

**ISO 9001:2008 QUALITY MANAGEMENT SYSTEM
CERTIFICATION AND SERVICE QUALITY IN KENYAN PUBLIC
UNIVERSITIES: A CASE OF THE UNIVERSITY OF NAIROBI**

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION,
SCHOOL OF BUSINESS, THE UNIVERSITY OF NAIROBI**

NOVEMBER 2016

DECLARATION

This research project is as a result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

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This research project has been submitted for examination with my approval as the university supervisor

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ACKNOWLEDGEMENT

My sincere gratitude goes to Almighty God for the much needed strength, courage and good health He has allowed me to carry on with this research proposal. I also thank my parents, my son, the entire administration and management of the University of Nairobi for their co-operation; those people who have in one way or another contributed to make this research study a success. I am very grateful to my supervisor Mr. Kongere for the intellectual advice and careful supervision; and other University of Nairobi lecturers for their constructive critics and encouragement during the process of conducting this study. I am deeply indebted to colleagues and all those who have sacrificed their time towards the contribution of this noble duty. I thank them for being supportive and co-operative in various ways.

DEDICATION

I dedicate this research work to my parents, Paschal Vusa and Bertha Vusa, for their constant encouragement throughout this journey. To my dear sisters Olivia and Gloria for their motivation. And to my dear son, Alvin, who makes it all worth it.

ABSTRACT

The study set out to find the influence of ISO 9001:2008 Quality management systems certification on service quality in Kenyan public universities, and in particular, the case of the University of Nairobi. To accomplish this, the objectives of the study were to establish the service quality dimensions at the University of Nairobi and to determine the relationship between ISO 9001:2008 certification and service quality at the University of Nairobi. A descriptive survey research design was used in the study as it describes a relationship between the variables. The target population for this study was 12,055 students from the School of Business. This comprised PhD, Masters and undergraduate students. The study used a stratified random sampling technique to pick 100 respondents. Primary data was collected from students using close ended Likert type questionnaire. It was found that tangibles was ranked highly by the students while responsiveness of the university staff was ranked poorly. The study also showed that there exists a positive relationship between ISO 9001:2008 Quality Management system certification and service quality. Findings of the research show that there is need to adopt ISO 9001:2008 QMS certification in Kenyan public universities. The study recommends the adoption and implementation of ISO 9001:2008 Quality management system in Kenyan public universities so as to ensure service quality. The study also recommends that universities find out the service quality needs of their students through various methods such as student satisfaction surveys and continuous dialogue. The universities should also train their staff on service quality.

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ABBREVIATIONS AND ACRONYMS

ISO International Organization for Standardization

PDCA Plan – Do – Check - Act

QMS Quality Management Systems

TQM Total Quality Management

UON University of Nairobi

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Many consumers today are prepared to switch if the service is not up to standard, putting immense pressure on organizations to keep their outputs (products or services) relevant. Customers consume the outputs from organizations and are thus vital to the survival of most organizations. It is therefore important that organizations develop and promote strategies that respond to their needs (Jones & George 2011). For an organization to deliver quality service, it must identify and understand what dimensions of quality are important to its customers (Metters, King – Metters & Pullman, 2006).

Customers perceive quality in a multidimensional way based on many factors relevant to the context (Zeithamal & Bitner, 2003) and often differ based on the expectations of the customer (Cheruiyot & Maru, 2013). Quality is much more elusive in services (Metters, et al., 2006), as a result, the measurement and management of service quality is of utmost importance so as to provide top quality services (Abdullah, 2006).

In universities, different approaches such as certification, benchmarking, accreditation and different models of TQM have been embraced for the establishment of quality management (Magutu, Mbeche, Nyaoga, Nyamwange, Onger & Ombati, 2010) to ensure service quality in various institutions.

Universities could adopt ISO 9001:2008 QMS certification to achieve service quality. Systems help people work in the most appropriate way by letting them know what actions they must take to ensure they produce goods and services of the required quality (Barnes,

2008). This is important because organizations are supposed to be accurate and dependable and provide the service they promise to provide (Zeithmal & Bitner, 2003).

1.1.1 ISO 9001:2008 Quality Management System Certification

International Standards Organization (ISO) is an independent, non-governmental international organization that has a membership of 163 national standards bodies. The members consist of experts who come together to develop market relevant and innovative international standards that provide solutions to global challenges and give world class specifications for products, services and systems so as to ensure efficiency, safety and quality (www.iso.org, 19/7/2016).

In 1987, the International Standards Organization came up with a series of standards under ISO 9000 series in order to provide products with exact quality specifications for individual customers and to maintain consistently high standards of quality (Mandal, 2011). The ISO 9001 standard is certifiable and gives requirements for an organization's quality management system. It has since been revised four times, in 1994, 2000, 2008 and 2015. To date, one million organizations in more than 170 countries globally are ISO 9001 certified (www.iso.org, 12/07/2016). The ISO 9001 standard provides a clear guideline for standardizing the organization's procedures and processes documentation which ultimately can lead to reduction in variability (Lovelock & Wirtz, 2007).

1.1.2 Service Quality

It is more challenging to evaluate the quality of a service due to the intangible and multi-angled nature as compared to the quality of products. As a result, measuring and improving quality is more complex in the service industry than in the manufacturing industry.

Service quality can be defined as providing something that adds value and pleases the customer (Bryslund & Curry, 2001). Service quality dimensions can be described as; responsiveness, reliability, tangibles, assurance and empathy (Lovelock & Wirtz, 2007).

The service quality dimensions are important to customers, but some of dimensions are more important to customers than others. Service providers need to work on all the dimensions but emphasize them in order of their importance (Cronin & Taylor, 1992). Organizations should continuously monitor their customers' service quality needs to ensure that all the customers' requirements are being met (Waters, 2006)

1.1.3 University Of Nairobi

The history of Kenyan public universities can be traced from 1956, when the University of Nairobi was first established as the Royal Technical College (www.uonbi.ac.ke, 12/07/2016). Changes in higher education came largely in 1958 as a result of the Lockwood commission report, which urged that the Royal Technical College of Nairobi be recognized as a federated university college within an East African University (Sheffield, 1973). By 1963, there were only 275 students enrolled to the university college which offered 13 certificate, diploma and degree programmes (Zezeza &

Olukoshi, 2000). It was renamed University College Nairobi in 1964. The University of East Africa was disbanded in 1970 and the University of Nairobi was setup with the Kenyatta University College as its constituent college. In 1984, Moi University was established and the former Kenyatta University College became Kenya's third university in 1985. Egerton college, became the fourth university in 1987 (Zezeza & Olukoshi, 2000). The University of Nairobi was established under the Universities Act 2012 of the law of Kenya and the University of Nairobi Charter, is the pioneer institution of University education in Kenya and the region (www.uonbi.ac.ke, 12/07/2016).

