RELATIONSHIP BETWEEN ISO 9001 CERTIFICATION AND CUSTOMER SATISFACTION IN PUBLIC UNIVERSITIES IN KENYA

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A Thesis Submitted to the Board of Graduate Studies in Partial Fulfillment of the Requirements for the Conferment of the Degree of Doctor of Philosophy in Educational Management of the University of Kabianga

UNIVERSITY OF KABIANGA

JANUARY, 2022

DECLARATION AND APPROVAL

Declaration

This thesis is my original work and has not been submitted for the conferment of a degree or for the award of a diploma in this or any other university:

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DEDICATION

This PhD Thesis is dedicated to my parents John and Everline Cheruiyot, for their support, inspiration and encouragement to undertake this arduous task.

ACKNOWLEDGEMENT

ABSTRACT

Higher educational institutions face a myriad of challenges which affect their customers' satisfaction. Complaints have been raised by the customers about the quality of services rendered in universities in Kenya. In an attempt to curb these challenges, universities put in place ISO 9001 Certification and Quality Management Systems (QMS), with quality management practices which include: performance indicators, accreditation, assessment of both programs and institutions and quality audits. This research sought to establish the relationship between ISO 9001 certification and customer satisfaction with a view to addressing the challenges that affect the quality of services offered by public universities in Kenya. The objectives of this study were to: investigate the relationship between quality assurance officers' training, quality management system's procedures, quality management system's audit and management support of quality management system and customer satisfaction in public universities in Kenya. The study was anchored on European Foundation for Quality Management (EFQM) excellence model and Expectancy Disconfirmation Theory. This study adopted positivism research philosophy. A sample of 480 respondents consisting students, Quality Assurance Officers, Deans of Schools, Heads of Sections, Internal Auditors and ISO coordinators was drawn using stratified random sampling from the 15 ISO certified universities. A pilot survey was conducted to test the face validity of the study instrument. The questionnaire was administered to 10 university students and they were asked to make any comments on questions or terms which were unclear or ambiguous. The questionnaire was adjusted and administered to 6 experts (university scholars, researchers and industry experts in ISO certification). For the reliability test, the study instruments were subjected to Cronbach's alpha test resulting in a value of 0. 812 which meant the instruments construct were very reliable. Descriptive analysis was used to profile the respondents while linear regression analysis was used to test the research hypotheses. The findings established by inferential statistics analysis found that three variables namely quality assurance officers' training, management support of quality management system and quality management system procedures were positively and significantly related to students' satisfaction and so their respective null hypotheses were rejected. However, quality management system audit was not significantly related with customer satisfaction. It was concluded that ISO 9001 certified universities in Kenya have better students' satisfaction as a result of embracing quality assurance training, management support of quality management system and quality management system procedures. The poor contribution of quality audit variable to the customer satisfaction could be attributed to reports of audits at the universities which show they were not acted upon and were not made available to the customers. In addition, the universities did not adhere to universities regulations, their service charters as well as their quality manuals. However, the management of the universities provided adequate support to QMS. The researcher recommended that the training programs for QAOs needed to be enhanced to make it more effective. Top management commitment to success is important if the culture of quality is to succeed at the university. Finally, there was need to audit regularly the extent of compliance by the universities with ISO 9001 QMS standards. The results of this study would inform both the public universities and the Ministry of Education in Kenya so that they would appreciate the issue of providing quality services which would enhance customer satisfaction.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA:	Analysis of Variance
AUQA:	Australian Universities Quality Agency
BSI:	British Standards Institution
CHE:	Commission for Higher Education
CUE:	Commission for University Education
EDM:	Expectancy Disconfirmation Model
EFQM:	European Foundation for Quality Management
HEIs:	Higher Educational Institutions
ICT:	Information Communication Technology
IQA:	Internal Quality Assurance
ISO:	International Organization for Standardization
IUCEA:	Inter-University Council of East Africa
KEBS:	Kenya Bureau of Standards
LIA:	Letter of Interim Authority
MCSQ:	Managerial Commitment to Service Quality
QA:	Quality Assurance
QAOs:	Quality Assurance Officers
QMS:	Quality Management Systems
SPSS:	Statistical Package for Social Sciences
TQM:	Total Quality Management Practices
ISO 9001:	International standard that specifies requirements for a Quality Management System (QMS)
SNA:	Social Network Analysis
NSE:	Nairobi Stock Exchange

DEFINITION OF TERMS

The following definition of terms was operationalized as follows:

Customers: Refers to the people who purchase goods and services from an organization. They could also be said to be consumers of the goods and services. In this study customers referred to the students in public universities in Kenya.

Customer Satisfaction: Refers to fulfillment or gratification of the desires or needs of customers. In this study, it referred to the perception of the customers as a result of the services offered by the university measured by customer satisfaction surveys.

Management Support of Quality Management systems: In this study, it referred to the help or backing that the management of the university offers to QMS in terms of policies, resources and training opportunities.

Public Universities: A public university or public college is a university or college that is in state ownership or receives significant public funds through a national or sub national government, as opposed to a private university.

Quality Assurance Officers: Refers to people charged with ensuring that set quality standards are upheld in a given institution. In this study, they were the directors of quality assurance appointed by the universities.

Quality Assurance Officers training: Refers to imparting skills, competencies and knowledge aimed at meeting customer expectations. In this study, it referred to the training received by directors of quality both on-the-job and off- the-job.

Quality Management System procedures: In this study, they are documented processes, policies and aspirations aimed at enhancing consistency in the quality of services or products so that they can meet the needs of the customer and enhance satisfaction.

Quality Management System audit: Refers to an independent review and examination of activities and processes. In this study, quality audit referred to the process of systematic evaluation of a quality system done by an internal or external quality auditor or an audit team to establish if the organization conformed to the defined quality system processes.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter deals with background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, research hypotheses, justification of the study, significance of the study, limitations of the study and assumptions of the study.

1.2 Background of the Study

Interest in higher education around the world has been aroused by the changes that are taking place in the societies. Some of these changes include rapid increase in student population, globalization of the economy, limited or unavailability of resources, instability occasioned by politics, lack of consistency in the policies of various regimes, and inefficient educational management systems (Haider, 2008).

The interest in education offered by higher institutions of learning has brought about a lot of challenges in Higher Educational Institutions (HEIs) as they seek to serve their customers as well as discharge their mandate. These challenges are rapid increase in student enrolments, shortage of financial resources, a decline in quality of those who graduate, insufficient number of staff and faculty with requisite training and qualification, and an increase in competition between various public and private colleges and universities (Ariff, Zaidin, & Sulong, 2007).

In a bid to curb the challenges they face, HEIs have adopted Quality Management Systems (QMS). Some of them include devices such as performance indicators, accreditation, assessment of program and institution, and quality audits. Attempts have also been made to incorporate models from the private sector into higher education

systems and institutions in a bid to enhance their service delivery (Sarrico, Rosa, Teixeira & Cardoso, 2010).

Aruasa (2009) notes that the specific requirements of the international standard for quality management system include the need to show capability to consistently provide a product or service which meets customer needs, applicable regulatory requirements and improvement of satisfaction of customer by effective system application . Aaker (2007) avers that the beginning of quality is understanding what a customer desires and ends when those desires are met.

International Organization for Standardization (ISO) 9001 addresses several aspects of quality management and has the best known ISO standards. These standards give direction and tools that companies and organizations can use to ensure there is consistency in their services in meeting customer's needs, and that there is consistency in quality improvement. Achievement of optimal level of customer satisfaction calls for the institutions to continuously assess the experiences, opinions and suggestions of their customers and potential customers. Improving quality of services to meet customer's expectations is a continuous aspect in every organization. The organizations are supposed to monitor information relating to perceptions of the customer so as to establish whether it meets the requirements as one of the measures of the performance of the Quality Management System (ISO 9001:2008 Standard).

ISO 9001 is a quality management standard that sets out requirements for organizations' quality management systems (ISO, 2016). The 2015 version emphasizes stronger focus on the organization's stakeholders, its context and has another high-level structure. It is

also more adaptable to different kinds of organizations in different scales (ISO, 2016). The 2008 version would continue to run parallel until September 15, 2018. To remain ISO 9001 certified, companies had to apply the requirements of the new version until that date (ISO 9001:2008 Standard).

An ISO 9001 certification increases organizations' ability to satisfy customer's needs and customers are assured that the products and services provided are of consistently good quality. ISO 9001 can also work as a tool to streamline the organization's processes and make them more efficient. Since the ISO 9001 is reviewed every five years, it helps organizations to keep current in an ever-changing world (ISO 9001:2008 Standard). All ISO standards are reviewed every five years and revised if considered necessary. This is meant to maintain it as a useful tool that is current and relevant for the marketplace (ibid). The aim is for business organizations to be more efficient in their operations and improve their customer satisfaction (ISO 9001:2008 Standard).

Shrestha and Chalidabhongse (2010) surveyed 300 employees who worked in 60 Thai companies on the extent to which customer satisfaction is influenced by the existing performance appraisal system which these companies used. The study concluded that the performance appraisal system, if not satisfactorily controlled, would lead to employees reporting lower performance. This is because performance appraisal system had been incorporated into the company's running processes.

Prajogo and Cooper (2012) studied the impact of Total Quality Management (TQM) practices on job satisfaction. Their research was aimed at finding out the relationship between people-related TQM practices and customer satisfaction of service employees.

Their research gave rise to a very critical question which is whether a TQM has an effect on employees' satisfaction. The data was obtained from 201 employees drawn from 23 diverse organizations in Victoria, Australia. The data collected was analyzed in two perspectives: the people related TQM practices and organizational performance, and the people related TQM practices and customer satisfaction. It was noted from the results that customer satisfaction of employees was greatly influenced by people-related elements of TQM. Further, it was noted that TQM with a hierarchical model had a positive relationship to the satisfaction of customers. This shows the effective role an internal customer plays in the entire performance process of the organization's quality management system.

Concerning external customer satisfaction, a study carried out by Pitterman (2013) found out that figures of satisfaction of customers at Telcordia technologies increased from 60% in 1992 to 95% at the time of ISO 9001 quality management system implementation. In addition, a 63% reduction in test cost efficiency was reported from 1993. A majority, 98%, of major software distributed between 1995 and 1998 by Telcordia was delivered in time despite an increase in the number released by three times during the four year period.

A study by Sakthivel and Rajendran (2013) found out that a major positive correlation existed between the five TQM variables (top management commitment, delivery of the course, and facilities at the campus, acceptable polite behavior, and feedback from customer) and the satisfaction of students. A significant difference in the perception of quality of educational service by students between ISO certified and non ISO certified institutions was reported. It was also noted that the implementation of ISO quality

management had a qualitative change in the educational institutions. Further, commitment by top management and infrastructure at the campus strongly predicted the students' satisfaction.

Padma, Rajendran and Ganesh (2015) researched on the dimensions which make up and improve level of customer satisfaction on the health care industry in India. This study was based on the existing quality management models and literature on healthcare services. Their aim was to provide a model to the hospitals to harmonize the frameworks of service delivery with the patients' requirements. From the research, it was found that implementation of quality management system should result in satisfaction of the patients.

