Furthermore, the study subjects also described the role of sports and recreation services on academic performance. Among interview participants, a Student Union representative at Wolaita Sodo University explained that:

Sports and recreation centers play a significant role in students' health. Healthy students can attend regular classes properly and study hard to pass exams and vice versa. Thus,

poor delivery of sports and recreation services indirectly affects students' academic performance (Male, Interview Participant-3).

The Student Union President at Jinka University further added a similar concern:

Physical exercise is important for students to be healthier. If students are not healthier, they cannot properly learn their education. In addition, recreation centers are important to protect students from drug and substance abuse. The students spend their leisure time in recreation centers (Male, Interview Participant-6).

In all three sampled universities, the study participants also described the impact of guidance and counseling services on students' academic performance. One of the interview participants and an instructor in the Department of Mathematics at Arba Minch University explained that proper guidance and counseling services improve students' academic performance. His interview response taken from interview transcripts summarizes others' thoughts:

I regret that guidance and counseling services are properly given in the universities. However, guidance and counseling services are very important for all students. As you know, students come to universities with different academic, economic, cultural, social and political backgrounds. Among these students, some students may face challenges in their learning and they need help to be successful in academic settings. Therefore, proper guidance and counseling services improve students' learning and their academic performance (Male, Interview Participant-3).

In general, the facets of educational service quality influence students' academic performance via the mediation role of their satisfaction. The quantitative findings confirmed that the influences of support services and facilities, students' welfare service and university access

on students' academic performance are insignificant as compared to services associated with academic, administrative, general infrastructure and university reputation. However, the qualitative findings assured that the quality of support services and facilities indirectly affects students' academic performance. The quality of dormitory and cafeteria services, sports and recreation services, and guidance and counseling services have their indirect influence on students' academic performance.

## **CHAPTER FIVE**

### **5. SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

The primary purpose of this study was to examine the relationship between education service quality and students' academic performance via their satisfaction. To meet this objective, the research was guided by the following research questions.

1. What are internal stakeholder perceptions of education service quality in Ethiopian universities?
  - 1.1 Is there a statistically significant perception difference between male and female students regarding the facets of education service quality?
  - 1.2 Is there a statistically significant perception difference between male and female students regarding the overall education service quality?
  - 1.3 How does education service quality affect students' learning, including their academic performance in Ethiopian public higher education institutions?
2. What is the relationship between education service quality and student satisfaction?
  - 2.1 Which dimensions of education service quality are highly correlated with students' satisfaction?
  - 2.2 To what extent do facets of education service quality predict students' satisfaction?
3. Is there a statistically significant effect of educational service quality on students' academic performance via students' satisfaction?
  - 3.1 To what extent does educational service quality predict students' academic performance via their satisfaction?

4. Which dimensions of education service quality are highly correlated with students' academic performance through the mediating role of their satisfaction?

The research followed a mixed research approach with a convergent parallel design. In the study, both quantitative and qualitative data were collected from primary and secondary sources. The primary data were collected from regular undergraduate graduating class students, university instructors, department heads, college deans and vice deans, directors, student union presidents and vice presidents, student deans, student association representatives, registrars and associate registrars, general facility workers through using questionnaires and interviews. While the secondary data sources were collected from documents. The collected data were presented, analyzed, and interpreted in the previous chapter four.

This chapter deals with a summary of the major findings, conclusions, and recommendations of the study. The findings of the study were discussed after which conclusions and recommendations were drawn. This chapter is divided into three sub-sections: summary of findings and discussions, conclusions, and recommendations. The first sub-section deals with the summary of the major findings. The second sub-section presents conclusions reached as a result of the findings of the study. Finally, the last sub-section discusses recommendations forwarded to actions or practice, policy and further research.

## **5.1 Summary of Major Findings**

The findings of this study were discussed under three main sub-headings, viz: descriptive summary of demographic characteristics of respondents, internal stakeholder perception towards education service quality, the relationship between education service quality and students' satisfaction and finally, the relationship among education service quality, students' satisfaction and their academic performance.

### **5.1.1. Descriptive Summary of Respondents' Demographic Characteristics**

This sub-section briefly summarizes the respondents' demographics which include: sex, age, study university, college/ institute/ school, department, university choice, transfer from another institution, plan to transfer to another institution and current semester CGPA. The demographic analysis about sex shows that the majority of respondents in this survey were males. More specifically, there were 285 (70.9 %) male respondents and the rest 115 (28.6%) were female participants. From this information, one can understand that the total number of male students exceeds the total number of female students in Ethiopian higher education located in the Southern part of Ethiopia. This implies that female students are under-represented in Ethiopian higher education.

Concerning the demographic analysis of the respondents' age composition, the majority of the respondents were youth. There were 315 (78.4%) 25 and below years old and followed by 78 (19.4%) were in between 26-30 years old and few of them were between 31-35 years old 40 (10.8%). This finding reveals that many students who joined Ethiopian higher education were youngsters.

Regarding respondents' study university, program division and year of entry, the majority of respondents 172 (42.8%) and 167 (41.5%) participated in the study from Arba Minch and Wolaita Sodo Universities, respectively and few of them 61 (15.2%) participated from Jinka University and all participants 400 (100) were regular undergraduate students. In addition, most participants 334 (83.1%) joined the university in 2012 E.C, showing that the majority of study participants were fourth-year students. This finding implies that the total number of undergraduate regular students is many in research universities as compared with applied and comprehensive universities. In addition, from this information, one can also deduce that the total

number of students who complete their undergraduate in four consecutive years exceeds the total number of students who complete their studies after four consecutive years.

In the study, study participants replied to their respective colleges, institutes and schools. Among seven colleges, two institutes and four schools, many participants 90 (22.4%) were from the College of Social Sciences and Humanities, 70 (17.4%) were from the College of Business and Economics, 64 (15.9%) were from the College of Natural and Computational Sciences 64(15.9%), followed by College of Medicine and Health Sciences 44(10.9%) and College of Agricultural Sciences [CAS] 39(9.7%) and few of them 3 (.7%) and 5(1.2) were from School of Veterinary Medicine and College of Education and Behavioral Studies, respectively, revealing that most study participants were from social sciences and humanities business and economics and health sciences field of the study. In addition, in the study students from more than sixty (60) departments participated in the study (See Appendix G). This shows the majority of students from different departments have had a chance to participate in the study.