In 1983, the university was remodeled and as a result, six colleges were formed: College of Agriculture & Veterinary Sciences , College of Architecture & Engineering, College of Biological & Physical Sciences , College of Education & External Studies , College of Health Sciences , College of Humanities and Social sciences (www.uonbi.ac.ke, 12/07/2016). The university has 35 faculties, schools, institutes and centers, 584 programmes, 2052 academic staff and has enrolled 84000 students (www.uonbi.ac.ke, 12/07/2016).

Due to high population growth, there has been a general demand for education leading to the expansion in Kenya's university education (Mutula, 2002). Data from the Commission for University Education shows that there 23 public chartered universities as of November 2015 (Status of Universities, 2015 – Appendix 2). In the 2014/15 academic year, enrolment in public universities in Kenya increased by 25.4 per cent from 289,733 in 2013/14 to 363,334. This growth was attributed to facilities and infrastructural development, launch of new courses and opening of additional campuses (Kenya

National Bureau of Statistics Economic survey, 2015). New challenges are also emerging as a result of increased enrollment at the public universities, reduced funding by the government, acquisition of middle level colleges (Owino, Kibera, Munyoki & Wanaina, 2014), private institutions and importance of higher education in achieving millennium development goals (Kagumba & George, 2013). The higher education sector consists of various stakeholders i.e. students, the government, parents, members of the faculty, members of the non-academic staff and the society, all having divergent interests (Magutu et al., 2010).

The University of Nairobi has had other major challenges including inadequate funding, quality and relevance amongst others (Magutu et al., 2010). The higher education environment is increasingly dynamic, and so the University of Nairobi has to continually respond so as to deliver educational services that could be benchmarked against international standards (Moturi & Mbithi, 2015).

1.2 Research Problem

A myriad of studies have affirmed that ISO 9001 certification utilizes a lot of time, is costly , impersonal, formalized, uses up resources and that the costs of implementation are significantly more than the benefits gained (Bhuiyan & Alam, 2005). However, Karapetrovic (1998) elucidated that an ISO 9001 certified education institution could get added advantages for instance better understanding and cooperation among lectures and staff members, streamlined operations, well understood responsibilities of lecturers, staff and students, marketing benefits and overall quality improvement.

Public universities in Kenya have faced a lot of challenges in regard to the quality of their services are thus urged to adopt practices such as benchmarking , Total Quality Management and use of international standards to ensure survival (Okibo & Kimani, 2013). The management of quality has become a global strategy for the survival and rise of many organizations in today's aggressive worldwide competitive environment (Kagumba & Gongera, 2013). Due to rising operating costs and increasing user expectations, universities are trying to improve their efficiency just like any other organization (Odediran, Gbadegesin & Babalola, 2015). Most Kenyan public universities are held accountable by the government, funding bodies and other stakeholders. Gamboa and Melão (2012) showed that there exists a positive influence of ISO 9001:2000 certification on service quality in Portuguese vocational schools.

Walker and Johnson (2009) concluded that securing independent and professional accreditation and certification can benefit both service providers as well as customers.

Sumaedi, Bakti and Metasari (2012), concluded that the dimensions contributing most to the total perceived service quality of a public university in Indonesia is facilities.

Researchers recommended that the state university could use surveys and adopt a proven system for quality management such as ISO 9001 to improved students' perceived quality.

Okibo and Kimani (2013) concluded that there exists a positive relationship between public universities service delivery due to ISO certification. Magutu et al. (2010) noted that the quality system for UON was derived from ISO 9001:2000 and had met all the requirements of the standard, while the benefits of ISO certification included improved

infrastructure and facilities; improved staff competence, morale and ownership Moturi and Mbithi (2015).

Studies have been done on ISO 9001:2008 QMS and the context of Kenyan public universities, no study has been done on the context of UON. There is thus a necessity for a study to be carried out concentrating on UON and to close the knowledge gap on the influence ISO 9001:2008 Quality Management Systems has on service quality.

The research question thus follows; What is the influence of ISO 9001:2008 certification on service quality at the University of Nairobi?

1.3 Research Objectives

The general objective will be to find out the influence of ISO 9001:2008 Quality Management System certification on service quality in public universities. The specific objectives of this research will be:

- 1) To establish the service quality dimensions at the University of Nairobi.
- 2) To determine the relationship between ISO 9001:2008 certification and service quality at the University of Nairobi.

1.4 Value of the Study

This research paper would benefit Kenyan Public Universities that are ISO 9001:2008 certified and the universities which are considering ISO certification. The study will provide useful information to quality managers and quality representatives that would wish to improve service quality in their organizations. The study will provide helpful information to top management in the public universities on decision making and allocation of resources. Future researchers will use this study as a form of reference and also undertake research on further research studies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

To understand the notion of quality management systems, various theories will be discussed through a number of approaches put forward by the quality gurus. Empirical studies done internationally and locally will also be analyzed and the knowledge gap provided. The summary of literature will be laid out and a conceptual framework developed.

2.2 Theoretical Review

The theories discussed in this chapter are the Deming theory and the Systems theory. These theories and concepts form the building blocks of today's quality management systems.

2.2.1 Deming Theory

Due to inconsistent behavior and functioning of weapons during World War II, a need for organized approach to quality was realized. The 'quality movement' begun after the war when Edward Deming and Joseph Juran commenced on studies on methods of addressing the quality issues of post-war in USA and the reconstruction of Japanese industries (Mandal, 2011).

Linking quality concerns to management practice is credited with Deming, who noted that management can change systems which are responsible for 85 percent of all defects (Costin, 1999). He advanced a theory of management that helps organizations learn

through acquiring process knowledge gained from experience which he called a system of profound knowledge. This system was comprised of four key components which include the appreciation of a system, the theory of variation, the theory of knowledge and knowledge of psychology.

The appreciation of a system has the same underlying principle as ISO 9001:2008 principle on leadership. According to Deming, it is top managements responsibility to optimize the organizations system. This means understanding the overall processes involving suppliers, the production process and finally the customers (Dean & Bowen, 1994). In the knowledge of variation, Deming discussed the causes of quality variations and the importance of statistical techniques in measurements (Anderson, Rungtusanatham & Schroeder, 1994). This also holds true for the ISO certification which requires factual approach to decision making and the requirement of measurement analysis.

Deming is also famous for coming up with the 14 points for quality improvement which complemented the plan – do – check – act (PDCA) cycle that came to be known as the Deming cycle which is the foundation of today's quality management system.



Figure 2.1 Deming cycle

Under planning, an organization chooses its processes and sets objectives. The organization then plans and collects relevant data on the results. The organization then checks its process through analyzing the collected results using statistical techniques. Finally, the organization acts by making decisions on changes needed to be made in order to improve the organizations processes. Deming's cycle is similar to the model of ISO 9001:2008 process-based quality management system (Figure 2.2). This cycle is a useful tool for solving problems and continuous improvement.

2.2.2 Systems Theory

The Systems theory is considered to be relevant in understanding how ISO 9001:2008 QMS certification influences service quality and thus provides the theoretical background for this for this study.

A system can be defined as a set of interrelated or interacting elements (ISO, 2008). The systems theory explores various principles that can be applied to operations of various systems (Rhee, 2000). In an organization, inputs such as raw materials, people, technology go through a process where they are planned, organized and controlled , leading to the output in terms of products and/or services. Feedback from the system would include information coming in from internal and external environments such as customers, governments, society etc.