The debate on the relationship between service quality and satisfaction has been spurred by academicians including Spreng and Singh (2015) who established that the higher the level of service quality the higher the level of customer satisfaction; Akar, (2007) deduced that service quality and customer satisfaction are distinct but related, while Shekarchizadeh et al. (2015) posit that customer satisfaction is antecedent to service quality. Satisfaction is generally associated with one particular transaction at a particular time and has been described by Spreng et al. (2015) as an emotional reaction to a product or service experience. Service quality on the other hand is more congruent with a long term attitude.

Overall, satisfaction is more experimental, transitory and transaction-specific, while service quality is believed to be more enduring. Akar (2007) posits that even though the study of the relationships between perceived quality and satisfaction is relatively new within the university scope, it must not be forgotten that the purpose of services whether

public or private, is user satisfaction. In addition, Navarro, (2015) notes that most studies in higher education designate the student as the element in the best position to evaluate the teaching received through a measurement of the levels of satisfaction. The student plays the customer role because they are both the receiver and subsequent users of the training given by the university. In support, Sarrico, Rosa, Teixeira & Cardoso, (2010), added that in educational institution, the student is the consumer, whose satisfaction the institution must seek to maximize.

A study carried out in South Africa on the need for the quality management systems' implementation in South African construction identified client satisfaction as one of the parameters that was negatively affected by non-achievement of quality (Smallwood & Rwelamila, 2012). A study carried out by Indiya, Otieno, Obura, Abong'o, and Ondoro, (2015) on Effect of Implementing Quality Management System (QMS) on the Performance of Public Universities in Kenya at Maseno University, found out that the presence of QMS significantly determines the students' enrolment. In addition, involvement of employees led to successful implementation of QMS. Both the students and the employees are the customers of the organization; the students being the external customers while the employees are the internal customers. Satisfaction of these customers is the most important aspect of the organization.

The demand for higher education in Kenya is growing rapidly. This rapid expansion in this sector has witnessed an increase in student enrolment, reduced government funding of public universities and a rise in expectation of quality services by the customers (Magutu, Mbeche, Nyaoga, Ongeri, & Ombati, 2010). The quality of service in education is taking the lead in a bid to satisfy and retain customers. Ngware, Onsomu and Manda,

(2005) note that the supply of higher education in Kenya continuously falls short of demand for quality education leading to low customer satisfaction.

Quality Management System (QMS) certification is very important in assuring the effective and efficient implementation of work processes and procedures for the achievement of the institutions' goal, which is provision of the educational services to the various stakeholders (Imre, Roudaina, & Mohamad, 2017). Despite adoption and use of QMS in public universities in Kenya, complaints about their services still abound. Aseka (2018) highlights some of the problems that learners in public universities go through, which express their dissatisfaction. Among the issues raised include marks that could not be accounted for, lack of assessment of students on attachment, under stocked libraries and inadequate preparation of learners due to poor syllabus coverage. University World News names universities growing too fast without regard for quality as one of the challenges facing university education in Kenya (University World News, 2014).

While most of the studies cited above seem to agree that implementation of QMS significantly influenced Customer Satisfaction, a study carried out on QMS and Customer Satisfaction in Kenya Aviation Industry suggests otherwise. It was noted that ISO 9001:2008 certification of organizations within the aviation industry had no significant relationship with customer satisfaction (Rukaria, 2014).

1.3 Statement of the Problem

Customers expect quality services from organizations that have been awarded ISO 9001 certification. This is because the main objective for the adoption of ISO 9001 is to project the organization as adhering to quality processes and policies. Despite efforts by higher

educational institutions to improve the quality of their services, complaints from their customers on the quality of services still abound. Numerous complaints by employers about half-baked graduates who lack employability skills, technical mastery and basic work related capabilities are evident. Moreover, customers of public universities have complained about the services offered which were not of good quality. These biting issues necessitated this study. Issues of marks that could not be accounted for by the lecturers as well as poor course coverage have been raised by the customers. These were indicators to probable issues of compromised quality in the organization showing that more needed to be done so that the customers are satisfied. Most of the studies already done in this area have focused on variables such as ISO 9001 Certification and Organizational Effectiveness, Marketing advantages and Productivity. However, studies on ISO 9001 Certification and Customer Satisfaction especially in public universities are limited. The paucity of research findings on ISO 9001 certification in higher education institutions necessitated this study. This study therefore systematically collected data for the purpose of analysis and documentation.

1.4 Purpose of the Study

The purpose of this research was to investigate the relationship between ISO 9001 certification and customer satisfaction in Public Universities in Kenya.

1.5 Objectives of the Study

The following objectives of the study were to:

i. Establish the relationship between quality assurance officers' training and customer satisfaction in Public Universities in Kenya.

ii. Establish the relationship between management support of Quality Management System and customer satisfaction in Public Universities in Kenya.

iii. Determine the relationship between quality management system's audit and customer satisfaction in Public Universities in Kenya.

iv. Investigate the relationship between Quality Management System procedures and customer satisfaction in Public Universities in Kenya.

1.6 Hypotheses of the Study

The following hypotheses were tested at 0.05 level of significance:

1.6.1 Null hypotheses

H_01There is no statistically significant relationship between quality assurance officers' training and customer satisfaction in Public Universities in Kenya.

H_02There is no statistically significant relationship between management support of Quality Management System and customer satisfaction in Public Universities in Kenya.

H_03There is no statistically significant relationship between Quality Management System's audit and customer satisfaction in Public Universities in Kenya.

H_04 There is no statistically significant relationship between Quality Management System's procedures and customer satisfaction in Public Universities in Kenya.

1.6.2 Alternate Hypotheses

$H_1$1There is a statistically significant relationship between quality assurance officers' training and customer satisfaction in public universities in Kenya.

$H_1$2There is a statistically significant relationship between management support of Quality Management System and customer satisfaction in public universities in Kenya.

$H_1$3There is a statistically significant relationship between Quality Management System's audit and customer satisfaction in public universities in Kenya.

$H_1$4There is a statistically significant relationship between Quality Management System's procedures and customer satisfaction in public universities in Kenya.

1.7 Justification of the Study

In this period of accountability and transparency, customers in educational institutions need accountability for the resources they spend in education because these resources are scarce. The intention of this study was to contribute to the knowledge by filling the gap that existed in the current literature on the relationship between ISO 9001 Certification and customer satisfaction in the public university education. These customers play a significant role in sustaining the organization. In addition, the expansion of university education has been met with conflicting issues of quality and quantity. Furthermore, Commission for University Education used to regulate private universities but since the year 2013 its role was expanded to include public universities. Consequently, they may be overwhelmed by the number of institutions it regulates hence compromising the quality. ISO 9001 certification is meant to ensure that an organization offers quality

services that meet the expectations of the customers. If quality programs were offered in institutions of learning, they would contribute significantly towards improving service delivery in the respective universities.

1.8 Significance of the Study

The results of this study would inform both the public universities and the Ministry of Education in Kenya so that they would appreciate the issue of quality of services so as to enhance customer satisfaction. Satisfied customers would always strive to ensure the success of the institution. Employees, parents, students and other customers of the university may benefit from the results of this study because HEIs may utilize the findings of the study to improve on customer satisfaction. Universities management may also benefit from the results of the study because it may expose the gaps in training and preparation of QAOs for execution of their mandate/duties. Furthermore, the findings of this study may generate useful literature for further studies and the necessary actions that would be undertaken in order to address the issue of quality of services in our public universities.

1.9 Scope of the Study

This study was undertaken in public universities in Kenya. Commission for University Education (CUE, 2017) reported that Kenya had 31 public universities. The study focused on universities that had ISO 9001 Certification. The study was carried out between October 2019 and December 2019. The study was delimited to the relationship between Quality Assurance Officers' training, QMS Procedures, Quality Management System Audit and Management Support of Quality Management System and Customer Satisfaction in Public Universities of Kenya.

1.10 Limitations of the Study

This research sought to investigate the relationship between ISO 9001 Certification and Customer Satisfaction in Public Universities of Kenya. Kenya had 31 public universities by July 2019, spread across the country. Of these, KEBs (2019) listed only 15 universities as having been awarded ISO 9001 Certification. The researcher therefore was limited to these public universities and the results may not be generalizable to all the universities in Kenya that are not ISO 9001 certified. Unwillingness of relevant officers to share information and/or provide evidence was also noted. To overcome this, the researcher assured all the respondents of confidentiality of the information provided. Unavailability of the relevant officers due to busy work schedules was overcome by the researcher through scheduling the interviews at convenient times with the officers that were interviewed. The researcher also offered the option of phone interviews with the respondents so as to work around their busy schedules.

1.11 Assumptions of the Study

The study had the following assumptions:

i) Regular ISO audit was undertaken in all public universities in Kenya.

ii) QMS procedures were followed by all the universities.

iii) The information provided by the respondents was genuine and reflected the true position of the organizations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed relevant literature having important conceptual contributions to the objectives of the present study. It entailed review of existing studies with keen attention to Quality Management System in Public Universities in Kenya and its influence on Customer Satisfaction. Empirical literature related to the study was also reviewed. The theoretical framework, conceptual framework and the research gaps have also been addressed in this chapter.

2.2 Review of Related Literature

Empirical literature related to the study was reviewed in accordance with the key themes on customer satisfaction, QAOs' training, management support of Quality Management System, quality audit and Quality Management System's procedures as follows:

2.2.1 Customer satisfaction

A customer can also be referred to as a consumer or a buyer (Rogers, 1995). The customer receives a product after giving out money or other valuable consideration. A customer can be either internal or external. An internal customer is an employee in the organization providing the product or service while an external customer is the beneficiary or purchaser of the product or service. Sudha (2013) names parents, students and guardians as customers of the academic institutions. The parents and guardians sponsor the students by paying fees. He notes that they are very much aware of their rights and would like to get value for their money as well as time spent. University of Kabianga Quality Manual (2013) further identifies students, parents/guardians, staff,

suppliers, government agencies, members of the public, local communities and other stakeholders as customers of the university.

Groocock (2000) classified customers into three categories. These are powerful, weak and patient. He noted that powerful customers hold sway on their suppliers as compared to the weak and patient customers. The influence of these powerful customers put the suppliers in check to ensure they adhere to the quality assurance system and quality improvement programs. Terziovski and Power (2007) illustrated that a customer could compel the work organization to seek ISO 9001 certification. The satisfaction of customer, therefore, should be the most important focus for any organization that seeks to maintain a quality management system as per ISO 9001.

Customer satisfaction has a broader meaning, which includes the perceived evaluation of product and service (Leem & Yoon 2004). Customer satisfaction is defined as the degree of how an individual feels as a result of comparing a product's perceived performance or outcome in respect to his/her own expectations (Kotler, 1996). Wong (2003) observes that customer satisfaction is the level or extent of fulfillment or contentment provided by the goods or services provided by the supplier. It is the level a product or service fulfills or transcends the expectations of the customer. Engagement of people, to achieve the organization's quality objectives, all levels in the organization must meet this principle.