In the respondents' demographics regarding university choice, transfer from another institution and plan to transfer to another institution, the majority of participants 182 (45.3%) replied third or lower choice. Among study participants, the majority of respondents, 366 (91%) were not transferred from another institution, whereas a few of them 34 (8.5%) were transferred from another institution. On the other hand, all study respondents 400 (100%) have no plan to transfer another to institution. This information shows that most students are placed in universities out of their choice. Most students have a low opportunity to get the first and second choice. The Ethiopian Federal Ministry of Education not protecting students' university choices while placing students in different universities. In addition, the students' transfer rates from assigned universities to other institutions are low as we can see from the above information.

Thus, many students attend their education at the assigned universities. Since all respondents are graduating class students, they have no intention to transfer to another institution.

Finally, when we look at the respondents' current semester CGPA, the majority of students 116 (28.9%) were between 2.5-2.99 and 114 (28.4) were between 3.00-3.44 and a few of them 73 (18.2%) were (3.5 and above). This information shows top scorer students were very minimal in study universities. Although students' academic performance is determined by many factors, it is anticipated that students' satisfaction with education service quality has an impact on students' academic performance.

### **5.1.2 Internal Stakeholder Perception towards Education Service Quality**

Education service quality is a fundamental and important parameter of educational excellence in general and higher education in particular. It is essential for a high standard of education and a good image of higher education institutions. In addition, service quality is important for HEIs to achieve universities' objectives and promote the effectiveness of the education system. Therefore, investigating the internal stakeholder perception towards education service quality plays a paramount role in higher education, because the internal stakeholders' evaluation and feedback on higher education service quality is the most important to pinpoint institutions' strengths and identify areas for improvement.

In the present study, the internal stakeholders' perception of educational service was examined from seven main higher education service quality dimensions. These include: (i) Academic Service Quality (ii) Non-academic or administrative service quality (iii) Quality of General Infrastructure (iv) Quality of Support Services and Facilities (v) Quality of Students' Welfare Services (vi) University Access to Students and (vii) University Reputation.

In this study, academic service quality was investigated from six sub-dimensions of academic service quality; namely, academic staff's attitude and behavior towards students, academic staff's competence, academic facilities and resources, academic program issues, quality of instructional practices and quality of library sciences. The study found that students have a somewhat positive perception of the academic service quality of their university because the grand mean of academic service quality to a degree exceeds the average mean value. However, in the majority of sub-dimensions that describe the academic service quality, students' perception was to be poor. Among sub-dimensions of academic service quality, students have poor perception towards academic attitude and behavior, academic staff's competence and quality of library services as the grand means were below the average mean value. The qualitative findings also uncovered that some teachers have poor academic competence, on the one hand, and some others have poor educational status, particularly in fourth-generation universities on the other hand. In all sampled universities, the qualitative findings confirmed that the libraries found in their respective university are not equipped with updated and necessary educational materials and there is poor internet access in the library.

Furthermore, the majority of items that explained academic service quality were below the average mean. The quantitative finding indicated that teachers' attitudes and behavior toward students were perceived by students to be poor. The qualitative findings also assured that some teachers have poor perceptions towards their students and some other teachers have a weak role in providing academic guidance and counseling services to students.

Regarding academic facilities and resources, to a degree, students have positive reflections regarding the availability of some academic facilities and resources at their university. However, students disagreed on the items related to the quality of the classroom environment,

adequacy of laboratory equipment, quality of internet services and adequacy of teaching tools. These findings confirm that the majority of the variables or items explaining the attributes of academic facilities and resources were perceived by students to be very poor. Similarly, the qualitative findings also confirmed that poor quality of classroom environment, inadequate supply of laboratory equipment and teaching tools and poor internet access in their universities were the most common challenges that affect students' learning.

On the other hand, students have a positive perception towards the nature of academic programs issues at their university. However, qualitative data show inconsistent findings about academic program issues. For example, the study participants at Wolaita Sodo University shared poor academic program expansion as a weakness of the university, whereas good academic program expansion as strengths of Jinka University.

The study found that students have a somewhat good perception of the quality of instructional practices. However, students disagreed on the majority of items that explained the attributes of quality of instructional practices, such as teachers' provision of regular feedback on students' progress, duration of completing the syllabus, integrating theory and practice while teaching and setting assessment tasks that challenge students to learn. In concur with these quantitative findings, the qualitative findings also confirmed that some teachers do not provide regular feedback on students' academic progress, do not complete the assigned course based on the academic calendar and do not construct tests that measure students' learning objectives.

In the study, non-academic or administrative service quality was investigated from three sub-dimensions, namely administrative staff's attitude and behavior, quality of administrative processes and procedures and non-academic staff's competence. The study found that students have a poor perception of the administrative service quality of their respective universities, as the

grand mean value was below the average mean value. Moreover, the qualitative findings also show that among administrative workers, health professionals have poor perceptions of students. The qualitative findings also uncovered that there are bureaucracies and unnecessary difficulties, particularly in finance and there is also a skill gap among administrative workers.

Students have a somewhat positive attitude towards the general infrastructure of their respective universities. Even though students have somewhat positive attitudes towards the general infrastructure, they disagreed on the majority of items or variables that explain the quality of general infrastructure. For example, students disagreed on the availability of internet access on the campus, the suitability of buildings and facilities for students with disability and the availability of transportation services for students. The qualitative findings also support that in study universities there is a lack of internet access on the campus, a lack of suitable buildings and facilities for students with disability, and a shortage of transportation service, particularly at Wolaita Sodo and Jinka Universities.

Moreover, students somewhat positively ranked their level of agreement towards the quality of support services and facilities. Although students agreed on many items associated with quality of support services and facilities, they also disagreed on items associated with the adequacy of sports and recreation facilities, medical facilities, reasonable pricing and quality of food and refreshments on campus, quality of guidance and counseling services and finally students' access to university internet services. In addition, the qualitative findings also revealed that shortage of medicines, the price level is high on the campus to get different services as compared with outside of the campus, poor delivery of guidance and counseling services to students.

In three sampled universities, students have a positive attitude towards the quality of students' welfare services and the university's information access to students. The qualitative findings also found that the quality of students' welfare services provided by their respective universities is encouraging as compared with other Ethiopian universities. There are no peace and security problems on the campus that limit students from attending their regular classes.