Organizations are dynamic systems which respond, evolve and change in response to feedback from the environment and can result in turbulence (Mason, 2007). These changes can be managed through having a quality management system. A systems

approach to management provides a conceptual basis and guideline for planning, organizing, directing and controlling an organization.

2.3 ISO 9001:2008 Quality Management System

The ISO 9001:2008 QMS standard consists of eight management principles and eight clauses. For an organization to be certified, they have to meet all the set requirements of the standard.

2.3.1 ISO 9001:2008 Quality Management System principles

The primary focus of quality is meeting and exceeding a customer requirement which forms the basis of the first principle, customer focus (ISO, 2015). On the principle of leadership, the top management of the organization establishes the direction, unity of purpose, and are responsible for maintaining a proper internal environment to ensure the organization meets its objectives and provides quality product/services to its customers (Arora, 2010). The principles of process and systems approach, organizations are made up of a set of interlinked activities and processes to create value to the customer; however, consistent results are achieved when all the processes are understood and managed as a lucid system (Wisner & Stanely, 2008). To create value and ensure product/service quality, organizations should involve and empower people at all levels (Plunkett, Attner & Allen, 2008).

Continual improvement of all related processes, activities and products is relied upon to ensure customer satisfaction (Mandal, 2011). Factual approach to decision making involves effective use of information and data to support and make decisions on key

company processes to ensure desired results (Cartin, 1999). Mutually beneficial supplier relationships are important so as to ensure the suppliers are willing to meet and, if possible, exceed expectations; their performance should be closely monitored and improved when necessary (Bozarth & Handfield, 2008). The ISO 9001:2008 principles are meant to serve as a guide and help organization in continual improvement.

2.3.2 ISO 9001:2008 System requirements

The ISO 9001:2008 standard comprises of a set of requirements that an organization needs to satisfy in order to get certified. The standard consists of eight major parts or clauses. The first three clauses are general clauses which cover the scope of the organization i.e. the organizations location, processes and products, the normative references and the terms and definitions as used by the standard. The remaining clauses are technical clauses which include the quality management system, the management responsibility, management of resources, product realization, measurement analysis and

continual improvement (ISO 9001:2008, 2008).

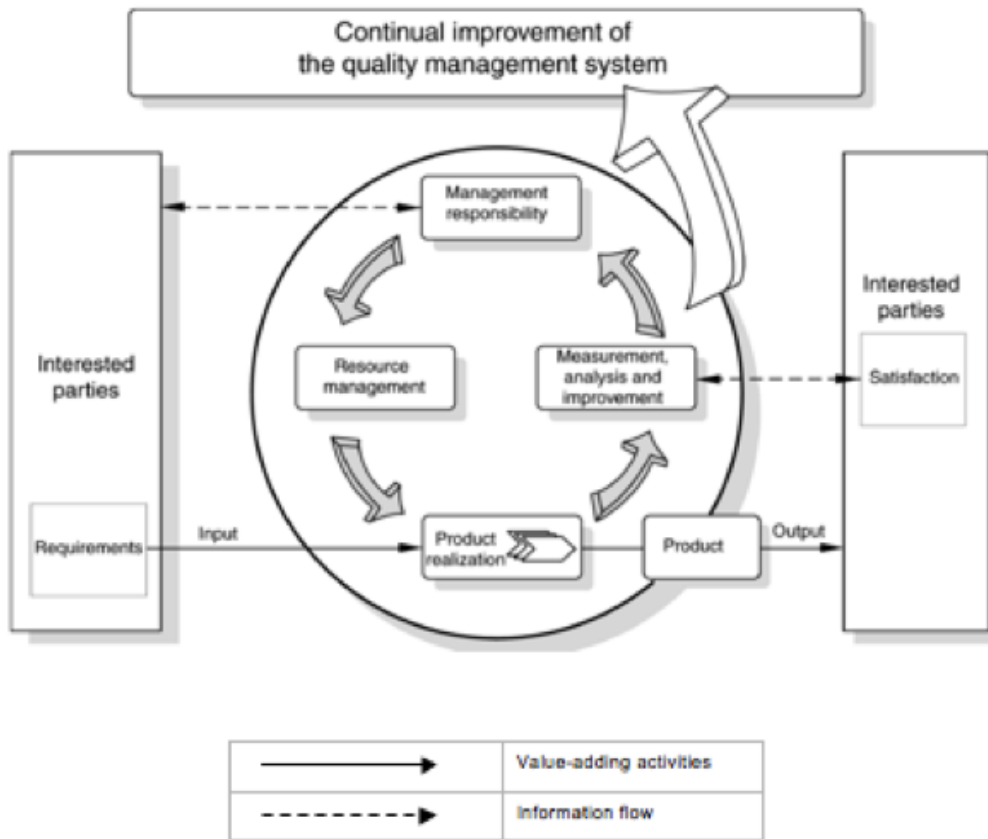


Figure 1 — Model of a process-based quality management system

Figure 2.2 — Model of a process-based QMS

Source, ISO 9001:2008 standard

The model of a process-based QMS helps organization identify the interrelationship of all its process and understand the flow of inputs and outputs. The model, which is similar to the plan – do – check – act cycle, is an efficient tool for achieving the standard requirements especially when it comes to continuous improvement.

2.4 Service Quality Dimensions

Service quality can be described as the capability of an organization to satisfy and/or exceed its customer expectations (Parasuraman, Zeithaml, and Berry (1988). It can also be defined as conforming to the expectations of the customers on a consistent basis (Baron, Harris & Hilton, 2012).

Research shows that depending on the context, customers gauge quality in a multidimensional way rather than in a one dimensional way (Zeithaml, Bitner, Gremler & Pandit, 2013). According to Grönroos (1982), service quality is divided into two dimensions i.e. functional quality in other words how the customer receives it and technical quality, what the customer receives (Grönroos, 1993). Parasuraman et al. (1985; 1988) concluded that service may be perceived five dimensions – reliability, responsiveness, tangibles, assurance and empathy. The researchers claim that these service quality dimensions are universal and thus applicable to all the different services.

Table 2.1 Service quality dimensions

Dimension	Description
Responsiveness	The willingness to help customers and provide prompt service
Reliability	The ability to perform the promised service accurately and dependably
Assurance	The employees' knowledge and courtesy and their ability to inspire trust and confidence
Tangibles	The physical appearance of facilities, equipment and personnel
Empathy	Caring and individualized attention the organization gives to its customers

Source: Adapted from Parasuraman, Zeithaml and Berry (1988)

2.5 Empirical studies

Walker and Johnston (2009), sought to find out the role of accreditation systems in impacting innate service quality in a certified service provider. The empirical study was conducted on accredited accommodation providers in Victoria, Australia, who met the accreditation requirements of the Tourism Accreditation Board Victoria (TABV). The researchers noted that TABV's motive, like ISO, was established to come up with , accredit, track, and ensure compliance with internationally acclaimed standards of best practice and customer service in the Australian tourism industry. Similarities of TABV to ISO include coming up with a detailed manual describing its procedures and policies, continuous improvement of its processes, customer service activities, competence of its staff and an annual audit process. The research methodology used were questionnaires administered to senior management personnel. The study concluded that accreditation and certification may benefit service providers by helping them establish service quality standards as the certification provides a reference of systems and processes needed to ensure that customer expectations are fulfilled. It further benefits customers in terms of quality assurance.