People throughout the organization need to be involved and respected as individuals to enhance the capability of the organization to create value. When people get involved, the chance to improve the understanding of the quality objectives as well as overall objectives of the organization increases. To create a work environment with engaged

people the organization needs to communicate the importance of individual contribution and importance of trust and collaboration, throughout the organization. There should also be recognition of the individuals' contribution, performance and learning. Surveys, communication of the result and self-evaluation of performance should also be conducted (Sudha, 2013).

Process approach is also a listed quality management principle. To achieve consistent and predictable results in an effective and efficient manner, activities within the organization need to be managed as interrelated processes that function as a uniform system. It is important to understand how results are produced by the system, define the objectives of the system and focus the effort on key processes, to find ways to optimize it. The main goal is to optimize performance, create consistent and predictable outcomes. This is done by effective process management or efficient use of resources and reducing cross-functional barriers (Leem & Yoon 2004).

Customer satisfaction is determined as the number of customers, or percentage of total customers, whose reported experience with an organization, its products, or its services goes beyond set satisfaction goals (Chen & Popovich, 2003). Kotler and Armstrong (2010) add that customer satisfaction involves creating, maintaining and sustaining strong relationships with customers, suppliers and employees with a goal of delivering long-term economic and social value to the stakeholders. It is measured by the number of repeat customers. Bruce (2007) adds that compliments by the customers, number of repeat customers, customer retention rate and the extent of satisfaction of customers are pointers of customer satisfaction.

The ability of the organizations to meet the service time requirement is directly related to the typical customer satisfaction index. When customers spend too much time on something they feel would have taken less time, they are dissatisfied with the service offered. Thus customer service quality should be perceived both subjectively and objectively (Blummberg, 2011). Customer satisfaction is measured by analysing customer feedback as this can accurately rate satisfaction. Successful organizations have continuous focus on improving themselves. It is essential for an organization to maintain the level of performance, and to be prepared for internal and external changes. To enhance improvement of the organization, it needs to promote improvement objectives at any level of the organization, and educate and train the people how to apply tools and methodologies (Kotler and Armstrong, 2010).

A good QMS should improve customer satisfaction, address quality requirements of the customer and help an organization to comply with the relevant regulations outlined, Improved process performance and organizational capabilities will lead to greater customer satisfaction, and to be able to do this focus must also be on investigation of root-causes and preventive and corrective actions (Blummberg, 2011). ISO 9001 is a QMS that has eight quality management principles. These are: Customer focus principle; Leadership principle; Involvement of people principle; Process approach principle; Systems approach to management principle; Continual improvement principle; Factual approach to decision making principle and Mutually beneficial supplier relationship principle relationship management, it is critical for organizations to manage relationships with interested parties, such as suppliers to sustaining success. Interested parties

influence performance of the organization and well-managed relationship will optimize the performance (Kotler & Armstrong, 2010).

It is important for management to have good relationships with suppliers and partner networks. The organization must determine their interested parties, prioritize them and consider their short-term or long-term possibilities. Interested parties can be suppliers, partners, customers, investors, employees or society. Interested parties that organization focus on should be shared information, expertise and resources with collaborative and improvement activities (Kotler & Armstrong, 2010). This implies that good relationship can enhance organization and its interested party's performance; therefore, it is important to understand common goals and values. This will also increase the relationship and create a well-managed supply chain, which will provide a stable flow of goods and services (Blummberg, 2011).

The customer focus principle is paramount to this study. Institutions are dependent on the customers hence there is need to understand their needs, both present and future and strive to meet and even exceed them. The principle's requirements are addressed and reflected through communication with customers; care accorded to what belongs to the customer; the figuring out of the needs and expectations of customer; appointment of a management or operations representative and lastly commitment by top management. Customer satisfaction components in certified work organizations are set out in International Organization for Standardization, ISO 9001. These components are made up of management responsibility, management of resources, realization of product or service, and analysis measurement and improvement. Apart from realizing external customer satisfaction, job satisfaction which results from satisfaction of internal customer

needs would augment performance improvement resulting in satisfaction of the customer (Guimaraes, 2013).

Research by Pamela and Lwakama (2010) observes that a customer who is satisfied has his or her expectations met or exceeded, experienced good service delivery, felt they were equitably treated, and thinks that he/she got value for money. Delivery of core service (the promise), comparative service quality (how the service is delivered, staff attitude/professionalism) and perceived value for money, (the difference between perceived benefits and costs) are the vital drivers of customer satisfaction (and future intention). The importance of each of these drivers varies across the services. However, the two very important ones for overall customer satisfaction are delivery of core service (what is delivered) and the perceived value (a feeling by customers that they got value).

ISO 9001 clause 8.2.1 requires that organizations should monitor information that relate to customer perception to determine if customer requirements have been met. A lot of emphasis is laid on ensuring that clients are indeed satisfied. Though it does not specify how to assess or measure whether clients are satisfied, conducting customer satisfaction surveys, implementing a robust and workable complaints handling process, implementing a process to monitor trends in customer data and implementing a process for reviewing customer data are some of the suggested ways (ISO 9001: 2008). Basically ISO is a Greek word meaning "Equal". Unfortunately, many people even today misunderstand the word ISO, thinking it is an abbreviated term for some three long words. However, there is a word with a semi-similar abbreviation, International Organization for Standardization, which cannot logically be equivalently abbreviated to "ISO"(Blummberg, 2011). It is best

close to an IOS abbreviation. International Organization for standardization (IOS) is the international authority body responsible for issuing various quality standards, one of which is the ISO 9001 standard for the quality management system.

Quality Management System (QMS) is a set of interconnected processes designed and executed for the purpose of meeting customer requirements (Leem & Yoon 2004). From the QMS definition, it is explicitly understood that quality is nothing more than an initial compliance with customer requirements. Initial compliance with customer needs is the pathway toward quality achievements. Some quality professionals define QMS as the system to manage customer requirements. Starting with customer focus, where the definition implies that work organization depend on their customers and therefore organizations shall understand the current and future customer needs, and to be able to meet customer requirements, and strive to exceed the customer expectations. Customers are the bloodstream of any organization. Organization shall start investing further and externally into their customers primarily, rather than on their profit engine process (Blummberg, 2011). In other words, outward seeking focus is more important than inward seeking focus.

The customer focus principle is addressed and reflected in the ISO 9001 standard requirements by: communication with customers; care for customer property; the determination of customer needs and expectation; appointment of a management or operations representative; and finally a top management commitment. The second quality principle is leadership which implies that leaders should establish the unity of purpose and direction for the organization. This is where motivation should be enhanced by leaders of the organization.

Leaders can be at different functions and levels within the work organizations (Leem & Yoon 2004). They are responsible for creating a work environment with employees motivated toward the achievement of business or operations objectives for the organization. Leaders shall encourage and motivate their subordinates rather than aggravate them (Blummberg, 2011). The concept of leadership is the cultural transition from aggravation to motivation within the work organization. This principle is reflected in the standard by setting up organization objectives, such as planning, internal communication, and creating and effective work environment. Other forms of improvements with ISO 9001 implementation took place when organizations were found to be adopting more than one management systems standards (Sudha, 2013). This is what can be referred to as various system integrations and understanding synergies between system standards. In the research institute a need for quality management system integration with ISO 9001 was found to increase the performance as analyzed by Pfeifer (2013).

Sudha (2013) studied three levels of integration in management systems and focused on the culture of learning and continuous improvements realized by the integrated management systems. Levine and Toffel (2010) indicated that firms compliant with the standards stood higher chances of growth in profits and revenues among other key performance indicators on a year to year basis. Customers on the other hand are the ultimate determinants of the suitability of the products (Briscoe, 2011). Although organizations possess the creativity and ingenuity in the development of products and services, the suitability of these products and services is based on whether the consumers find them capable of providing utility. As a result, it is imperative for firms to establish

the needs of the consumers in the process of developing the standards of quality and the products.

Magd (2013) evaluated the results from a survey on ISO 9001 certified manufacturing companies in Saudi Arabia. It was an empirical survey of 175 certified manufacturing firms in Saudi Arabia. This study is focused on the benefits achieved from ISO 9001 implementation, level of satisfaction with the standard, the anticipated steps after ISO 9001 implementation, factors influencing the choice of registration agencies and the associated problems with registration agencies. Certified firms in Saudi Arabia have performed well in their registration process and have benefited from ISO implementation (Naveh & Marcus, 2005). This could be due to the high level of interest in the area of quality, as most customers request quality or a certificate to prove existence of quality products/services. For effective implementation of the standard in other organizations, the study recommended that organizations should plan carefully, measuring internal as well as external aspects and performing cost-effective analysis of the implementation process. Also they should use gap analysis to assess their actual abilities against ISO requirements (Naveh and Marcus, 2005).

Jang and Lin (2007) empirically examined whether business can benefit from ISO 9001certification and examines how motivation impacts the depth of ISO 9001 implementation and how the depth of ISO 9001 implementation impacts a firm's performance in Taiwan. A survey questionnaire was mailed to the 1,668 companies with ISO 9001 certification, and a total of 441 usable responses were returned. Using a structural equation model, this study empirically examined the relationship between ISO 9001 motivation and ISO 9001 implementation depth and how implementation depth

influenced firm performance. The results demonstrate that a positive relationship exists between the extent to which companies implement ISO 9001 and firm performance. Additionally, internal motivation fully mediates the relationship between external motivation and ISO implementation depth. Furthermore, the implementation of ISO 9001 directly and positively influences operational performance and indirectly affects market performance, in turn positively impacting business performance.

Ul-Hassan (2012) empirically examined the association between total quality management (TQM) practices and performance; that is, quality, business, and organizational performance. The quantitative data was obtained through a survey from 171 quality managers of Pakistan's manufacturing industry. This study supports the hypothesis that TQM practices positively impact the performance. TQM tools and techniques (Incentive and Recognition System, Process, Monitoring and Control and Continuous Improvement) and Behavioral factors (Fact based-management, top management's commitment to quality, employee involvement and customer focus) contribute to the successful implementation of TQM. The study reports that successful adoption and implementation of TQM practices results in improving the performance of organization.

Karahan and Tetik (2012) investigated effects of TQM practices on internal customer satisfaction in Malaysian companies. The results of the study showed that Total Quality Management had a positive impact on the performance of the companies.

Omer el Tigani (2011) assessed the impact of the implementation of the ISO Quality Management System on the performance of participating workers. Qualitative as well as

quantitative research was conducted. Data was collected using a quantitative survey administered to 150 participants from either governmental or private and both sectors in the State of Qatar. Findings indicated the implementation of the ISO 9000 QMS had no impact on the performance of the participating organizations' workers. This research study also revealed some important points related to the organizations' workers and their performances under the umbrella of the ISO 9000 Quality Management System, which lead the researcher to raise some questions to the concerned people in the International Organization for Standardization (ISO).

Memari (2013) investigated the relationship between organizational commitment and employees' job performance in Meli Bank in Kurdistan Iran. The results revealed a positive relationship between organizational commitment and employees' job performance. In the comparative analysis of three dimensions of organizational commitment, normative commitment has a positive and significant correlation with employees' job performance. Furthermore, the study explored the employees job performance with four demographic variables, resulting that male employees were high performers in comparison to their female counterparts.