Furthermore, students have a somewhat positive attitude towards the university's reputation. Although the grand mean value exceeds the average mean value, students disagreed on the items associated with the availability of experienced human resources and the adequacy of facilities on the campus respectively. As detailed in the previous sections, the qualitative findings confirmed that there is a shortage of experienced and high-academic-rank teachers in the sampled universities, principally at Jinka University. In most departments, still majority of BA holder teachers have been teaching undergraduate students. In addition, in all sampled universities, the qualitative findings further showed that there are shortages of various facilities (ICT facilities, medical facilities and teaching tools) on the campus.

The independent samples t-test results showed that there was a statistically significant perception difference in mean scores for males and females about their perception of the overall educational service quality because the  $p=0.005$  is  $<0.05$ . However, there was no statistically significant perception difference in mean score for male and female students in the majority of variables that explain educational service quality, such as academic staff's attitude and behavior, academic facilities and resources, academic program issues, quality of library services, non-academic attitude and behavior, non-academic competence, quality of general infrastructure, and university reputation as the p-value each variable exceeds 0.05 (See Table 23, 27, 29, 33, 36, 40, 42 & 51). On the other hand, there was a statistically significant perception difference between

male and female students in some dimensions that explain education service quality, such as academic staff's competence, quality of instructional practices, quality of administrative processes and procedures, quality of support services and facilities, quality of students' welfare services and university access to students (See Table 25, 31, 38, 45, 47 & 49).

### **5.1.3 The Relationship between Educational Service Quality and Students' Satisfaction**

The quantitative findings revealed that there is a statistically significant, high and positive correlation between overall education service quality and overall student satisfaction ( $r=.844$ ). Besides, all service quality variables have a strong and positive correlation with students' satisfaction. Similarly, as mentioned earlier, many prior recent studies found a significant relationship between service quality and student satisfaction. For example, Adedamola, Modupe and Ayodele (2016) in their study indicated that service quality has a statistically significant correlation with students' satisfaction. Another study conducted by Ali and Mohamed (2014) also found a positive significant relationship between service quality dimensions and students' satisfaction while dealing with the provision of service quality and students' satisfaction in Somalia Higher Education Institutions [HEIs]. Likewise, Hanaysha and Hilman (2012) in their study observed a significant relationship between the five dimensions of service quality and student satisfaction.

In addition, the multiple regression findings further proved that the facets of educational service quality accounted for 83.5 % of the variations in students' satisfaction in the universities. The ANOVA results confirmed that education service quality had a significant combined effect on students' satisfaction in the universities. Besides, the beta coefficients in each facet of educational service quality revealed that there is a statistically significant relationship between education service quality and students' satisfaction as a p-value less than 0.05. Thus, the

dimensions of education service quality make a statistically significant unique contribution to the dependent variable or students' satisfaction in this case.

#### **5.1.4 The Relationship among Education Service Quality, Students' Satisfaction and Their Academic Performance**

The study found that education service quality has an indirect effect on students' academic performance via their satisfaction. Thus, educational service quality is making a statistically significant unique contribution to student academic performance. An improvement in the education service quality in the universities was likely to result in a proportionate improvement in students' academic performance. In addition, the results of the study showed that among the facets of educational services quality, quality of general infrastructure, administrative service quality, academic service quality and university reputation are highly influencing students' academic performance via the mediating role of students' satisfaction. The quality of support services and facilities, the quality of students' welfare services and university access to students played insignificant contributions to students' academic performance. In contrast with this quantitative finding, the qualitative findings found that particularly the quality of support services and facilities indirectly influence the students' academic performance. The qualitative findings further revealed that the quality of cafeteria services, health services, sports and recreation services, and guidance counseling services influences students' satisfaction and ultimately that indirectly influences the academic performance of the students.

## 5.2 Conclusions

The overall research sought to examine the relationship between education service quality and students' academic performance via the mediating role of students' satisfaction. From the findings and discussions of the study, the researcher reached the following conclusions:

Although students are positively rated for some sub-dimensions of academic and administrative service quality, they have poor perceptions towards many sub-dimensions and variables or items that describe academic and administrative service quality. More specifically, among the elements of academic and administrative service quality, students have a poor perception of academic and non-academic competence, administrative processes and procedures and the quality of library services. In addition, in the majority of variables or items that describe academic staff's attitude and behavior, academic facilities and resources, the quality of instructional practices was perceived by students to be very poor.

The study also concludes that although students somewhat positively rated the quality of general infrastructure, they have poor perception towards the majority of items or variables that explain the quality of general infrastructure, such as the availability of internet access on the campus, suitability of buildings and facilities for students with disability and availability of transportation services for students. The qualitative findings also confirmed that there is a lack of internet access on the campus, a lack of suitable buildings and facilities for students with disability, and a shortage of transportation service, particularly at Wolaita Sodo and Jinka Universities.

As found in the study, the study participants have a poor perception of the quality of support services and facilities. The universities did not provide adequate sports and recreation facilities; there is a lack of medical facilities in the students' clinic, an absence of reasonable pricing and quality of food and refreshments on the campus, and poor guidance and counseling services to students. These constraints had the potential to affect the quality of academic programmes and students' satisfaction negatively.

The study found that the universities provide quality welfare services to students. There is no peace and security problem in all three sample universities. Since sampled universities are aggressively

working on the students' welfare services, students have no peace and security fear to properly attend their education. In addition, the study findings confirmed that the study participants have a positive perception of the quality of university access to students. The university information is accessible to all students. Not only that but also students get an opportunity to participate in the decision-making process. On the other hand, although students' ratings about the university's reputation exceed the average mean value, the study found that there is a shortage of experienced human resources and learning facilities on the campus.

Although the study confirmed a statistically significant perception difference between male and female respondents regarding educational service quality, there was no statistically significant perception difference in mean score for male and female students in the majority of variables that explained educational service quality. For example, the study participants have no perception difference in key attributes that describe academic service quality, administrative service quality, quality of general infrastructure and university reputation.

The study also concludes that there is a significant and direct relationship between facets of educational service quality and students' satisfaction in the universities. An improvement in the level of provision of these dimensions was likely to result in a proportionate increase in students' satisfaction in the universities. Quality of support services and facilities had a direct but insignificant relationship with students' satisfaction implying that students were contented with the provision of quality of support services and facilities in the universities.