Gamboa and Melão (2012) conducted an empirical study to establish the advantages and disadvantages associated with the adoption of ISO 9001:2000 in the context of vocational schools in Portugal. Various case studies were conducted on five ISO 9001:2000 private vocational educational institutions in Portugal. Interviews, documentation and observation were used to collect data as evidence. The study revealed that one of the benefits of ISO 9001: 2000 certification was that there was more interest

with cleanliness and state of conservation of the facilities and equipment because there were records as required by the standard. Assurance, in terms of competence of the staff, was also another benefit noted as tasks, duties and responsibilities were clearly defined as per the requirements of the standard. The standard also requires performance assessment of staff which adds to the benefit of the staff being more effective and productive.

Another benefit was improved communication between students, teachers and staff as they could all have access to all documentation. Due to the underlying principle of customer focus, the institutions were able to determine, fulfill and exceed student's needs. In terms of the reliability, it was noted that implementation of the standard was in particular beneficial to institutions that had several campuses as it increased efficiency through standardizing the processes and adopting best practices. Due to improved document organization and control as per the standard requirements, the staff had a more effective control of their daily operation thus impacting on the responsiveness dimension.

Sumaedi, Bakti and Metasari (2012) conducted a study of state university students' perceived service quality in two Indonesian public universities. A survey was conducted using questionnaires issued to 155 students. The findings of the study showed that the facilities dimension contributed the greatest to the overall perceived quality. Contact personnel, education counseling, instruction and communication medium also had a definite notable effect on quality. The researchers recommended the implementation of ISO 9001:2008 standard and noted that earlier research conducted by Sakthivel et al (2005) showed a noteworthy contrast in student perceived quality in ISO 9001 certified institutions of higher learning in India.

Psomas, Pantouvakis and Kafetzopolous (2013) deduced that by achieving the ISO 9001 objectives, product/service quality and performance of the organizations processes improve directly. Their empirical study sought to find out impact of ISO 9001 effectiveness on performance in the context of Greek service companies. Data was collected through structured questionnaires from 600 quality managers.

Anim (2015) conducted a study on service quality in Tertiary institutions in Ghana. The research focused on two universities, Kwame Nkurumah University of Science and Technology and the Methodist College Ghana. Simple random technique was used to sample 240 students and a questionnaire was used to collect data. Findings from the study showed that at the Nkurumah University, responsiveness was the most important service quality attribute, followed by assurance and reliability. Tangibles was rated the worst. At the Methodist college Ghana, the students rated empathy as the most important, followed by responsiveness, assurance, tangibles and reliability respectively.

Andollo (2011) conducted a study on the influence of QMS on service provision in UON. Study investigated the influence of support from top management, training empowerment, strategic planning, effective communication and infrastructure as an aspect of management of quality on service provision. An ex post facto research design was used; 392 employees were the target population. The results showed there exists a positive relationship between quality management system and provision of service.

Cheruiyot and Maru (2013) study on service quality and the relative performance of public universities in East Africa concluded that tangibility and reliability was important

to students in the East African universities. However, the responsiveness service dimension was put into doubt. The study focused on 450 respondents in three public universities in Kenya, Tanzania and Uganda; i.e. Moi, Dar es salaam and Makere Universities respectively. 150 respondents were drawn from each university through systematic sampling and structured questionnaires were administered.

Okibo and Kimani (2013) conducted a study on ISO 901:2008 effectiveness on service delivery in Kenyan public universities. The study was conducted on seven public universities, one of which was the University of Nairobi. Random sampling was used both quantitative and qualitative research methods to collect data. The study concluded that ISO certification influenced curricular development, teaching facilities improvement, streamlining of processes and adaptability to changing market needs.

Moturi and Mbithi (2015) conducted a case study on implementation, impact of ISO 9001:2008 standard in University of Nairobi. The methodology included the internal and external audit reports, internal review reports which included feedback from employees and students, international rankings and government of Kenya performance contracting assessments. The study noted that some of the benefits of the ISO certification included improved infrastructure and facilities; improved staff competence, morale and ownership amongst others.

2.6 Summary of Literature and Knowledge Gap

The literature reviewed showed that certification to international standards has a positive influence on service quality. However, various findings used different research methodologies while some of the studies were conducted in different countries and different industries and thus do not reflect the situation in Kenyan public universities.

Table 2.2 Summary of literature and knowledge gap

AUTHOR	AREA OF STUDY	FINDINGS	GAP
Walker and Johnston (2009)	Signaling intrinsic service quality & value via accreditation & certification in accommodation providers	Accreditation & certification may benefit service providers by helping establish service quality standards to ensure that customer expectations are fulfilled.	The study covered accommodation providers in Australia and the certification was based on TABV, not ISO 9001:2008.
Gamboa and Melão (2012)	Adoption of ISO 9001:2000 in vocational school in Portugal	ISO 9001:2000 certification has a positive influence on service quality.	The study context was private Portuguese vocational educational institutions. The study focused on ISO 9001:2000 QMS certification and not on ISO 9001:2008.
Sumaedi, Bakti and Metasari (2012)	Students' perceived service quality in public universities in Indonesia	Facilities, contact personnel, instruction & communication has a notable effect on perceived service quality. Researchers recommended implementation of ISO 9001:2008.	The context of the study was Indonesian public universities and did not show the impact/influence of a QMS on quality service.
Psomas, Pantouvakis and Kafetzopolous (2013)	Greek service companies and influence of ISO on performance	Achieving the ISO 9001 objectives, operational performance and quality directly improve.	The context of the study was Greek service companies and it did not look into the service quality attributes in detail.
Anim (2015)	Service quality in Higher education: Tertiary Institutions in Ghana	Tangibles and reliability were rated poorly by students at the universities.	The study focused on the tertiary institutions in Ghana and not UON
(Andollo 2011)	The influence of QMS on service provision in UON	There exists a positive relationship between quality management system and service provision.	The study did not show how the ISO certification influenced service quality.

Cheruiyot and Maru (2013)	Service quality in East African public universities ; Moi, Dar es salaam and Makere	Tangibles and reliability were important to students. Responsiveness service dimension was rated poorly.	Study did not focus on UON and did not show the influence ISO has on service quality
Okibo and Kimani (2013)	Effectiveness of ISO on service delivery of Kenyan public universities	ISO certification influence facilities, development of curricular, streamlining of processes and adjustability to changing market	The study focused on the seven public universities as a whole and not the University of Nairobi in particular. Study focused on service delivery.
Moturi and Mbithi (2015)	Implementation and impact of ISO 9001 standard at the University of Nairobi	Some of the benefits of the ISO certification include improved infrastructure and facilities, staff competence, morale amongst others.	Data was collected only from secondary sources. All the service quality attributes were however not analyzed in the case study

2.7 Conceptual Framework

Service quality is the variable of concern as the study is focused on how the variable is influenced by ISO certification. Indicators of service quality are reliability, responsiveness, tangibles, assurance and empathy.