Muturi (2015) established effect of ISO 9001 implementation on performance of organizations in Kenya. It specifically targeted organizations listed on the Nairobi Securities Exchange, which is the leading securities exchange in East Africa. Secondary data available from the NSE repositories on financial performance was collected from 19 of these organizations. The study covered five sectors namely: Finance; Automobiles; Manufacturing; Energy/Petroleum and Commercial services. The survey made use of web content analysis to collect data from these organizations' websites. Data was

collected on net profit, turnover and net assets over a four-year period (2010- 2013). Results of the survey revealed that ISO 9001 certification influenced return on net assets of the organizations thereby influencing their performance. For other variables measured (net profit and turnover) there were no significant differences between the ISO 9001 certified organizations and the ones not certified on the same. No significant differences were noted across sectors of organizations covered in the survey.

A study carried out by Indiya, Otieno, Obura, Abong'o, and Ondoro (2015) on Effect of Implementing Quality Management System (QMS) on the Performance of Public Universities in Kenya at Maseno University, found out that the presence of QMS significantly determines the students' enrolment. In addition, involvement of employees led to successful implementation of QMS.

Benarbia, Mankouri and Berrouiguet (2015) investigated the effect of ISO 9001 certification of BeniSaf company performance, as perceived by the management. Results indicated that the ISO 9001 certification had a positive impact on BeniSaf Company's performance. The marketing advantages were the principal benefits and the benefits related to the human resources occupied the lowest position in the company.

Kibe and Wanjau (2014) explored quality management systems and their influence performance of food processing firms in Kenya, where, food processing companies still find it challenging to effectively implement quality managements systems that contribute towards realization of increased organization performance. Over 75% of food processing companies in Kenya are still struggling to embrace effective quality management systems as a strategy to gain a competitive edge in the target market through development of superior product quality, market growth and higher customer satisfaction. The study

found that quality management practices under study had a strong positive correlation with an organizations' competitive performance. These quality practices are critical in achieving and maintaining this competitive performance, they include top management support, capacity enhancement, adoption and utilization of information technology and control measures.

Karani and Bichanga (2012) studied the effects of Total Quality Management (TQM) implementation on business performance in service institutions, a case of Kenya Wildlife Service. The study was guided by the following objectives: To determine the TQM principles used, to obtain the effects of TQM implementation on organizational business performance, to determine challenges in the implementation of TQM. The established that found leadership has a positive impact on TQM implementation; employee involvement in the implementation of TQM is a major factor that most firms should put to consideration and that the organization practices TQM to a great extent since customer focus was found to be a driving factor that influences the need to adopt TQM.

Fapohunda (2012) examined correlation of total quality management as a leadership style on organization performance. The current trend of total quality management as used in work universities prompted the interest of this study. The objective was to establish relationship between total quality management and organization performance using a manufacturing company in Nigeria. One hundred and fifty (150) questionnaires were returned in usable condition. With the aid of chi-square statistical method, the four hypotheses formulated were tested. The findings showed a significant relationship between total quality management and organizational performance; between TQM and defect prevention; between the success of TQM and perception of organization members;

between total quality management and effective management of resistance to change performance. This study recommended that management should also provide enabling environment to implement total quality management policy with democratic leadership styles in the organization and should think of how to satisfy customers at the first time always.

Brown and Clignet (2014) observed that institutions of higher learning up to recently placed insignificant emphasis on evaluating customer satisfaction, viewing the same as a reserve of commercial enterprises only. According to Kelysey and Bond (2015) the measurement of customer satisfaction has become a concern of academic institutions and this observation led them to identify seven factors that explained variations in customer satisfaction in universities. These factors include customer's positive experience, commitment of staff, availability of staff, recommendation of alternative processes, alternative sources of information by staff, approachability of management and assistance provided by the centre staff to customers. This study relied on means and standard deviation in analysis, but descriptive statistics is less appropriate for prediction purposes.

In addition, Navarro (2015) points out that modern universities are faced with the challenge of appearance of professionals who seek to update their knowledge and who, for these institutions, represent a student with unique needs. Using factor analysis, the study revealed three major components as comprising, the teaching staff, organization and enrolment. Despite identifying the three, Navarro et al. (2014) failed to recognize them as service quality dimensions. Smith et al. (2014) evaluated service quality in universities and concluded that the application of service quality (SERVQUAL) in the public sector can produce different results from those found in private sector services.

They however, did not examine the strength of relationship between service quality and customer satisfaction. Becket and Brookes (2013) concluded that many universities rely heavily on industrial quality models including TQM, European Framework for Quality Management (EFQM), Balanced Score Card, ISO 9000 and SERVQUAL, which they observed, had proved beneficial in addressing quality assurance in administrative functions rather than in technical service delivery. However, they questioned the ability of current management and leadership in universities to effectively apply the industrial models.

Fronting a performance-based paradigm, Sultan and Wong (2014) revealed eight factors that influence customer satisfaction in Japanese universities as dependability, effectiveness, capability, efficiency, competencies, assurance, unusual situation management, and semester syllabus and using SEM, the authors developed PHEd. However, the study did not undertake a comparative operationalization of this model between public and private universities. Senthilkumar and Arulraj (2015) generated SQM-HEI that was used to demonstrate that quality of education was based on the best faculty, excellent physical resources, having a wide range of disciplines and employability of the graduates. In SQM-HEI, placement was presented as mediating factor for various dimensions of quality education. The study however used convenience and judgmental sampling which limits generalization of the findings

2.2.2 Quality assurance officers' training and customer satisfaction

Training is the imparting of requisite skills, competencies and knowledge through teaching or instruction (Harris, Willis, Simons & Underwood, 2008). The main aim of training is to improve one's ability, capacity and accomplishment at the place of work.

According to Harris et al. (2008), Quality Assurance Officers/ Directors of Quality play a very important role in ensuring that institutions offer quality services to its customers. They ensure that the institutions adhere to the set quality standards. Their training is therefore very important because it equips them with requisite knowledge and skills to carry out their duties effectively. Provision of quality services will enhance customer satisfaction. Training is categorized into two. These are on-the-job and off-the-job training.

Harris et al. (2008) said that on-the-job training is done in a normal working situation, with the use of actual tools, equipment, documents or materials that trainees use when they are fully trained. This kind of training is thought to be effective especially for vocational work. Off-the-job training is carried out away from the normal working environment. This means that the employee when undergoing such training does not productively work. It is advantageous because employees are able to dedicate their time to training without the thought of going to work. In addition, this type of training is thought to be more effective since employees can understand better the ideas and concepts they are taught.

Thompson and Kolsky (2004) emphasize that training brings about job satisfaction among the employees thus enabling them to perform better. They further note that organizations which invest in training of its employees are likely to achieve better results in the long run. It was also observed by Nakauka (2008) that they are able to perform with excellence after training and that their desire to excel goes up after such trainings. Although the literature above point to what are achieved as a result of training and their influence on customer satisfaction, Cheramie, Sturman and Walsh (2007) posit that

management in an organization are usually hesitant while investing in its customer satisfaction for a number of reasons. Despite receiving effective and timely training programs some employees train for the sake of their own marketability or prospects of better paying employment opportunities. Others are willing to move from one job to the other in quest for higher pay hence investment in their training does not benefit the organization.

Cheramie et al. (2007) concur with Beardwell, Holden and Claydon (2004) that after training or development, employees usually expect rewards especially because they have used more effort or have acquired better skills. The reward could be increase in pay, promotion or being appointed to a more demanding and a higher status job. From the literature above, it was evident that there were benefits that accrued as a result of training. However, these may be countered if those being trained had other motives for undergoing the training. Furthermore, if the training was inadequate, ineffective and not timely it may not yield its intended benefits. This perhaps could be the reason complaints abound about dwindling quality of education in the Public Universities in Kenya despite the presence of Quality Assurance Officers. This therefore necessitated this study so as to address the issue of training for QAOs in public universities in Kenya.

Public Universities in Kenya are administered through their individual university Acts of Parliament. These universities regulate themselves when it comes to quality assurance (QA) through policies and mechanisms they have come up with and ratified by their Councils, and dictated by their mandates as stipulated in the Acts. When coming up with their policies, public universities are guided by the CUE guidelines and standards which

include criteria for admission into the programs, the design of curriculum, development of infrastructure, and support system for students (Lenga, 2010).

The Commission for Higher Education (CHE) presently referred to as the Commission for University Education (CUE) was started by an Act of Parliament, Universities Act Cap 210 B, in 1985. CHE was established to regulate education offered by universities in Kenya. The Act was operationalised through the gazetting of the Universities Rules of 1989 (CHE, 2012).

Universities in Kenya, including public universities, are required to establish and maintain internal mechanism for quality assurance to assure standards, quality and relevance in the institution as per the provisions of The Universities Act 2012 (The Universities Act 2012). Sessional Paper 1 of 2005 notes that to enhance quality and equity in university education, the government through the respective University Councils and CHE, will strengthen quality assurance mechanisms in all universities.

Section 52 (1) and (2) of the Universities Regulations, 2014 spell out quality assurance systems for academic programs in the universities in Kenya. It states that upon establishment, each university shall have internal quality assurance of their academic programs as the primary responsibility. Each university is required to institute its own internal quality assurance policy, systems and mechanisms (Universities Regulations, 2014).

According to Standa (2008), quality assurance is an on-going activity through which an educational institution ensures that quality and standards of its academic activities are maintained or improved. Lenga (2010) notes that each university is supposed to establish

an Internal Quality Assurance (IQA) structure, having a Standing IQA Committee, developing an IQA policy and mechanisms/processes for implementing the same, customizing a harmonized student evaluation instrument used to evaluate all courses, and putting in place Faculty/School based Curriculum Design and Review Committees.

The Inter-University Council of East Africa (IUCEA) and the national higher education regulatory agencies in East Africa developed a uniform Quality Assurance (QA) system that would be used by universities in the region. A uniform QA system would ensure that students from East Africa enjoy quality higher education in all universities of the member states. The tool which would be used in the region was developed and a move was then taken towards creating uniformity of university quality assurance systems through training and establishment of directorates and units of QA at university level (CHE, 2012).

Kenya institutionalized QA in the universities through training, carried out by the Commission for Higher Education (CHE) on QA and capacity building through workshops. Commission for Higher Education has also put in place guidelines for formulation of QA policy by institutions of higher education. About 25 new HEIs had appointed Quality Assurance Officers by May 2012. These included constituent colleges of public universities. They had also started the setting up QA directorates and units. The QA officers, Deans and Chairs of various academic programs would continue being trained by CHE so as to lead in program assessment and pear review processes (Lenga, 2010; CHE 2012).