Furthermore, the education service quality has a statistically indirect effect on students' academic performance via their satisfaction. The students' satisfaction statistically plays a mediating role between educational service quality and academic performance. Among the facets of educational service quality, quality of general infrastructure, administrative service quality, academic service quality and university reputation are highly influencing students' academic performance via the mediating role of students' satisfaction. On the other hand, the quality of support services and facilities, the quality of students' welfare services and university access to students played insignificant contributions to students' academic

performance. However, the qualitative findings assured that the quality of support services and facilities indirectly affects students' academic performance. Moreover, the quality of dormitory and cafeteria services, sports and recreation services, and guidance and counseling services have an indirect influence on students' academic performance.

## **5.3 Recommendations**

Based on the major findings and conclusions, the researcher make the following recommendations. The recommendations are presented as 'Recommendations for Action or Practice'' and 'Recommendations for Further Research''.

### **5.3.1 Recommendations for Action or Practice**

1. As identified in the present study, poor quality of classroom environment, inadequate supply of laboratory equipment and teaching tools, lack of organized computer laboratories and poor internet access, and the lack of suitable buildings and facilities for students with disability in the universities were the most common challenges that influence students' satisfaction and their academic performance. Many stakeholders, such as the government, Non- Governmental Organizations [NGOs], the Ministry of Education, the surrounding community, private organizations or Private Limited Companies [PLCs] etc. are playing a paramount role in the provision of educational services to higher education. In collaboration with these different stakeholders and the Ministry of Education, the university should make available all necessary academic facilities and resources in the universities to improve students' academic performance.
2. In the universities, the way some teachers perceive their students is not positive. In addition, some teachers do not complete the courses assigned to a given semester on time, do not construct tests that measure students' learning objectives and do not provide regular

feedback on students' academic progress. Therefore, universities should design different professional training programs to improve teachers' professional quality.

3. Among administrative service quality, poor delivery of guidance and counseling services was one of the challenges that influenced students' satisfaction and their academic performance. Academic guidance and counseling services play a significant role in improving students' success in the universities. The university should assign counselors who specialize in the guidance and counseling field of study and are aware of cultural differences. Since university students are from different cultural backgrounds and demographic characteristics, the counselor has to be aware of the prejudice and bias of his or her own culturally rooted value system. The culturally sensitive counselor demonstrates a cultural awareness, openness, and respect for different values, as well as tolerance for ambiguity, a willingness to learn, and a genuine concern for people with different values and from a different cultural background. The counselor needs to develop a comprehensive cross-cultural competence that includes cultural sensitivity, knowledge, and skills.
4. In three sampled universities, the quality of health services is very poor. There are shortages of medicines in the student clinic on the one hand, and health professionals improperly handle and serve students on the other hand. Students can properly learn their education when they are healthy enough both mentally and physically. The university should make the medicines available in the student clinic. In addition, the universities should also provide continuous professional training to health professionals to improve their professional skills, attitudes and behavior toward students.

5. The unnecessary bureaucracies and difficulties particularly in finance and there is also a skill gap among administrative workers that directly influence students' satisfaction and their interest to learn. The universities should make the finance procedure as flexible as possible and design different professional training programs for administrative workers to improve their professional skills.
6. Among sampled universities, in Wolaita Sodo and Jinka Universities, there are shortages of transportation services for teachers and administrative staff, including students. This indirectly influences students' learning. The universities in collaboration with MoE should take all the necessary measures to reduce transportation service problems in the universities.
7. The availability of experienced and skilled manpower is a significant factor in improving students' learning and quality education. In Ethiopian fourth-generation universities like Jinka University, there are shortages of skilled and well-educated manpower. Most BA-holder teachers have been teaching undergraduate students. This directly affects the quality of education and contributes its share to the quality of graduates. The Ethiopian Ministry of Education in collaboration with universities should recruit skilled manpower in different programs and departments to address the shortage of skilled manpower.
8. Educational service quality directly influences students' satisfaction. Students' satisfaction provides valuable information about the educational service quality. It is one of the significant indicators of higher education performance and retains students in universities. The universities should satisfy their students' needs to succeed in a competitive higher education sector. Students' satisfaction also leads to students' intent to return to the former university for further studies and increase the number of students in the university. In

addition, educational service quality also indirectly affects students' academic performance via their satisfaction. Satisfied students are getting better grades as compared with dissatisfied students. Students' academic performance is one of the key indicators of quality education. The ultimate goal of any educational organization is mainly to improve students' academic performance. In collaboration with different stakeholders, the universities should aggressively work to improve educational service quality to improve students' satisfaction and their academic performance.

9. Among the facets of educational service quality, academic service quality, administrative service quality, general campus infrastructure and university reputation are highly influencing students' academic performance as compared with the quality of support services and facilities, quality of students' welfare services and university access to students. Therefore, universities should invest many resources in the mentioned services that significantly influence students' academic performance to improve quality education in the universities. In addition, educational planners, policy and decision makers should consider vital education service quality variables, such as academic service quality, administrative service quality, university reputation and general campus infrastructure that highly influence students' academic performance while setting strategic plans.

### **5.3.2 Recommendations for Further Research**

In this study, the relationship among education service quality, students' satisfaction and their academic performance was examined. It is projected that the education service quality not only influences students' satisfaction and their academic performance but also has its role in attracting new students to the institutions, retaining students in the universities, improving

students' loyalty to the institutions and so forth. Hence, future researchers investigate the role of educational service quality on the variables that were not studied in the present study.

In the current study, the respondents' demographics on students' academic performance were not studied. Future researchers and scholars should examine the impact of students' background characteristics on their academic performance. Moreover, the indirect effect of education service quality on students' academic performance via satisfaction was not studied across universities, colleges and departments. Further researchers should examine the indirect effect of education service quality on students' academic performance via their students' satisfaction should be studied across universities, colleges, institutes, schools and departments.

In this study, the relationship between education service quality and students' academic performance was conducted in public universities located in the Southern part of Ethiopia. The findings and conclusions of the study can not be generalizable to all Ethiopian public universities. Future researchers and scholars should conduct their study in all Ethiopian public universities by taking a representative sample from all Ethiopian public universities.