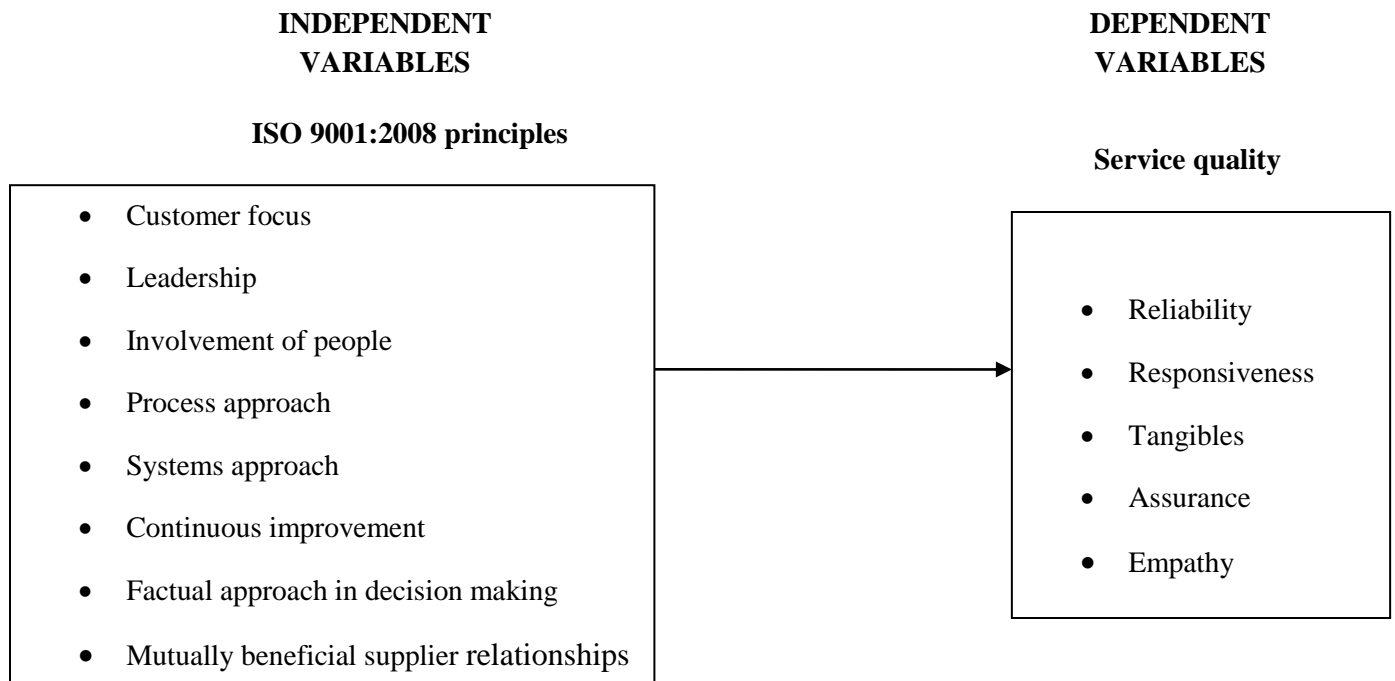


Figure 2.3 Conceptual Model. Source; Researcher (2016)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The research design, the population of study, the sample, data collection and analysis will be discussed in this chapter.

3.2 Research Design

A descriptive survey research design was used in the study. A descriptive survey describes a relationship between variables and development of theories that have universal validity (Best & Kahn, 1993). The design was chosen because the study seeks to determine how ISO 9001:2008 QMS correlates with service quality.

3.3 Population of the Study

The population of the study was drawn from the six colleges of UON, i.e., College of Health Sciences, College of Humanities and Social Sciences, College of Agriculture & Veterinary Sciences, College of Architecture & Engineering, College of Biological & Physical Sciences, College of Education & External Studies.

3.4 The Sample

Stratified random sampling was used to select sample for study. The respondents were divided into three distinct strata from the three programs offered at the university, Undergraduate, Masters and PhD in the School of Business, College of Humanities and Social Sciences. Proportionate stratification was used to determine the sample.

Table 3.1 Student Statistics School of Business

Program	Population
Undergraduate	7,446
Masters	4,172
PhD	437
TOTAL	12,055

Source: University of Nairobi, 2016

The School of Business has a total of 12,055 students enrolled in the three degree programs. A majority of the students, 7446, are currently undertaking the Undergraduate program.

Table 3.2 Sampling frame

Program	Population	Percentage per sample	Sample Size	Sample
Undergraduate	7,446	61.8%	100	62
Masters	4,172	34.6%	100	34
PhD	437	3.6%	100	4
TOTAL	12,055			100

Source: Researcher 2016.

Random sampling was then used to pick respondents from each stratum.

3.5 Data Collection

The target respondents were students in the School of Business. Data was collected from primary sources through the use of a closed ended questionnaire (Appendix 1). The questionnaire was divided in three sections. Part I of the questionnaire gives the profile of the respondents. The first objective, to establish the service quality dimensions at the University of Nairobi, was addressed in part II of the questionnaire. Part III of the questionnaire addressed the second objective, to determine the relationship linking ISO 9001:2008 certification and service quality at the University of Nairobi. The questionnaires were administered by drop and pick

3.6 Data Analysis

The collected data was keyed in in a computer and analyzed with the help of Statistical Package for Social Science (SPSS) version 21. Descriptive statistics was used to achieve the first objective, to establish the service quality dimensions at the University of Nairobi. Mean and standard deviation was used to present the data in tables. Regression and correlation analysis was used to determine the relationship between ISO 9001:2008 and service quality at the University of Nairobi. A description of the regression model to be used is given:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + E$$

Where:

Y = service quality

a = the regression constant

$b_1, b_2, b_3, b_4, b_5, b_6, b_7,$ and b_8 are the regression weights attached to the variable constants

The coefficients:

$X_1 =$ Customer focus

$X_2 =$ Leadership

$X_3 =$ Involvement of people

$X_4 =$ Process approach

$X_5 =$ Systems approach

$X_6 =$ Continuous improvement

$X_7 =$ Factual approach to decision making

$X_8 =$ Mutually beneficial customer relationships

$E =$ error

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter focuses on data analysis, interpretation and discussion. The purpose of this study was to establish the influence ISO 9001:2008 has on service quality in public universities in Kenya. More specifically, the study sought to establish the service quality dimensions at the University of Nairobi and to determine the relationship between ISO 9001:2008 certification and service quality at the University of Nairobi.

4.2 Response Rate

As shown in table 4.1 below, a response rate of 83 % (83) was achieved with majority of respondents returning their questionnaires. This was deemed excellent. The high response rate was attributed to the fact that the researcher had a good network in the study area which facilitated data collection process.