The Commission for Higher Education and Republic of Kenya, sector review and development (2003) identified curriculum, instructional materials and equipment, physical facilities, teachers/ instructors/ lecturers, assessment and examinations, institutional management and institutional environment as the key variables that impact on quality of education

2.2.3 Management support of quality management system and customer satisfaction

Management commitment is a very vital component that determines the success of QMS. Lack of management support is the most common pitfall. Strategies for change are more likely to fail in the absence of a positive commitment (Kanji, 2013). For any organization to succeed what is required is more than just a business strategy that is sound; a quality culture is required to support the strategy. Therefore, top management should prepare for change and make the necessary arrangements to accommodate it (Kanji, 2013). McBride, Lovelock, Dirks, Welch and Shepherd (2015) add that the top management' responsibility in the firm is to provide an environment that is customer-oriented while ensuring the provision of customer driven services. Different scholars have offered different definitions for quality.

American scholar Edward Deming defined quality by making reference to uniformity, ability to be depended on as well as low cost. He says that it is the predictable degree of uniformity and dependability at low cost and suited to the market (Deming, 2012). Joseph Juran, on the other hand, said quality is "fitness for use". This means that quality is when a service or a product satisfies the intended use (Juran, 2012). The British Standard Institution (BSI) says quality is the sum total of features and characteristics of a product or service which influences its ability to satisfy or fulfill the set or implied needs (BSI,

1991). Juran's and BSI's definitions are related in the sense in which both address the issue of customer satisfaction.

According to the researcher, quality is the appropriateness or aptness of the service or product in meeting immediate or future needs of the customers. According to Skizypek (2006), Juran proposed that the quality of the university is the level to which it satisfies the growing needs of surroundings and helps the students in their development. ISO (2005) defines quality management system as a system of management which provides direction and control to an institution concerning quality. Quality Management System (QMS) is a management technique that is used within an organization to let employees know what is expected for production of desired quality of products and services and to influence the action of employees in completing tasks according to the set standards (Reichheld, 2012).

Okwiri (2012) notes that Quality Management is a management approach anchored on principles of Leadership, Customer focus, Involvement of people, Systems approach, Process approach, Continuous improvement, Fact-based decision making and Mutually beneficial supplier relationship. These principles are applied to an organization's infrastructure value chain through actions described as management practices. These practices, within an organization, are said to be the activities that take place in the organization's infrastructure leading to the attainment of the organization's goals (Okwiri, 2014).

Models to ensure that the organization's practices are consistent with these principles have been developed. Quality Management System is one such model. ISO 9001 family

of Quality Management System standards are aimed at enabling organizations to set up effective management systems so as to meet the needs of interested parties and provide an assurance of sustained success. It gives a set of requirements needed to run a Quality Management System and stands for international best practices for the management of quality.

ISO 9001 standards, also referred to as Quality Management Systems, are published by International Organization for Standardization (ISO) and are obtainable through national bodies for standards (Tsim, Yeung and Leung, 2002). They are meant for use within the organization for customer-supplier contract purposes or outsde the organization by third party certification. Third party certification precedes an evaluation of the quality system against given context-neutral audit criteria. QMS therefore helps in directing and controlling quality in an organization (ISO, 2005).

Organizations adopt QMS for various reasons. According to Meyer and Rowan (2009), external factors such as consideration that certification is important for enhancing their market reputation (Lowrey, 2005), seeking certification in order to match their competitors who seem to be doing well (Chua & Petty, 2010) and in response to the demands posed by customers, suppliers, trade unions or government to whom its businesses is largely dependent could influence the organizations to adopt QMS.

Criticisms have been raised on the applicability of QMS to HEIs. This is because the ISO approach takes a general look at the process of producing higher education (Csizmadia, 2006, as cited by Pratasavitskaya & Stensaker, 2010). This implies a high level of processes' standardization which does not go along well with HEIs' nature (Rosa, 2003).

Tsim (2002) add that certification process is wasteful and is not useful for all organizations. However, Rosa (2003) avers that the standard may be applied by HEI if it so wishes and believes that its implementation will allow the initiation of a continuous improvement process.

Some HEIs that have implemented the quality management systems (Sohail and Rajamdurai, 2006) have obtained various benefits, which include benefits such as a cost effective method for accountability, the development of a focus that is improvement-driven through re-focusing core processes to improve both productivity and service levels, taking into account a broader number of stakeholder views, enhancing the use of data for quality assurance purposes, improvement in working conditions among various departments and improvement in student enrolment (Brookes & Becket, 2013). The application of the ISO 9001 in institutions of higher education, however, has been confined to the services of the institutions and not teaching and learning which their core functions are.

Tari, Van and Loughton (2007) investigated the relationships between quality management practices and their direct and indirect effects on quality outcomes in 106 ISO 9001 certified Spanish firms. They concluded that HR management and CI had direct effect on quality outcomes, and TQM improved quality outcomes. Martinez-Costa and Slocock (2008) analysed the impacts of TQM and ISO 9001 implementations on return on assets and productivity in 713 firms in Spain. A positive effect of TQM was noticed on both performance measures. The ISO 9000 and firms' certification indicated positive results on productivity, but had no effect on return on assets.

Prajogo and Cooper (2012) investigated the effect of leadership, strategic planning, customer focus, information and analysis, people management and quality management practices on product quality and product innovation in 130 South Korean research and design divisions. Significant impacts of these practices on both product quality and product innovation were concluded with stronger effects on product innovation than product quality.

According to Sampaio (2010) internal motivations were present in those companies that were really committed to the continuous improvement of their internal processes, and therefore aimed to achieve effective organizational improvements. External motivations, on the other hand, were related mostly to promotional and marketing issues, customers and market pressures and market share enlargement goals. Even though all organizations presented both kinds of motivations to some extent, only one was usually the most predominant and determined the organizations' decision to become ISO 9001 certified. Miguel and Dias (2009) observed, that from marketing advantages of certification in ISO 9001 standards, had received numerous reviews by researchers. Proponents of the marketing advantage of the acquisition of the standards were keen on establishing the fact that the assurances to the customers resulted to prominence of the firm.

 The studies conducted by Santos and Millan (2012), all point towards the imperativeness of quality in market prominence. Firms in the manufacturing industry, just like any other industry, thrived on the prominence of their marketing mix, including product, pricing, place and promotion which were also drawn from accreditation in ISO 9001 standards. Quality management is critical for all organizations and involves identifying and satisfying the needs of customers who demand high quality products and services, which

are the organization's duty to offer. The International Organization for Standardization (ISO 9001:2008) is one of the quality systems commonly used by most organizations to provide businesses with the capability for their processes and requirements, or to give guidance on good management practice.

ISO 9001:2008 was adopted as a tool in a grand strategy for achieving competitive advantage and providing a steppingstone on the way to Total Quality Management (TQM) practices. However, despite the benefits there were many barriers faced by organizations. ISO 9001 applies to all types of organizations, irrespective of size or what they do. It can help both product and service-oriented organizations achieve standards of quality that are recognized and respected around the world. It might therefore be concluded that ISO 9001 complements rather than substitutes TQM.

Management in organizations together with the organizational staff are charged with provision of the leadership for the quality management systems. This responsibility includes availing of requisite resources to all the staff to ensure enhanced delivery of service for the realization of the organization's vision and mission; establishment and review of the quality policy and quality objectives to ensure conformity to the quality standards (Cane & Sheila, 2012).

Olayo (2005) in his study of selected universities in Kenya found that employees were demotivated by inadequate availability of resources. This also failed to enhance work performance. It was noted that possession of skills without adequate resources does not enhance efficiency. In addition, he found that inadequate training opportunities for capacity building de-motivated the employees. Ndegwa (2007) further noted that public

universities failed to give priority to staff training yet building capacity is very important in improving efficiency.

Management in the universities provides leadership. Cole and Phil (2011) said that leadership is the process of influencing others to do what needs to be done in the manner agreed and the process of enabling individual or individuals to achieve set objectives. Provision of a vision of an organization through setting of challenging goals and targets is the primary task of the leader. Ndegwa (2007) noted that learning outcomes for any academic institution are shaped more by the determination of the university authorities than the values of students, lecturers and availability of resources.

Whereas management by default should take a lead role in quality management, complaints were still being raised by the customers of the public universities in Kenya. A research by Owino, Ogachi and Olel (2011) on the Role of Managers in Quality Assurance in Kenya's University Education pointed to what could possibly be a hindrance to the management in performance of their duties. They noted that the appointment of senior managers of universities in Kenya had not resulted in effective delivery of service because the appointments were based on tribal background and patronage at the expense of academic achievement and experience.

The management's loyalty to ethnic pressure and patronage, both political and religious, of the respective universities had been cited as the major hindrance to observing the requirements of quality assurance by the university management. They concluded that ISO 9001 certification failed to significantly improve efficiency of management to deliver quality education since it was deemed to be an end by the management team

hence lacking stakeholders' commitment and engagement in enforcement. This study was therefore necessitated by the complaints by the customers of universities in Kenya on the quality of educational services being offered. From literature review, it is understood that perceived or actual improvement from ISO 9001 implementation is not only a function about adopting certain quality controls and methods but a deeper understanding of the ISO 9001 standard was required. However, a leadership and a top management commitment can be both, the affecting parameters in the QMS performance and also play bigger roles in the improvement prediction and effective implementation of ISO 9001 QMS.

Guimaraes (2013) explained in general how organizational commitment is highly related to final results of QMS performance. His findings also indicated that there were direct relationships between job satisfaction and organizational commitment. His findings were not so specific about top management commitment but rather to the whole organization's employees. Nevertheless, his findings are beneficial since top management is part of the whole work organization. Laszlo (1998) has shown in his Canadian case study that managerial commitment toward ISO 9001 implementation would also increase productivity, overcome problems and conflicts. Going beyond meeting standard requirement of ISO 9001, key business indicators such as on time deliveries, manufacturing, cost, variance, overall quality costs showed numerical improvements within two operating quarters.

On the other hand, Kumar and Balakrishnan (2011) have shown that efficiency and profitability would improve if top management commit towards educating their workforce toward implementing a process mapping technique. This will bring the issue

of the awareness factor among organization staff. Therefore, the employees' awareness level will most probably increase if top management has shown a documented commitment policy and a practical translation of that policy in the same organization.

Al-Rawahi and Bashir (2011) have shown that top management commitment was a leading factor to a successful ISO 9001 implementation in the work organizations. London (2005) also indicated that the extent of managerial commitment was a fundamental factor behind the success of quality policy implementation. Other results of research have shown specifically that the manager's role in commitment and involvement plays a dominant factor in bringing success to quality implementation (Rad & Yarmohammadian, 2006). Other researchers (Lee and Lam, 1995) have gone further and identified that the main barrier in implementing a quality program is attributed to the managerial commitment.

Similar findings by Magd (2013) have also shown that management commitment was behind the success of ISO implementation in the business organizations. Yong-zhong et al. (2009) investigated the relationship between managerial commitment, customer orientation, job satisfaction, service efforts and service quality of a service employee. Their research method was based on self-regulation theory and established a conceptual model for determining the relationship between managerial commitment to service quality (MCSQ) and emotional response to serve quality. The results of the analysis indicated that MCSQ was highly influenced by the orientation of the service employee towards the customer, which therefore, affects the service quality in service delivery processes.