The present study merely focused on the Ethiopian public universities. There are many government and private universities in the country. Therefore, a comparative study should be conducted to examine the role of education service quality in both private and public universities. In addition, most education service quality research focused on public universities as compared to private universities. Thus, much research work should be conducted in Ethiopian private higher education as well. Furthermore, although a mixed research approach was employed in the current study, further comparable studies should conduct mixed research using experimental design to better determine the influence of educational service quality on students' academic performance via their satisfaction.

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*Appendix-A*  
**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES**  
**DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT**  
**PHD PROGRAM IN EDUCATIONAL POLICY AND LEADERSHIP**  
*Questionnaire to be filled by Graduating Class [GC] Students*

**Dear GC Students,**

My name is Zelalem Zekarias (a PhD candidate at Addis Ababa University, Ethiopia). I am carrying out PhD research on ‘**The Relationship between Educational Service Quality and Student Academic Performance in Ethiopian Public Universities Located in Southern Part of Ethiopia: A Mediating Role of Students’ Satisfaction**’. The main purpose of this study is to investigate how and to what extent do education service quality affects students’ learning and their academic achievement. Your genuine responses have vital contribution for the success of this study. So, you are kindly requested to read all questions and fill the questionnaire with genuine responses. Be sure that your responses will not be used for other purposes other than academic purpose. The identity of you as a participant and the information you provide will be treated confidentially. If you are not volunteering to participate in the study, it is your right to decline at any time from the study. You will take roughly *1:30hr.* of your time to respond to the questionnaires presented. For any queries, feel free to contact me by using the following address: Mobile: +2519 16 66 88 80 or Email: zelalem.zekarias@gamil.com

**General Instruction: Please note the following points before you start filling the questionnaire:**

1. You do not need to write your name on questionnaire.
2. Read all the instructions before attempting to answer the questions.
3. There is no need to consult others to fill the questionnaire.
4. Please provide appropriate responses by putting (x) mark on your choice from one of the suggested alternatives.
5. Please do not leave the questions not answered.

***Thank you in advance for your cooperation!***

## Part I: Students' Demographic Information

**Instruction:** The following questions are related to your general demographic information. Please read the following each personal information and encircle your appropriate response for questions consisting suggested alternatives and write your response for some questions in the blank space provided.

- 1.1 Your Sex: A. Male                      B. Female
- 1.2 Your Age:-----
- 1.3 Your Study University-----
- 1.4 Your Program Division: A. Regular              B. Extension              C. Summer              D. other
- 1.5 Your Year of Entry: -----
- 1.6 Your College/Institution/School: -----
- 1.7 Your department: -----
- 1.8 When I entered this institution, it was my:A. First Choice              B. Second Choice              C.  
Third Choice or lower
- 1.9 Did you transfer to this institution from another institution? A. Yes              B. No
- 1.10 Did you plan to transfer to another institution? A. Yes              B. No
- 1.11 Your Current Semester Commutative Grade Point Average (CGPA): -----

## Part II: Education Service Quality Questionnaires

### 2.1 Academic Service Quality

**Instruction:** The following questions are related to the academic service quality of your respective university. Please read the statements carefully and indicate your level of agreement by using one of the Likert Scales and put (x) mark on the space provided.

**Key:** 1= Strongly Disagree [SD] 2=Disagree [D] 3=Neutral [N] 4=Agree [A] 5=Strongly Agree [SA]

Dimension One: Academic Service Quality		Level of Agreement				
	Sub Dimension One: Academic Staffs' Attitude and Behavior	1	2	3	4	5
SN	Items					
	<b>My Lecturers/ Professors...</b>					
1	Have positive attitude towards students					
2	Understand the individual needs of their students					
3	Show sincere interest in solving students' problems					
4	Welcome students' questions and comments					
5	Provide efficient and courteous consultations to students					
6	Provide students with feedback on their progress options					
7	Provide the students with the expected knowledge					
8	Willing to go out of his or her way to help students					
9	Encourage and motivate students to do their best					
10	Fair and impartial in grading					
	<b>Sub Dimension Two: Academic Staffs' Competence</b>					
	<b>Items</b>					
SN	<b>My Lecturers/ Professors...</b>					
1	Have both theoretical and practical knowledge					
2	Highly educated & knowledgeable in their areas of specialization					
3	Have excellent communication skills					
4	Prominent researchers					
5	Use latest technologies, e.g., laptops, projectors while teaching					
6	Passionate, committed and enthusiastic in teaching					
7	Being professional and ethical					
8	Confident in their expert understanding of a course					
9	Have capacity to solve students' immediate problems					
	<b>Sub Dimension Three: Academic Facilities and Resources</b>					
SN	<b>Items</b>					
1	The classrooms are modern and up-to-date					
2	The classrooms are equipped with teaching aids (e.g., projector, whiteboard, internet etc)					
3	The classrooms are well ventilated and comfortable					
4	The classrooms have functional natural and artificial lighting					
5	The classrooms/ lecture halls have enough tables and chairs					
6	The classrooms/lecture halls have enough sitting space					
7	The university has adequate auditoriums, conference halls etc.					
8	The university has adequate lecture rooms					

9	The university has adequate teaching laboratory facilities					
10	The university has adequate computers labs and internet facilities					
11	The university has quiet places to study within campus					
12	The university has adequate teaching tools and equipment					
<b>Sub Dimension Four: Academic Program Issues</b>						
	<b>Items</b>					
<b>SN</b>	<b>The University...</b>					
1	Has flexible and satisfactory syllabus					
2	Provides reputable academic programs					
3	Displays professional image					
4	Has clearly defined course content and course objectives					
5	Courses develop students' Knowledge, Skills and Attitude					
<b>Sub Dimension Five: Quality of Instructional Practices</b>						
	<b>Items</b>					
<b>SN</b>	<b>My Lecturers/Professors...</b>					
1	Follow good teaching practices					
2	Encourage students' active participation in their learning process					
3	Provide regular feedback to students on their performance					
4	Follow curriculum strictly					
5	Complete the syllabus on time					
6	Demonstrate adequate preparation for the lessons					
7	Provide course outlines at the beginning of the semester					
8	Stimulate students thinking by asking challenging questions					
9	Provide clear expectations on course work and assessment					
10	Ensure they complete the syllabus					
11	Set assessment tasks that challenge students to learn					
12	Integrate both theory and practical learning experiences					
13	Award grades that reflect individual students' ability					
<b>The University...</b>						
14	Provides students' placement services on time					
15	Informs exam schedules on time					
16	Registration takes place timely					
17	Classes (teaching-learning process) take regularly					
18	Releases examination results on time					
<b>Sub Dimension Six: Quality of Library Services</b>						
	<b>Items</b>					
<b>SN</b>	<b>The Library...</b>					
1	Has comfortable chairs and tables					
2	Has adequate and latest academic resources/materials					
3	Provides a conducive environment for study					
4	Has convenient opening and closing hours					
5	Facilitates access to internet resources					
6	Staff are friendly and helpful					
7	Staff provide prompt services to students					

## 2.2 Non-Academic Service Quality

**Instruction:** The following questions are related to the non-academic service quality of your respective university. Please read the statements carefully and indicate your level of agreement by using one of the Likert Scales and put (x) mark on the space provided.