Table 4.1 Response Rate

No. of questionnaires	Frequency	Percent (%)
Returned	83	83
Non returned	17	17
Total	100	100

Source, Research data, 2016

4.3 Attendance

The questionnaire required the students to indicate the programs they were currently attending. Results in table 4.2 below show that majority of the respondents attend

undergraduate program 76.4% (63). About 16 % (12) of the respondents indicated THAT they attend the Masters program. While a small number, 9.6% (8), of the respondents indicated they attend the PhD program.

Table 4.2 Attendance

Program	Frequency	Percentage (%)
Undergraduate	63	76.4
Masters	12	16
PhD	8	9.6%
Total	83	100%

Source, Research data, 2016

4.4 Admission to the University of Nairobi

Respondents were asked to indicate the year they were admitted to the University of Nairobi. 12% (10) of the respondents indicated that they joined the University of Nairobi in 2012 while 41% (34) joined in 2013. About 28% (23) of the respondents indicated they joined 2014, 13% (11) of the respondents indicated they joined in 2015 and the relatively a small number 6% (5) indicated they were admitted before 2012.

The findings show that the majority of the respondents, 87% (72), joined the university before 2015. This shows that a large percentage of the respondents had interacted more with the staff at the university, had more understanding of the processes and system at the university and were thus able to answer the questions more confidently.

Table 4.3 Admission to the University

Year	Frequency	Percent (%)
2012	10	12
2013	34	41
2014	23	28
2015	11	13
Before 2012	5	6
Total	83	100

Source, Research data, 2016

4.5 Knowledge of ISO 9001:2008 Quality Management System Certification

The respondents were asked whether they knew about ISO 9001:2008 QMS certification. This would serve the purpose of understanding the awareness of the existence of the ISO certification at the university and the overall knowledge of the standard. Majority 79% (66) of the respondents indicated yes while 21 % (17) of the respondents indicated no, meaning they were not aware of ISO 9001: 2008 certification .

Table 4.4 ISO 9001:2008 Awareness

Response	Frequency	Percent %
Yes	66	79
No	17	21
Total	83	100

Source, Research data, 2016

4.6 Service Quality dimensions

The first objective of the study was to find out the service quality dimensions at the University of Nairobi. Respondents were given close ended questionnaires and were required to tick on the Likerts scale of 1 to 5, where 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly disagree. The service quality dimensions covered were responsiveness, reliability, tangibles, assurance and empathy. Mean and standard deviation was used to present the data collected in tables.

4.6.1 Responsiveness

The study sought to determine the willingness of the University of Nairobi staff to help students and provide prompt service. The responses were rated on a five point Likert scale where 5 = strongly agree; 4 = agree; 3 = neutral,; 2 = disagree; 1 = strongly disagree

Table 4.5 Responsiveness

Statement	Mean	Std dev
UON employees are always willing to help you	4.13	0.379
UON employees give you prompt services	2.53	0.325
UON employees are never too busy to respond to your request	3.54	0.179
The university tells you when a service will be performed	2.75	0.161

Source, Research data, 2016

From the study findings, it shows that the students feel that the university does not give prompt services to them (2.53) and that the university does not tell the students when a

service will be performed (2.75). However, majority of the students agreed that the university employees are always willing to help them (4.13) and that the employees are never too busy to respond to their requests (3.54)

The findings are in line with Cheruiyot and Maru (2013) study on service quality and relative performance in public universities in East Africa, who noted that responsiveness was put into doubt by the students as a majority of them felt that the universities did not provide the services on time as they had promised.

4.6.2 Reliability

The study sought to determine the ability of the university to perform the promised service dependably and accurately. The responses were rated on a five point Likert scale where the ratings were as follows, 5 = Strongly agree 4 = Agree 3 = Neutral, 2 = Disagree and 1 = Strongly disagree

Table 4.6 Reliability

Statement	Mean	Std Dev
When something is promised to be done by a certain time, it is always provided by the university	4.33	0.083
The university keeps accurate error free records	4.42	0.079
The university provides the service right the first time	4.21	0.090
The university provides services at the time they promise to do so	4.28	0.085

Source, Research data, 2016

The study findings show that the students feel that the university is dependable and accurate in providing the promised service. The students agreed with all the statements

provided showing that the university is reliable in its provision of services. Promise of provision of service by a certain time (4.33) and keeping of accurate error free records (4.42) were scored highly. While provision of right service at the first time (4.21) and provision of services at the time promised also scored highly.

This contradicts with Cheruiyot and Maru (2013) empirical study on service quality and relative performance in public universities in East Africa, where students reported low scores in provision of services when promised. In the same study, the students were neutral on issue of keeping accurate records.

This is however consistent with Owino et al (2014) contextual analysis of service quality in Kenyan Universities, who also found out that students rated reliability in the universities highly.

4.6.3 Assurance

Under assurance, the study sought to find out the employees' knowledge and courtesy and their ability to inspire confidence and trust. Responses were rated on a five point Likert scale where ratings were 5 = strongly agree; 4 = agree; 3 = neutral; 2 = disagree and 1 = strongly disagree

Table 4.7 Assurance

Statement	Mean	Std Dev
You feel safe and secure while at the university	4.06	0.157
UON employees are consistently friendly and polite with you	4.17	0.159
UON employees are knowledgeable and are able to answer	4.35	0.081

all your questions		
You are able to trust the UON employees.	4.11	0.235

Source, Research data, 2016

Assurance service dimension was also ranked highly with majority of the students agreeing with the statement that UON employees are knowledgeable and able to answer the students questions (4.35) . This is consistent with Anim (2015) who found out that the assurance dimension was an important service quality determinant at the Kwame Nkurumah University of Science and Technology.

4.6.4 Tangibles

The study also sought to find out whether the physical appearance of the universities facilities and provision of adequate equipment to support its learning processes had an impact on service quality. Responses were rated on the five point Likert scale. 5 = strongly agree, 4 = agree; 3 = neutral, 2 = disagree; 1 = strongly disagree

Table 4.8 Tangibles

Statement	Mean	Std dev
The appearance of physical facilities and equipment at the university are visually appealing	4.90	0.100
The university provides adequate equipment to support learning process	4.58	0.737

Source, Research data, 2016

The findings show that the physical appearance of the university facilities had a very big impact on service quality as majority of the students agreed on the statements (4.9). The provision of equipment by the university to support the learning processes was also ranked highly as most of the students agreed to the statement (4.58).

The findings are consistent with Sumaedi, Bakti and Metasari (2012), who found out that facilities contributed most to the overall perceived service quality in two Indonesian public universities. The findings however contradict Cheruiyot and Maru (2013) study on service quality and relative performance in East Africa public universities, who noted that the students reported low scores on the facilities dimension in appropriate facilities for teaching, accommodation, medical and ICT facilities.