2.2.4 Quality audit and customer satisfaction

Hassanin (2018) says quality audit is a systematic and independent evaluation to establish the compliance of quality activities and related results with planned arrangements and whether the said arrangements are being implemented effectively and that they are appropriate for the achievement of objectives. The major aim of an audit is the collection of objective evidence that can be used to make an informed decision about the state of the systems or product being audited. The following types and sub-types of audit are identified:

i) Internal audit (also referred as first party or self) – This is audit done by individuals affiliated to the company such as employees, consultants and contractors.

ii) External audit

a) Supplier audit – this happens when customer employee(s) audit your company or your company employee(s) audit a company supplying your company with a product or service.

b) Independent organization – this is done when a customer wants an audit of your company. They include: Compliance – check conformity with the standard; System (The Theory) – is the audit of document control; Process (The Practice) – is the audit of any process; Product (The Result) – is the audit of finished products to check if they fulfill technical specifications.

According to Keller and Pyzdek (2013) quality audit is aimed at assessing or examining a product, the process used to produce a particular product or line of products or the system supporting the product to be produced. It is meant to establish if what is being audited operates in conformity with the set standards.

Kristoffersen and Woodhouse (2005) noted that the reasons for the introduction of external quality audits were: An increase in the students' population resulting in an alteration in the nature of higher education, and the perception that institutional quality assurance procedures were ascertained to be in tandem the change; An increase in the amount of money being expended in higher education by a growing students' population, bringing about the need to ensure that funds in university were being used well ; Provision of funds for higher education had gone making the governments want to ascertain the expenditure of their funds; An increase in government's attention on the national needs for graduates, leading to government's desire to hold higher education institutions to account for the graduates they produced; An increase in the demand for higher education, leading to more private providers hence the need for strict external checks and Globalisation, which had led to students moving across different countries. This resulted in the need for a national quality assurance process that was visible to other countries.

According to Dittenhofer (2001), when evaluating the effectiveness of the internal auditing operation, a positive response would be given when the internal auditor: audits the achievement of the auditees' objectives and finds no problems, and no problems surfaces following the audit; or audits and finds problems; and recommends solutions to the problems; and the solutions resolve the problems. From this statement it is clear that outcomes address a wide range of aspects, that is, all the elements on which audit activities have an impact. These include both efficiency and effectiveness of the audited processes, and corporate performances. At a process

level, for example, the impact of activities has been related to cost savings generated by the implementation of suggested recommendations (Cashell & Aldhizer, 2002).

At a corporate level, outcome can address the contribution to corporate performance, such as profit, growth, or share price; or its role in the avoidance of corporate failures by ensuring sound corporate governance. This last issue has been given particular attention in the most recent literature. Sarens (2009), based on Gramling, Maletta, Schneider and Church (2004) suggested that IA can be considered effective when the quality of IA function has a positive impact on the quality of corporate governance. He also goes on linking IA quality to the capacity to monitor and improve risk management and internal control processes.

To improve risk management and internal control processes, the internal auditors have to convince the auditees about the quality of their work, persuading managers to implement their recommendations. The internal auditors, in most of cases, do not act on the internal control-risk management system directly. They can identify a criticism or an area of potential improvement and provide managers, responsible of business processes, with an evaluation of the internal control–risk management system. The managers and officers have to decide whether and how to enact internal auditors' recommendations.

As highlighted by Mihret and Yismaw (2007), audit findings and recommendations would not serve much purpose unless management is committed to implement them. Implementation of audit recommendations is therefore highly relevant to audit effectiveness (Van Gansberghe, 2005; Sawyer, 1995). The effect that internal auditors

have on the achievement of corporate objectives (their effectiveness) is influenced by the extent to which managers consider internal auditors' work valuable and decide to exploit it. In such view, the effectiveness of audit depends on the quality perceived by the auditees.

Magd (2013) suggests that auditing is an action, intended to collect information to evaluate against pre-set criteria. Furthermore, it is an applicatory and methodological activity. Some of the writers tend to name it an (formal) examination; others say it is a process of collecting evidence to achieve a certain objective; therefore, audit is also a means to evaluate evidence objectively against audit criteria. Even these definitions seem to be inconsistent. They lack a definition of the terms objective and criteria, and what consequently determines the audit action and the way the audit has to be planned and conducted.

As noted by Mautz and Sharaf (2010) quality management system auditing is largely founded on financial auditing. It appears that the standard lacks a full explanation of these principles and leaves it to the reader to make sense of and to interpret the terms, and how to apply them in practice. Additionally, the principles do not provide information on methods and approaches to be used to approach evidence, as well as what an audit, and the evaluation process, entails. On the other hand, the principles indicate that the norms applied for evaluation determine the course of the audit, the methods/approaches to be used, and that the auditor's competence is required.

Comparing the groups of principles offered by Gray and Manson (2010) in detail, only the credibility group is directly addressed in this standard. It is the same with principles

of competence and independence are the only principles fully recognized to be the foundation for action.

According to Magd (2013), auditing of quality management systems differs from its financial sibling insofar as the evaluation criteria, simply framed by generic requirements of conformance, and thus different from financial auditing, where compliance or non-compliance is to be attested. In the context of quality management system auditing, the ISO 9000:2005 defines conformity as the fulfillment of requirements. Requirements are defined as a need or expectation which is stated, custom, or common practice for the respective auditee or even obligatory.

Karapetrovic and Willborn (2010) note that auditors need to collect and verify audit evidence independently and objectively and to evaluate against audit criteria. They add that an audit will be effective and efficient when the auditors are not directly responsible to the function or organization to be audited, which applies to the principle of independency. Rajendran and Devadasan (2005) note that quality audit was fairly new and hitherto unknown in universities. Although this has changed to date, their comment that the hidden agenda (revelation of whether Deming's PDCA circle is applied effectively) of quality auditing is not realized in the majority of universities. It results, according to Rajendran and Devadasan (2005), in not nourishing the objectives set by the standards for auditing. Thus organizations view quality auditing only as a checkpoint which has to be crossed to obtain quality system certification.

By contrast, Carnero and Delgado (2012) note that when auditing, the objective should be the detection and diagnosis of problems, the provision of solutions to found non-conformities, and the adaption of a maintenance function to the specification of the

chosen standard. It could be argued that this can be applied generically, although the provision of solutions for betterment is not the task of the third-party auditor due to the principle of independency, which might be affected by recommendations for improvement. This is true at least in the course of future audits on the same site and conducted by the same auditor. However, the effectiveness of the processing of audits influences the outcome, and thus the credibility, or trustworthiness of an audit statement.

Dittenhofer (2013) discusses the function of internal financial auditing and notes that effectiveness is the achievement of goals and objectives using the factor measures provided for determining such achievement and effective audit procedures should result in determination by the (internal) auditors of the character and quality of the effectiveness of the auditee's control operations. This refers to the quality of conduct of the individual audit process.

Shah (2011) noted that the policy of the government on external quality audit in Australia was begun in 2000 through the establishment of the Australian Universities Quality Agency (AUQA). He noted that among the leading factors which had led to policy implementation by the government on external quality audits in Australia included: the growth and expansion of higher education; accountability by the university of the public funding of institutions; the growth of profit making higher education; an increase in student differences, and the access and equity agenda; an increase in the use of information communication technology and other modes of learning; an increase in cost of education; an increase in movements of consumer and demand for quality education; the reputation of some institutions offering higher education courses; and university accountability to meet the needs of stakeholders.

Commission for University Education (CUE) in Kenya is tasked with the responsibility of assuring the public and the stakeholders that education offered was of good quality. Universities Regulations 2014 set out how Institutional Quality Audits were supposed to be undertaken as a precursor to Quality Audits to be done by CUE. This audit was carried out to confirm or deny the pronouncements an institution had made in self-assessment report (Universities Regulations, 2014).

In exercising its mandate, the CUE carried out a Quality Audit in all Universities of Kenya in January and February, 2017. This audit was done to establish the extent of compliance by the universities with the Universities Act No. 42 of 2012 and the Amendments thereto, the Universities Regulations, 2014; and the Universities Standards and Guidelines, 2014. Among issues that were identified by the report prepared by CUE after the exercise include: Missing or lost marks, delayed rates of completion, and failure to account for students at all levels; Low quality of school-based programs offered by many universities since the programs did not allow sufficient contact time between the learners and their lecturers, did not allow learners sufficient exposure to quality degree research, library time and interaction between the learners themselves; Some universities offered unapproved programs; Some universities did not adhere to the ratios of full time to part-time staff, as prescribed in the Standards and Guidelines; The lecturer to student ration was too high hence affecting quality of education in most universities; Some universities were found not to have instituted internal quality assurance policies, systems and mechanisms, in line with the Universities Regulations (CUE, 2017).

Though it was a requirement that universities in Kenya adhere to Universities Regulations, the 2017 Quality Audit report revealed glaring discrepancies. The

Commission had instructed all universities to establish and strengthen their internal quality assurance structures, systems and mechanisms by 30th June 2017. Despite the time set by the commission having elapsed, issues of quality were still rife in the universities in Kenya. Students across the universities in Kenya had voiced their grievances. They raised pertinent issues, among them was the quality of education they received which pointed to their dissatisfaction on the services they receive (The Standard, January 11, 2018).

2.2.5 Quality management procedures and customer satisfaction

The Universities Act (2012) spells out the need by all the universities in Kenya to put in place internal quality assurance mechanism to ensure adherence to standards, quality and relevance in the institution in line with the provisions of the Act. In addition, the Universities Standards and Guidelines (2014), also known as University Standards for Accreditation and Operations, provides a road map of what a university is expected to do so as to satisfy the needs of its customers. Among the standards set are: provision of services to students which are commensurate with the student population, promotion of the highest standards of instruction and institutionalization of mechanisms for quality assurance (CUE, 2014).

An ISO 9001 certification increases organizations' ability to satisfy customer needs and customers can rely on that the products and services provided are of consistently good quality. ISO 9001 can also work as a tool to streamline the organization's processes and make them more efficient. Since the ISO 9001 is reviewed every five years, it helps organizations to keep current in an ever-changing world (ISO, 2016). ISO 9001 is a management system standard for the quality processes within a company or an

organization. This management system is considered as the most common used standard. There are approximately 1.1 million certificates issued in 188 countries. Every day a new company is certificated, and 5000 companies in Sweden have been ISO 9001 certificated (ISO, 2016).

There is a whole family of ISO 9001 standards, with different aspects of quality management. They all provide guidelines and tools that will facilitate companies' and organizations' work towards ensuring that their products and services meet the requirements of their customers. The standards also help the companies in their work towards continuous quality improvements (ISO, 2016). ISO 9001 is a management system standard for the quality processes within a company or an organization. This management system is considered as the most common used standard.

Hernandez (2010) concluded that organizations should implement quality management system with an effective internal auditing process to meet customer requirements and achieve customer satisfaction. These findings also agree with the findings of Russell (2002). Russell (2002) suggested that internal auditing process be controlled as per ISO 9001:2008 to achieve improvements. This is exactly what the standard is talking about. The standard in clause 8.2.2 "Internal audit" is requesting ISO 9001 users (certified organizations) to effectively implement and maintain an internal audit process to ensure implicitly the effectiveness and efficiency of the quality management system performance (ISO 9001, 2008).