**Key:** 1= Strongly Disagree [SD] 2=Disagree [D] 3=Neutral [N] 4=Agree [A] 5=Strongly Agree [SA]

<b>Dimension One: Non-Academic Service Quality</b>						
	<b>Sub Dimension One: Administrative Staffs' Attitude and Behavior</b>	<b>Level of Agreement</b>				
	<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SN</b>	<b>Administrative Staffs...</b>					
1	Have positive attitude towards the students					
2	Have good communication with students					
3	Provide caring and individualized attention					
4	Show sincere interest in solving students' problems					
5	Guarantee the confidentiality of students' information					
6	Provide prompt and accurate services					
7	Pay attention to detail of the services sought by students					
8	Are courteous and willing to help students					
9	Are friendly and approachable					
10	Are accessible during office hours					
	<b>Sub Dimension Two: Quality of Administrative Processes and Procedures</b>					
<b>SN</b>	<b>Items</b>					
1	There is not that much bureaucracy and useless difficulties					
2	There are clear and well-structured administrative procedures					
3	There is transparency of official procedures and regulations					
	<b>Sub Dimension Three: Non-Academic Staffs' Competence</b>					
	<b>Items</b>					
<b>SN</b>	<b>Administrative Staff...</b>					
1	Are knowledgeable and well experienced with university rules and procedures					
2	Efficient/prompt in dealing with students' complaints					
3	Maintains accurate and retrieval records					
4	Provide service within reasonable time frame					

### 2.3 Quality of General Infrastructure

**Instruction:** The following questions are related to the quality of general infrastructure of your respective university. Please read the statements carefully and indicate your level of agreement by using one of the Likert Scales and put (x) mark on the space provided.

**Key:** 1= Strongly Disagree [SD] 2=Disagree [D] 3=Neutral [N] 4=Agree [A] 5=Strongly Agree [SA]

Quality of General Infrastructure		Level of Agreement				
SN	Items	1	2	3	4	5
1	There is adequate water supply on the campus					
2	There is sufficient number of toilets students					
3	There is separate toilet for male and female students					
4	There is sufficient water supply in the toilets					
5	There is adequate electricity supply					
6	There are accessible internet services on your campus					
7	The appearance of buildings and grounds are very nice					
8	There are suitable buildings and facilities for students with disability					
9	The university has available transport facilities to students					
10	The Campus infrastructures are well maintained					

### 2.4 Quality of Support Services and Facilities

**Instruction:** The following questions are related to the quality of support services and facilities of your respective university. Please read the statements carefully and facilities questions and indicate your level of agreement by using one of the Likert Scales and put (x) mark on the space provided.

**Key:** 1= Strongly Disagree [SD] 2=Disagree [D] 3=Neutral [N] 4=Agree [A] 5=Strongly Agree [SA]

Quality of Support Services and Facilities		Level of Agreement				
SN	Items	1	2	3	4	5
	<b>The University...</b>					
1	Has sufficient sports and recreation facilities					
2	Has adequate Cafeteria infrastructure					
3	Has adequate IT facilities					
4	Has adequate medical facilities (Health Centers)					
5	Has adequate hostel facilities (e.g., Bank, ATM, Post Office)					
6	Has adequate photocopy and printing facilities to students					
7	Has adequate extracurricular activities to students					
8	Has separate dormitory services for male and female students					
9	Has reasonable pricing and quality of food and refreshments on campus for students					
10	Provides counseling and guidance services to students					
11	Provides quality dormitory services to students					
12	Students can access university internet on their phones and laptops					

## 2.5 Quality of Students' Welfare Services

**Instruction:** The following questions related to the quality students' welfare services of your respective university. Please read the statements carefully and indicate your level of agreement by using one of the Likert Scales and put (x) mark on the space provided.

**Key:** 1= Strongly Disagree [SD] 2=Disagree [D] 3=Neutral [N] 4=Agree [A] 5=Strongly Agree [SA]

Quality of Students' Welfare Services		Level of Agreement				
SN	Items	1	2	3	4	5
	The University...					
1	Provides adequate support mechanism for needy students					
2	Promotes an independent students' union					
3	Involves students' representatives in decision making					
4	Provides equal treatment and respect to students					
5	Provides enough security services to students					

## 2.6 University Access to Students

**Instruction:** The following questions related to the access of your respective university to students. Please read the statements carefully and indicate your level of agreement by using one of the Likert Scales and put (x) mark on the space provided.

**Key:** 1= Strongly Disagree [SD] 2=Disagree [D] 3=Neutral [N] 4=Agree [A] 5=Strongly Agree [SA]

University Access to Students		Level of Agreement				
SN	Items	1	2	3	4	5
	The University...					
1	Supports students' associations					
2	Values and recognizes students' feedback for improvement					
3	Has simple service delivery procedures to students					
4	Staff are easily contacted (e-mail, telephone and so on)					
5	Website is informative and helpful to students					

## 2.7 University Reputation

**Instruction:** The following questions related to the university reputation. Please read the following university reputation questions and indicate your level of agreement by using one of the Likert Scales and put (x) mark on the space provided.