4.6.5 Empathy

Caring and individualized attention to its students was another service quality dimension the study sought to find out. Respondents were to rate the statements on a five point Likert scale as follows, 5 =Strongly agree, 4 =Agree, 3 =Neutral, 2 = Disagree, 1 =Strongly disagree

Table 4.9 Empathy

Statement	Mean	Std Dev
The university gives you individual attention	4.25	0.084
Operating hours at the university are convenient to you	4.34	0.082

Source, Research data, 2016

Majority of the students reported high scores and agreed on the statements, the university gives individual attention (4.25) and that the universities operating hours are convenient (4.34). The findings are in line with Anim (2015) concluded that empathy is an important determinant of service quality at the Methodist university college in Ghana.

4.7 Regression Analysis

The second objective of the study sought to determine the relationship between ISO 9001:2008 certification and service quality at the University of Nairobi. Regression analysis was used to measure this relationship. Statistical package for social sciences (SPSS) was used to code, enter and compute the measurements for the multiple regression. The regression model used was as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + E$$

Where:

Y = Service quality

a = the regression constant

b₁, b₂, b₃, b₄, b₅, b₆, b₇, and b₈ are the regression weights attached to the variable constants

The coefficients:

X₁ = Customer focus

X₂ = Leadership

X₃ = Involvement of people

X₄ = Process approach

X₅ = Systems approach

X₆ = Continuous improvement

X₇ = Factual approach to decision making

X₈ = Mutually beneficial supplier relationships

E = error

Table 4.7.1 Model Goodness of Fit

R	R²	Adjusted R²	Std. Error of the Estimate
0.871	0.681	0.696	0.056

a. Predictors: (Constants), ISO Quality management systems certification principles

b. Dependent Variable Service quality dimensions

With R-squared of 0.681, the model shows a fairly strong relationship between ISO 9001:2008 and service quality. Thus, customer focus, leadership, involvement of people, process approach, systems approach, continuous improvement, factual approach to decision making and mutually beneficial supplier relationships account for 68.1% of the variations in service quality at the university, while 31.9% is explained by other indicators which are not inclusive in study or model. Therefore, further research could be conducted to investigate other indicators that affect service quality at the university.

Table 4.7.2 ANOVA results

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	4.132	8	.691	1.389	.031
Residual	26.462	83	.495		
Total	30.594	75			

a. Predictors: (Constants), ISO Quality management systems certification principles

b. Dependent Variable Service quality dimensions

Source, Research findings, 2016

The significance value .031 is less than 0.05 showing the model is statistically significant in predicting how ISO 9001:2008 QMS certification influences service quality at the University of Nairobi. F critical at 5% level of significance was at 1.389.

Table 4.7.3 Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.11	.060		2.573	.032
CSTMRFCS	1.45	.012	-.001	-2.771	.030
LDRSHP	1.01	.068	.162	2.471	.041
INVLVMNTPPL	.949	.001	.004	-.032	.000
PRCSSAPPRCH	.645	.483	.967	30.811	.003
SYSTEMAPPRCH	.611	.311	.838	3.582	.006
CNTNSIMPRVMNT	.872	.614	.074	4.119	.005
DCSNMAKNG	.049	.476	.008	.003	.007
SPPLRLTNSHP	.573	.216	.038	4.613	.001

a. Dependent Variable: Service quality Source; Research findings, 2016

Statistical package for social sciences (SPSS) generated the table above showing the weights of the variables that were subjected to the regression analysis. The constant value, 2.11, shows the service quality value when all the independent variables (B) are held constant. The derived model is as follows:

$$\text{Service quality} = 2.11 + 1.45 \text{ Customer focus} + 1.01 \text{ Leadership} + 0.949 \text{ Involvement of people} + 0.645 \text{ Process approach} + 0.611 \text{ systems approach} + 0.872 \text{ continuous improvement} + 0.049 \text{ factual approach to decision making} + 0.573 \text{ mutually beneficial supplier relationship} + E$$

The study is in line with Walker and Johnson (2009) who showed that certification benefits service providers by assisting in coming up with service quality standards. The study is also consistent with Psomas, Pantouvakis and Kafetzopolous (2013) who concluded that achieving ISO certification and objectives, quality directly improves.

4.8 Discussion of Findings

From the study, it was noted that tangibles was the most important service quality dimension with a mean of 4.90 and a standard deviation of 0.1 on the appearance of its physical facilities and equipment, according to students at the University of Nairobi. This means that the University of Nairobi has good, well maintained infrastructure and is providing the required equipment to support learning.

According to the results, students find responsiveness of University of Nairobi staff to be poor. Majority of the students feel that the university does not provide prompt service and they do not inform the students when the service will be performed.

The study also showed that ISO 9001:2008 contribute significantly to service quality. The results show that there is a positive relationship between ISO certification and service quality. This is consistent with Gamboa and Melao (2012), who found that ISO 9001:2000 certification has a positive influence on service quality in Portuguese vocational schools.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the summary of findings, the conclusions and recommendations so as to address the study objectives which were to ascertain the service quality dimensions at the University of Nairobi and to determine the relationship between ISO 9001:2008 certification and service quality. The areas for further research will also be discussed.

5.2 Summary of the Findings

The purpose of this study was to explore ISO 9001:2008 certification and service quality in Kenyan public universities: case of the University of Nairobi. The study had a significant response rate of 83%, while 87% joined the university before 2015. This shows a large proportion of the respondents were aware of the processes in the university. Furthermore, 79% of the students indicated they know about ISO certification which showed a good indicator of the understanding of the concept under study.

5.2.1 Service Quality Dimensions at the University of Nairobi

The first study objective was to find out the service quality dimensions at the University of Nairobi. The study covered service quality dimensions in terms of responsiveness, reliability, assurance, tangibles and empathy. It was found that students at the university consider the appearance of physical facilities as an important service quality attribute at UON. However, responsiveness of staff at the university was ranked poorly by the students; and in particular provision of prompt services. The students also noted that the university staff are not always willing to help.

5.2.2 Relationship between ISO and Service Quality

The second objective of the study was to determine the relationship between ISO 9001:2008 certification and service quality at the University of Nairobi. The study showed that there is a positive relationship between ISO 9001:2008 and service quality. The ISO 9001:2008 principles act as a guide to ensure organizations reach their service quality objectives. However, it was noted that other factors could contribute to service quality.

5.3 Conclusion

The study concludes that ISO 9001:2008 QMS certification has a positive influence on service quality. Institutions of higher learning should embrace ISO certification which would work as a guide to ensure the quality of their services and also to ensure that the students' needs and the expectations are met and exceeded. The findings are also in line with Gamboa and Melao (2012), who found that ISO 9001:2000 certification has a positive influence on service quality in Portuguese vocational schools.

The study also concludes that the tangibles are an important service quality attribute according to students at UON. This is in line with findings from Sumaedi, Bakti and Metasari (2012) who found that facilities has a significant effect on perceived quality as per their study on Indonesian public universities.

5.4 Recommendations

Findings of the research show that there is need to adopt ISO 9001:2008 QMS certification in Kenyan public universities. The study recommends the adoption and implementation of ISO 9001:2008 Quality management system in Kenyan universities so as to ensure service quality. The study recommends that universities find out the service quality needs of their students through various methods such as student satisfaction surveys and continuous dialogue. The universities should also train their staff on service quality. In particular, the University of Nairobi should train their staff on responsiveness.