Sitko-Lutek (2010) examined the customer complaint handling process with respect to the information quality, thereby suggesting possible areas of improvements in the process. Their research method involved in reviewing documents, complaint handling

procedures and interviews through a Social Network Analysis (SNA) model. The results suggested that process engineering leadership played a vital and responsive role in disseminating quality assurance information to other staff, and it also suggested that identification in potential areas of process improvements, will thereby enhance, and improve customer satisfaction. Another was of achieving customer satisfaction, in a work organization, to enhance the internal quality audit process for the existing quality management systems. From this brief history of how customer satisfaction is achieved by firms or any business work organizations, other organizations consider customer loyalty as a precious target to accomplish.

Yang (2010) came up with a model for a service system while addressing customer loyalty, brand image, customer satisfaction and service quality. They studied the relationship between customer loyalty, brand image, customer satisfaction and service quality. The results were applied towards identifying factors influencing customer loyalty in the service sector.

Accredited universities are expected to comply with the standards prescribed by the Commission for University Education and those which are contained in their charter (University Regulations, 2014). This has resulted in the universities adopting and implementing quality management systems in an attempt to meet and even exceed their customers' expectations. To this end therefore, most public universities in Kenya have adopted ISO 9001Quality Management System, which has customer focus as one of its principles.

With the adoption of ISO 9001Quality Management System, most universities have developed documents such as service charters and quality manuals outlining how they are

going to operationalize the principles of the standard. Service charters showing the services rendered, time taken and the cost implication if any, are found in strategic places in the universities. Quality manuals state the quality policy as well as the procedures of carrying out the activities in the universities so as to meet the standard set.

According to Oxford Dictionary, a procedure is an established or official way of doing something. The QMS procedures state how activities are to be undertaken in organizations that have implemented the standard. They are meant to ensure that the activities performed in the organizations follow the stated channel, enhance consistency and reduce complaints and conflicts.

Quality Management Procedures include: document control whose purpose is to ensure effective control of QMS documents such as quality policy, quality manual, mandatory procedures, general administration, curriculum procedures, finance procedures, human resource procedures, procurement procedures, auditing services, student welfare procedures, library services, ICT and admissions; control of records which is meant to ensure effectiveness and efficiency in the control of records; internal auditing with its purpose being to ensure that the QMS internal audits are carried out in a timely and effective manner; control of nonconforming products which is meant to ensure effective identification and control of nonconforming products and operations; corrective action with the purpose to ensure effective elimination of causes of nonconformities and prevent recurrence; preventive action whose purpose is to ensure effective elimination of potential causes of nonconformities and prevent recurrence (Kirinyaga University, 2015; University of Kabianga, 2013; Maseno University, 2014).

To operationalize the procedures mentioned, universities have developed procedures manuals. For example, University of Kabianga has the following manuals: mandatory procedures manual, curriculum procedures manual, administration procedures manual, library procedures manual, admission procedures manual, public relations manual, procurement procedures manual, students' welfare procedures manual, human resources manual, contracts and litigation procedures manual, finance procedures manual, ICT procedures manual, planning research and development manual, provision of health care services procedures manual and risk based procedures manual (University of Kabianga, 2013).

Among the QMS procedures relevant to this study are:

i) Public relations procedures such as: customer care which is meant to ensure effectiveness, timeliness and consistency in customer care; handling of complaints and compliments which is meant to ensure effectiveness, efficiency, timeliness and consistency in handling complaints and compliments in order to nurture, project and sustain national and international corporate image; communication whose purpose is to ensure effectiveness, timeliness, consistency and accuracy of information from within and outside the university; marketing with its purpose being to ensure effectiveness, efficiency, consistency and accuracy in marketing; coordination of meetings meant to ensure effectiveness, consistency and orderliness in the coordination of meetings

ii) Students' welfare procedures which include provision of catering services, allocation of rooms, cleaning of hostels, guidance & counseling, organization & coordination of games and sports, orientation of new students, students' governance, clubs & societies,

management of work study program, allocation of kitchenettes and students' discipline (University of Kabianga, 2013).

Proper and timely implementation of the procedures mentioned would effectively address the concerns that the customers might have and ultimately bring about customer satisfaction in the universities in Kenya. When customers spend too much time on something they feel would have taken less time, they are dissatisfied with the service offered (Blummberg, 2011).

A study by Okibo and Kimani (2013) on the effectiveness of ISO 9001:2008 Certification on Service Delivery of Public Universities in Kenya found that proper organization of processes as a result of ISO certification influences public universities' service delivery. This would then bring about customer satisfaction. However, there seems to be lapses in the implementation of the procedures thus bringing about dissatisfaction of the customers. CUE (2017) audit report exposes failure to adhere to the processes and procedures which result in students' losing marks, delayed rates of completion and failure to account for students at all levels. In addition, students have voiced their concerns about perceived failure by universities to adhere to the procedures in the running of the institutions through protests. Students of Daystar University, for example, protested against failure by the university to make public the contents of audit report, misappropriation of funds and poor services and failure by the management to address their concerns (Aradi & Ombati, 2018). This research therefore addressed the gap that existed between the QMS procedures and customer satisfaction.

2.3 Theoretical Framework

This study was anchored on the following theories:

2.3.1 European foundation for quality management excellence model

This research was anchored on European Foundation for Quality Management (EFQM) Excellence Model advanced by Hendricks (1996). EFQM advocates for the utilization of a standard management model that can bring the organization to the level of excellence (Campatelli, Citti & Meneghin, 2011).

Calvo-Mora, Leal, and Roldan, (2010) note that EFQM model analyses how satisfaction can bring about excellence in the results of an organization, recognizing that through the adoption of different approaches, excellence may be sustainably achieved. According to the model, satisfaction of both customers and employees, and the impact on society result from leadership that facilitates and stimulates institutional strategies and the management of personnel, resources and processes.

The EFQM Model is anchored on nine quality management criteria. These are five enablers (criteria that cover what a company does or is set to do) and four results (criteria that cover what a company realizes or achieves).These nine criteria are explained by the EFQM Model as: Focus on Results – company's stakeholders are supposed to be pleased with results achieved; Focus on Customers – customer satisfaction should be realized through the company's quality management; Constancy of Purpose and Consistent, Visionary Leadership, Process and Facts form the Management Focus – the management should break down everything into systems, processes and facts to ease monitoring and training; Involvment of Employees – employees should get opportunities for professional development and should be encouraged to continue being involved in the company's

activities; Continuous Learning – everybody should be given an opportunity or opportunities for learning while in employment; Developing Partnerships –developing associations or partnerships that add value to the company's improvement process should be encouraged; Social Responsibility of the Corporation – the company should act responsibly towards the environment and community (James & Willams, 2008; Goetsch & Davis, 2013).

The model criteria cover the quality standards required of an organization, which will enhance customer satisfaction through the realization of quality results. This model was therefore appropriate to the study. Customers in any institution are supposed to be pleased or satisfied by the results. When quality services are rendered through consistency of processes and procedures, customers will be satisfied.

The practice by implementation of ISO 9001 and EFQM is different; some organizations tend to implement ISO 9001 procedures first and the EFQM Excellence Model is included later. The EFQM specialists as well as the practice confirm that the most appropriate is to apply ISO 9001 and EFQM together, but it is a never-ending process. The resources limitation is sometimes the reason why organizations are not able to implement both at the same time. It is worth noting that ISO 9001 has limitations. The EFQM Excellence Model is long-term oriented (prepares organization for long-term sustainable excellence)(Campatelli, Citti & Meneghin, 2011).

Social Responsibility Guideline, ISO 26000, was issued by a well-known authority which is ISO. ISO 26000 is a Community Social Responsibility (CSR) guideline that enables all organizations to define and implement CSR in their corporate strategy. ISO 26000

espouses seven core subjects which are human rights, labour practices, the environment, fair operating practices, consumer issues, community involvement and development (Campatelli, Citti & Meneghin, 2011).

A stakeholder approach to business is about creating as much value as possible for stakeholders, without resorting to trade-offs (Calvo-Mora, Leal, & Roldan, 2010). Relationships with stakeholders are also very important in the educational institutions (all levels), health system, government and public sector, local communities, non-governmental institutions, and public–private partnerships. Organizations are trying to meet their own requirements as well as the requirements and expectations of their stakeholders.

The relationship between competitiveness and Social Responsibility (SR) is not a simple one. Social Responsibility can also encourage innovation, investment, cooperation, and competition. It means that organizations pay attention to ecological, social and financial aspects of their responsibility in interaction with all stakeholders (for example, they care about their sustainable production, emissions and waste, employee safety and satisfaction, and stakeholder involvement). It is clear that responsible shareholders are important stakeholders who must support sustainable leadership orientation. The EFQM Excellence Model is a practical tool that indicates the position of business and other organizations on excellence path and helps them to determine their shortcomings and encourages appropriate solutions (Calvo-Mora, Leal, and Roldan, 2010). The first EFQM Excellence Model was published in 1992; it is flexible and can be implemented in large companies, SMEs, and other organizations (private and public, government, local communities, and other organizations).

From a theoretical and practical point of view, the business excellence models (particularly EFQM) have to be applicable and implementable in different types of organizations. Many countries try to encourage implementation of the organizational excellence models, like Deming (Japan), Malcolm Baldrige (USA), and EFQM (Europe).

ISO standards have a long tradition; one of the most important standards is ISO 9001 (requires certification), which is comprehensive and exactly describes quality requirements, protocol, and how to meet all these requirements. On the other hand, EFQM Excellence Model is open, its implementation needs creativity, but it is possible just in freedom. Furthermore, in such holistic approach, creativity and complexity go together in the EFQM Excellence Model. The EFQM model is used as a management system that encourages the discipline of organizational self-assessment. The Model is a practical tool to help organizations to use tools such as ISO Certification to measure where they are on the path to Excellence; helping them understand the gaps; and stimulating solutions. It is applicable to organization irrespective of size and structure, and sector. Self-assessment has wide applicability to organizations large and small, in the public as well as the private sectors. The outputs from self-assessment can be used as part of the business planning process and the model itself can be used as a basis for operational and project review.

The Excellence Model provides a holistic framework that systematically addresses a thorough range of organizational quality issues and also gives attention to impacts through the 'results' criteria. It provides a clear diagnosis of an organization's activities and is useful for planning as it makes links between what an organization does and the

results it achieves, highlighting how they are achieved. It seeks to instill a culture of continuous improvement. It is flexible enough to be used in bite-sized chunks or for specific issues for example, an analysis of an organization's environmental policy in less than a single day as well as providing a framework for a comprehensive review of all the organization's activities over several months.

There is no requirement for external validation and the Excellence Model can be used as an internally driven self-assessment tool allowing an organization to be as honest and as open as possible in gauging its performance. 'Scoring' can provide an organization with an internal benchmark for its next self-assessment, in order to capture trends. It can also be used among organizations for some external benchmarking and comparison. The Excellence Model stresses the importance of consensus in assessing an organization's strengths and areas to improve.