**Key:** 1= Strongly Disagree [SD] 2=Disagree [D] 3=Neutral [N] 4=Agree [A] 5=Strongly Agree [SA]

University Reputation		Level of Agreement				
SN	Items	1	2	3	4	5
	<b>The University...</b>					
1	Has adequate well experienced human resources					
2	Has adequate campus facilities and equipment					
3	Has ideal campus location/layout					
4	Maintains minimal class sizes in order to increase the class quality					
5	Produces easily employable graduates					
6	Students are given fair amount of freedom					

## Part III: Students' Overall Satisfaction Questionnaire

**Instruction:** The following are some of the questions related to your overall satisfaction in facets of educational services that offered by your respective university. Please read each service quality dimension carefully and indicate your overall level of satisfaction by using one of the Likert Scales and put (x) mark on the space provided.

**Key:** 1= Extremely Dissatisfied [ED] 2=Dissatisfied [D] 3=Neutral [N] 4=Satisfied [S] 5=Extremely Satisfied [ES]

Dimension 1: Academic Services		Level of Satisfaction				
Sub Dimensions	I am satisfied with overall...;	1	2	3	4	5
1	Academic Staffs' Attitude and Behavior					
2	Academic Staffs' Competence					
3	Academic Facilities and Resources					
4	Academic Program Issues					
5	Quality of Instructional Practices					
6	Quality of Library Services					
Dimension 2 Non-academic services						
Sub Dimensions						
1	Administrative Staffs' Attitude and Behavior					
2	Quality of Administrative Process and Procedures					
3	Non-academic Staffs' Competence					
<b>Dimension 3: Quality of General Infrastructure</b>						
<b>Dimension 4: Quality of Support Services and Facilities</b>						
<b>Dimension 5: Quality of Students' Welfare Services</b>						
<b>Dimension 6: University Access to Students</b>						
<b>Dimension 7: University Reputation</b>						

*Thank you again for taking your time to complete this questionnaire!!!*

*Appendix-B*  
**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF EDUCATION AND BEHVIORAL STUDIES**  
**DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT**  
**Interview Guiding Questions**

**Research Title:**The Relationship between Educational Service Quality and Student Academic Performance in Ethiopian Public Universities Located in Southern Part of Ethiopia: A Mediating Role of Students' Satisfaction

**To:** Instructors and University Leaders

**Entry Activity:**First, the researcher introduces himself to interview participants. Next, the aim of interview will be shared to participants

Number of Participants: -----

Place: -----

Time: -----

DD/MM/YY: -----

- =====
- (1). How do you express the education service quality of your respective university?
  - (2). In your observation, which dimensions of service quality (academic or administrative) is poorly offered by your university and why?
  - (3). How would you express students complain with regard to education service quality of your university?
  - (4). How do you compare the education service quality of your university with other Ethiopian universities' education service quality? What strengths and weaknesses did you observe?
  - (5). How does education service quality affect students' learning and academic achievement?
  - (6). In your assumption, which dimension of education service quality needs further improvement or needs more focus and why?
- =====

*Thank you for your cooperation!!!*

*Appendix- C*  
**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF EDUCATION AND BEHVIORAL STUDIES**  
**DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT**  
**Focus Group Discussion (FGD) Guiding Questions**

**Research Title: The Relationship between Educational Service Quality and Student Academic Performance in Ethiopian Public Universities Located in Southern Part of Ethiopia: A Mediating Role of Students' Satisfaction**

**To: Regular UG graduating class Students**

**Entry Activity:**First, the researcher introduces himself to group discussants. Next, the aim of the focus group discussion will be shared to participants

Moderator's Name: -----

Note Taker's Name: -----

Number of Participants: -----

Venue: -----

Time: -----

DD/MM/YY: -----

=====

- (1). How do you describe the education service quality of your university?
- (2). How do you feel the education service quality of your university with your expectation that you have before joining this institution?
- (3). How do you express the level of your satisfaction with regard to education service quality of your university? Are you satisfied or dissatisfied and why?
- (4). In your opinion, which education services are properly offered in your university and how?
- (5). How do you compare the education service quality of your university with other Ethiopian universities? What strengths and weaknesses did you observe?
- (6). How does the university education service quality affect your learning and your academic performance?
- (7). In your assumption, which dimension of education service quality needs further improvement or needs more focus and why?

=====

***Thank you for your cooperation!!!***

*Appendix-D*  
**ADDIS ABABA UNIVERSITY**  
**College of Education and Behavioral Studies**  
**Department of Educational Planning and Management**  
**Focus Group Script**

**ZZ:** I would like to thank you for attending this focus group interview session today. My name is Zelalem Zekarias and I will serve as the moderator for today. I realize your time is valuable, and I appreciate you taking time to assist me with my research. This focus group interview is an informal method of sharing your thoughts and ideas in regards to education service quality of your university.

**ZZ:** This is \_\_\_\_\_; he will serve as my proxy for the interview. To ensure your can did response and to avoid any bias, he will help me conduct the interviews. My role as moderator is to guide the discussion and ask questions. Please feel free to talk to each other. There are no wrong answers so please share your thoughts and ideas. Today's conversation will be videotaped and recorded. No names will be used in my research.

**ZZ:** Let's take a few minutes and introduce yourselves so that I can be on a first name basis with you.

**Some things that will help our discussion go more smoothly are:**

1. Only one person should speak at a time.
2. Please avoid side conversations
3. Everyone needs to participate and no one should dominate the conversation
4. The focus group will last no longer than 1 ½ hours, many of you have cell phones, please avoid using your cell phones during this time. If at all possible, please turn off your cell phones. If you need to keep your cell phone on, please put it on vibrate and leave the room if you need to take a call.

Thank you for your time today!!

*Appendix-E*  
**ADDIS ABABA UNIVERSITY**  
**College of Education and Behavioral Studies**  
**Department of Educational Planning and Management**  
**Participants' Information Letter**

**Study: The Relationship between Educational Service Quality and Student Academic Performance in Ethiopian Public Universities Located in Southern Part of Ethiopia: A Mediating Role of Students' Satisfaction.**

My name is Zelalem Zekarias (a PhD student at Addis Ababa University, Ethiopia). You have been specifically invited to participate in this study because you are graduating class students. Your participation is very valuable to the study and will help to look into the overall effectiveness of education service quality of your respective university.

Responses from the focus group and interviews will be used as a part of a research project and your participation in the study and responses to the questions will be kept anonymous. Your identity and involvement in the study will not be revealed at any time. Each participant, the name of the department and campus will be assigned a pseudo name for the purpose of this research. This allows you to share your honest feelings about education service quality. It is imperative to the study that all of your responses reflect how you truly feel. Over the course of several weeks, I will spend time talking with you about your insights and perceptions of education service quality of your respective university.