The study also recommends that the ISO certified universities communicate to the students more on ISO certification so that they become more aware and involved in continuous improvement. Universities should also aim to find out other factors that contribute to service quality. Universities should aim to have a service quality culture in their institutions and they should pay closer attention to the physical appearance of its facilities as the study showed that the tangibles are the most important service quality dimension.

5.5 Limitations of the Study

The study was faced with various limitations. The study used only a sample of 100, and got a response of 83, which limited the data precision considering the large student population at the University of Nairobi. The researcher also had limited time to collect data. The researcher also had a hard time convincing the Undergraduate students that the

purpose of the study was purely academic despite showing them an official letter from the University.

5.6 Suggestions for Further Studies

Further studies can be done on other ISO certified public universities in Kenya as this study only focused on the University of Nairobi. Further studies could also be carried in other schools within the University of Nairobi as the study focused on the school of Business, therefore the findings may not be exhaustive. The sample of the study was only 100 students; another study could be carried out to with a larger sample of students. Furthermore, more students in the Masters and PhD programs could be sampled to ensure a fair representation as a majority of the students sampled, 63%, were undergraduates.

The respondents could also be academic and non-academic staff and not students as was the case in this study. Further studies could be carried out on differences in perceived service quality in public universities and private universities.

With the new ISO 9001:2015 QMS standard in use, studies could also be carried out to find out whether it has a more positive or negative influence on service quality.

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APPENDICES

APPENDIX I: RESEARCH QUESTIONNAIRE

This questionnaire is divided into three parts. Kindly tick in the appropriate box as per instructions provided.

PART I: General information

1. What program do you attend?

a) Undergraduate

b) Masters

c) PhD

2. Please indicate year of admission to the University of Nairobi

a) 2015 e) Before 2012

b) 2014

c) 2013

d) 2012

3. Do you know about ISO 9001:2008 Quality Management System Certification?

Yes No

PART II: Service quality dimensions at the University Of Nairobi

4. Please tick in the appropriate box the extent you agree with the statements using the following rating: **5 = strongly agree, 4 = agree, 3 =neutral , 2 = disagree, 1 = strongly disagree.**

Please Note: Employee includes both Academic and Non-academic staff

Service quality dimension		Statement	5	4	3	2	1
Responsiveness	1.	UON employees are always willing to help you					
	2.	UON employees give you prompt services					
	3.	UON employees are never too busy to respond to your request					
	4.	The university tells you when a service will be performed					
Reliability	5.	When something is promised to be done by a certain time, it is always provided by the university					
	6.	The university keeps accurate error free records					
	7.	The university provides the service right the first time					
	8.	The university provides services at the time they promise to do so					
Assurance	9.	You feel safe and secure while at the university					
	10.	UON employees are consistently friendly and polite with you					
	11.	UON employees are knowledgeable and are able to answer all your questions					
	12.	You are able to trust the UON employees.					

Tangibles	13.	The appearance of physical facilities and equipment at the university are visually appealing					
	15.	The university provides adequate equipment to support learning process					
Empathy	16.	The university gives you individual attention					
	17.	Operating hours at the university are convenient to you					

PART III: Relationship between ISO and service quality at the University

5. Please tick in the appropriate box the extent you agree with the statements using the following rating; **5 = strongly agree, 4 = agree, 3 =neutral, 2 = Disagree, 1 = strongly disagree.**

ISO Principles		Statement	5	4	3	2	1
CUSTOMER FOCUS	1	Your views on service quality needs and expectations were sought					
	2	The objectives of the university are linked to students needs and expectations					
LEADERSHIP	3	The vision, mission and policies of the university are well communicated					
	4	Infrastructure in terms of buildings and equipment are provided and well maintained					
	5	The university hires skilled personnel					
INVOLVEMENT OF PEOPLE	6	The university has dialogue with students on the quality of their services					
	7	The university is open to the views of students					
PROCESS APPROACH	8	The university has key procedures for students to ensure service quality					
	9	The university employees always follow the laid down procedures					

SYSTEMS APPROACH	10	The entire system of the university is structured to achieve quality service					
CONTINUOUS IMPROVEMENT	11	The quality of services at the university is continually improving					
FACTUAL APPROACH	12	The university makes decisions based on experience and evidence					
SUPPLIER RELATIONSHIPS	13	Cleaning, ground maintenance and waste management services are well carried out					

Thank you very much for your response

APPENDIX 2: STATUS OF UNIVERSITIES, 2015

ACCREDITED UNIVERSITIES IN KENYA – NOVEMBER 2015 ACCREDITED UNIVERSITIES		YEAR OF ESTABLISHMENT	YEAR OF AWARD OF CHARTER
Public Chartered Universities			
1.	University of Nairobi (UoN)	1970	2013
2.	Moi University (MU)	1984	2013
3.	Kenyatta University (KU)	1985	2013
4.	Egerton University (EU)	1987	2013
5.	Jomo Kenyatta University of Agriculture and Technology (JKUAT)	1994	2013
6.	Maseno University (Maseno)	2001	2013
7.	Dedan Kimathi University of Technology	2007	2012
8.	Chuka University	2007	2013
9.	Technical University of Kenya	2007	2013

10.	Technical University of Mombasa	2007	2013
11.	Pwani University	2007	2013
12.	Kisii University	2007	2013
13.	Masinde Muliro University of Science and Technology (MMUST)	2007	2013
14.	Maasai Mara University	2008	2013
15.	South Eastern Kenya University	2008	2013
16.	Meru University of Science and Technology	2008	2013
17.	Multimedia University of Kenya	2008	2013
18.	Jaramogi Oginga Odinga University of Science and Technology	2009	2013
19.	Laikipia University	2009	2013
	University of Kabianga	2009	2013

20.			
21.	University of Eldoret	2010	2013
22.	Karatina University	2010	2013
23.	Kibabii University	2011	2015
Public University Constituent Colleges			
24.	Embu University College (UoN)		2011
25.	Kirinyaga University College (JKUAT)		2011
26.	Garissa University College (MU)		2011
27.	Murang'a University College (JKUAT)		2011
28.	Machakos University College (KU)		2011
29.	Rongo University College (MU)		2011
30.	Taita Taveta University College (JKUAT)		2011

31.	The Co-operative University College of Kenya (JKUAT)		2011
32.	Kaimosi Friends University College (MMUST)		2015
33.	Alupe University College (MU)		2015
Private Chartered Universities			
34.	University of Eastern Africa, Baraton	1989	1991
35.	Catholic University of Eastern Africa (CUEA)	1989	1992
36.	Daystar University	1989	1994
37.	Scott Christian University	1989	1997
38.	United States International University	1989	1999
39.	St. Paul's University	1989	2007
40.	Pan Africa Christian University	1989	2008
	Africa International	1989	2011

41.	University		
42.	Kenya Highlands Evangelical University	1989	2011
43.	Africa Nazarene University	1993	2002