Your participation is valuable; however, you can decide at any time that you do not want to participate in the study and I will respect your decision. I appreciate your willingness to consider participating in the study. If you are willing to participate in this study, please review and sign the informed consent that is attached to this letter. After signing the informed consent, please return it to me in the stamped envelope that is enclosed. Thank you so much for your willingness to consider participation in this study.

Sincerely,  
Zelalem Zekarias

*Appendix-F*  
**ADDIS ABABA UNIVERSITY**  
**College of Education and Behavioral Studies**  
**Department of Educational Planning and Management**  
**Participants' Informed Consent**

**Research Title: The Relationship between Educational Service Quality and Student Academic Performance in Ethiopian Public Universities Located in Southern Part of Ethiopia: A Mediating Role of Students' Satisfaction**

1. Zelalem Zekarias (zelalem.zekarias@gmail.com) doctoral student under the internal supervisor Dr. DemozeDegefa (PhD) (demozed2008@gmail.com) and external supervisor Professor Jonathan D. Jansen (jonathanjansen@sun.ac.za) are requesting your participation in this study.
2. If at any time during the study you are uncomfortable answering any of the questions please feel free to decline a response or stop the interview. The design of the study has been created to minimize the risk to any participant.
3. The results of the study will be presented based on my supervisor's request however; the names of the participants, the department, and the campus that you attending the training will not be revealed in the study. For the purpose of the study, pseudo names will be assigned by the researcher to the department, the campus, and all participants. Names will not be revealed by the researcher at any time. All transcripts and data collected will be kept in a secured area available only to the researcher.
4. Any questions about the study should be referred to Zelalem Zekarias +2519 16 66 88 80
5. Your participation in the study is voluntary and will not be compensated. At any time during the study, you are free to withdraw from the study.

**Participant's Permission**

I have read and understand the Informed Consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

Date \_\_\_\_\_

Participant's Signature

**Appendix-G**  
**ADDIS ABABA UNIVERSITY**  
**College of Education and Behavioral Studies**  
**Department of Educational Planning and Management**  
**Departments' Descriptive Statistics**

SN	Departments	F	%	VP	CV
1	Management	26	6.5	6.5	6.5
2	Economics	18	4.5	4.5	11.0
3	Tourism Management	7	1.7	1.8	12.8
4	Accounting and Finance	14	3.5	3.5	16.3
5	Public Administration and Development Management	3	.7	.8	17.0
6	Marketing Management	2	.5	.5	17.5
7	Mathematics	5	1.2	1.3	18.8
8	Chemistry	13	3.2	3.3	22.0
9	Biology	9	2.2	2.3	24.3
10	Forensic Chemistry and Toxicology	2	.5	.5	24.8
11	Industrial Chemistry	3	.7	.8	25.5
12	Biotechnology	6	1.5	1.5	27.0
13	Sport Science	9	2.2	2.3	29.3
14	Geology	4	1.0	1.0	30.3
15	Statistics	11	2.7	2.8	33.0
16	Physics	2	.5	.5	33.5
17	Plant Science	4	1.0	1.0	34.5
18	Animal Science	12	3.0	3.0	37.5
19	Horticulture	3	.7	.8	38.3
20	Natural Resource Management [NaRM]	2	.5	.5	38.8
21	Rural Development and Agricultural Extension [RDAE]	1	.2	.3	39.0
22	Agribusiness and Value Chain Management	6	1.5	1.5	40.5
23	Forestry	1	.2	.3	40.8
24	Agricultural Economics	9	2.2	2.3	43.0
25	Food Science and Postharvest Technology	1	.2	.3	43.3
26	Veterinary Medicine	3	.7	.8	44.0
27	Medicine	6	1.5	1.5	45.5
28	Medical Laboratory	9	2.2	2.3	47.8

**Where;** *F=Frequency; %=Percent; VP=Valid Percent; CV=Cumulative Value*

**Deaprtments' Descriptive Statistics Con't...**

SN	Departments	F	%	VP	CV
29	Midwifery	6	1.5	1.5	49.3
30	Nursing	3	.7	.8	50.0
31	Public Health	7	1.7	1.8	51.8
32	Pharmacy	6	1.5	1.5	53.3
33	Anesthesia	7	1.7	1.8	55.0
34	Civil Engineering	6	1.5	1.5	56.5
35	Information Technology	7	1.7	1.8	58.3
36	Computer Science	6	1.5	1.5	59.8
37	Software Engineering	4	1.0	1.0	60.8
38	Mechanical Engineering	9	2.2	2.3	63.0
39	Electrical and Computer Engineering	1	.2	.3	63.3
40	Architecture and Urban Plan	3	.7	.8	64.0
41	Water Resource and Irrigation Engineering [WRIE]	4	1.0	1.0	65.0
42	Water Supply and Environmental Engineering [WSEE]	3	.7	.8	65.8
43	Meteorology and Hydrology	4	1.0	1.0	66.8
44	Hydraulic and Water Resource Engineering [HWRE]	1	.2	.3	67.0
45	Construction Technology Management [COTOM]	3	.7	.8	67.8
46	Information System	3	.7	.8	68.5
47	Geography	14	3.5	3.5	72.0
48	Public Relation and Communication	6	1.5	1.5	73.5
49	Sociology	10	2.5	2.5	76.0
50	Social Anthropology	5	1.2	1.3	77.3
51	Wolaitatto	5	1.2	1.3	78.5
52	English Language and Literature [ELL]	11	2.7	2.8	81.3
53	History and Heritage Management	8	2.0	2.0	83.3
54	Amharic	8	2.0	2.0	85.3
55	Civics and Ethical Studies	6	1.5	1.5	86.8
56	Psychology	12	3.0	3.0	89.8
57	Adult Education and Life Long Learning	4	1.0	1.0	90.8
58	Special Needs and Inclusive Education [SNIE]	6	1.5	1.5	92.3
59	Educational Planning and Management [EdPM]	12	3.0	3.0	95.3
60	Early Childhood Care and Development [ECCD]	1	.2	.3	95.5
61	Law	18	4.5	4.5	100.0
Total		400	99.5	100.0	

**Where;** F=Frequency; %=Percent; VP=Valid Percent; CV=Cumulative Value