The basic concepts of this model are extensive and involve results orientation. Customers are one of the main stakeholders; their satisfaction and loyalty are important for each organization. Leadership plays a crucial role; it must be the model as well as the motivator and strategic processes, which are focused on quality, stakeholder partnerships, and sustainability. Employees are one of the main stakeholders, and their involvement reflects as their contribution to innovativeness, improvement, and competitiveness. Stakeholder partnership is a long-term process and is part of the holistic and systemic social responsibility in organizations.

The EFQM Model is a non-prescriptive framework that recognizes there are many approaches to achieving sustainable excellence. Within this approach there are some

fundamental concepts which underpin the EFQM model. However, these concepts are not fixed. It is accepted that they will change overtime as excellent organizations develop and improve. The framework of the EFQM Excellence Model is based on nine criteria. Five of these are Enablers' and four are 'Results'. The 'Enabler' criteria cover what an organization does. The 'Results' criteria cover what an organization achieves. Results' are caused by 'Enablers' and feedback from 'Results' help to improve 'Enablers'. The Model recognises there are many approaches to achieving sustainable excellence in all aspects of performance (http://base-uk.org/knowledge/european-foundation-quality-management-efqm). This performance is measured according to the achievements made within each of the four basic competitive priorities for the purchasing function: cost, quality, dependability and flexibility. In addition to that, according to Kim et al. (2010), there is a value added in discussing the Business Excellence Enablers in the context of other important themes in operations management research such as University Management, considered as one of the strong themes in a cross enterprise and cross functional context.

Yusof and Aspinwall (2000) differentiate between three types of implementation frameworks: (1) those based on experts, leaders or gurus of quality; (2) the excellence models or quality awards; and (3) those extracted after theoretical and/or empirical research or measurement studies. To this end, various studies (Bou-Llusar et al., 2009; Kim, Kumar, and Murphy 2010) clearly show how excellence models offer a suitable reference framework for the implementation of TQM in an organization. In Europe, the EFQM Excellence Model is the best-known and most widespread reference when introducing and improving a TQM system (Kim, Kumar & Murphy 2010).

Llusar et al. (2009) point out how the use of the EFQM Excellence Model guarantees that the management practices employed form a coherent system. In the TQM research field, the studies that analyse excellence models present disparate objectives, such as the identification of the barriers, weaknesses and limitation found in the implementation of the excellence models (Kim, Kumar & Murphy 2010); the analysis of the criteria of the models that are considered the most crucial to achieve success (Tutuncu & Kucukusta 2007); the internal structure of relationships (Calvo-Mora, Leal & Roldán 2005); the impact on the performance or results of the organizations (Lee, Rho & Lee 2003); and the usefulness of identifying the most representative resources and abilities of the company, which enables the identification of the key resources for the generation of competitive advantages (Castresana & Fernández-Ortiz 2005). In this context, few studies have analysed the mediation relationships which can occur between the social and technical factors of TQM present in the EFQM Excellence Model and the organizational results.

2.3.2 Expectancy disconfirmation theory

Smith and Houston (1982) said that the expectancy disconfirmation theory is a popular sciences theory. The theory postulates that satisfaction with services is related to confirmation or disconfirmation of expectations. The theory maintains that satisfaction is related to size and direction of disconfirmation experience where disconfirmation is related to the person's initial expectations (Churchill & Suprenant, 1982).

In this theory customers form expectations of product or service performance characteristics prior to purchase. When the product or service is bought and used the expectations are compared with actual performance using a better than worse heuristic. Positive disconfirmation results if the product or service is better than the expected while

worse than expected results in negative disconfirmation. Simple confirmation results when a product or service performs as expected. Satisfaction is expected to increase as positive disconfirmation increases (Churchill et al., 1982).

ISO certification is expected to result in better quality of product or service thus the customers have some expectations when an organization is certified which with time will result to positive or negative disconfirmation of the expectations. This made this theory very important in guiding the study. In general, these theories suggest that consumer satisfaction is a relative concept, which is always judged in relation to a standard. Some theorize that satisfaction results from the comparison between consumer inputs and outputs (the Equity Theory), whereas others suggest that satisfaction is the result of the discrepancy between expectations and perceived performance; the latter led to the conceptualization of the EDM (Oliver, 2012), which has become the most widely applied method of consumer satisfaction and dissatisfaction assessment (Weber, 2012). The conceptualization of tourist satisfaction as a comparison process between tourists' expectations and tourists' experiences has been employed by several tourism and hospitality investigators (Weber, 2012).

However, given the attention, surprisingly limited research has been carried out to examine whether the EDM possesses any theoretical and/or methodological limitations, and whether it is possible to apply the model in every situation. The EDM implies that consumers purchase goods and services with prepared expectations about anticipated performance. The expectation level then becomes a standard against which the product is judged. That is, once the product or service has been used, outcomes are compared

against expectations. If the outcome matches the expectation, confirmation occurs. Disconfirmation occurs where there is a difference between expectations and outcomes.

A customer is either satisfied or dissatisfied as a result of a positive or negative difference between expectations and perceptions. Thus, when service performance is better than initially expected, there is a positive disconfirmation between expectations and performance that results in satisfaction, and when service performance is as expected, there is a confirmation between expectations and perceptions that results in satisfaction. In contrast, when service performance is not as good as expected, there is a negative disconfirmation between expectations and perceptions, which causes dissatisfaction.

The notion of discrepancy may be traced back to Howard and Sheth's (2010) definition of satisfaction, which states that it is a function of the degree of congruency between aspirations and perceived reality of experiences.

There are, basically, two methods of investigating confirmation/disconfirmation of expectations. The first is the inferred approach (or the subtractive approach), and the second is the direct approach (or the subjective approach) (Meyer & Westerbarkey, 2009). The inferred approach involves the computation of the discrepancy between expectations and evaluations of performance.

Expectation theory (also commonly known as Expectancy-Disconfirmation Theory) is the most widely accepted theory concerning customer satisfaction processes. The theory holds that satisfaction/dissatisfaction results from a customer's comparison of performance (of a product or service) with predetermined standards of performance. According to the view, the predetermined standards are the customer's predictive

expectations. Three possible outcomes of the comparison are possible. Positive disconfirmation occurs when performance is perceived to be better than the predetermined expectations.

Perceived performance refers to a person's perceptions of the actual performance of a product, service, or technology artifact. According to expectation confirmation theory, perceptions of performance are directly influenced by pre-purchase or pre-adoption expectations, and in turn directly influence disconfirmation of beliefs and post-purchase or post-adoption satisfaction. Perceived performance is also posited to indirectly influence post-purchase or post-adoption satisfaction by way of a mediational relationship through the disconfirmation construct.

Disconfirmation of beliefs refers to the judgments or evaluations that a person makes with respect to a product, service, or technology artifact. These evaluations or judgments are made in comparison to the person's original expectations. When a product, service, or technology artifact outperforms the person's original expectations, the disconfirmation is positive, which is posited to increase post-purchase or post-adoption satisfaction. When a product, service, or technology artifact underperforms the person's original expectations, the disconfirmation is negative, which is posited to decrease post-purchase or post-adoption satisfaction (i.e., to increase dissatisfaction).

Post-purchase or post-adoption satisfaction refers to the extent to which a person is pleased or contented with a product, service, or technology artifact after having gained direct experience with the product, service, or artifact. Expectation confirmation theory posits that satisfaction is directly influenced by disconfirmation of beliefs and perceived

performance, and is indirectly influenced by both expectations and perceived performance by means of a mediational relationship which passes through the disconfirmation construct.

Expectation theory (also commonly known as Expectancy-Disconfirmation Theory) is the most widely accepted theory concerning customer satisfaction processes. The theory holds that satisfaction/dissatisfaction results from a customer's comparison of performance (of a product or service) with predetermined standards of performance. According to the view, the predetermined standards are the customer's predictive expectations. Three possible outcomes of the comparison are possible. Positive disconfirmation occurs when performance is perceived to be better than the predetermined expectations. In this scenario, customer is delighted. Zero disconfirmation occurs when performance is perceived to be exactly equal to expectations-customers are likely to be satisfied. Finally, negative disconfirmation occurs when performance is lower than expectations. Of course, negative disconfirmation leads to dissatisfied or unhappy customers.

2.4 Conceptual Framework

Figure 2.1 below shows how QAOs' training, management support of QMS, quality audit and QMS procedures influence customer satisfaction in public universities in Kenya. A conceptual framework is a set of thoughts from a certain field of enquiry and can be used to set a successive presentation (Kombo & Tromp, 2009). Saunders and Lewis (2012) confirm that indeed, if conceptual framework is clearly articulated, it has the possibility of assisting a researcher in his or her findings. Figure 2.1 summarizes the conceptual framework in the study.

Quality Assurance Officers' Training
• On-the-job training
• Off-the-job training

Dependent Variable

Management Support of QMS
• Training opportunities/capacity building QMS
• Availing resources
• Quality policy/objectives-compliance to standards

Customer Satisfaction
• Customer compliments
• Number of repeat customers
• Customer retention rate
• Level of customer satisfaction
• External customer satisfaction audits

QMS Audit
• Internal audit
• External audit

QMS Procedures
• Document control
• Control of records
• Internal auditing
• Control of non conforming products
• Corrective action

Figure 2.1 Conceptual Framework of the relationship between ISO 9001 Certification and Customer Satisfaction in Public Universities in Kenya

Source: The Author (2022)

As perceived in the review of the literature, the independent variables for the study include quality assurance officers' training, management support of QMS, quality audit

and QMS procedures. The dependent variable was customer satisfaction in public universities.

2.5. Identification of Knowledge Gap

Most of the studies that have been undertaken on ISO 9001 have focused on companies but little has been carried out in educational institutions. The studies that have an aspect of customer satisfaction have other variables. From the literature available therefore, it is evident that little has been done on ISO 9001 and customer satisfaction particularly in universities as indicated in table 2.1

Table 2.1
Summary of Studies that have been Done and Knowledge Gap

Author(s)	Topic of the study	Gap
Shrestha and Chalidabhongse (2010)	Extent of customer satisfaction influenced by existing performance appraisal in companies	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Prajogo and Cooper (2012)	Impact of TQM practices on job satisfaction(customer satisfaction of service employees)	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Pitterman (2013)	ISO 9001 QMS implementation and customer satisfaction in a software company	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Sakthivel and Rajendran (2013)	Correlation between TQM variables and satisfaction of students of both ISO certified and non ISO certified institutions	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Padma, Rajendran and Ganesh (2015)	Dimensions that make up and improve level of customer satisfaction on health care industry in India	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Smallwood and Rwelamila (2012)	The need for the Quality Management Systems' implementation in South African construction	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Indiya et al. (2015)	Effect of implementing QMS on the performance of Public Universities in Kenya at Maseno University	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Sit and Narasimhan (2009)	Relationship between TQM practices and customer satisfaction in Malaysia's service sector	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Rukaria (2014)	QMS and Customer Satisfaction in Kenyan Aviation Industry	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Magd(2013)	Implementation of ISO 9001 on performance in ISO certified manufacturing companies in Saudi Arabia	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Ul-Hassan (2012)	Association between TQM practices and performance in Pakistan's manufacturing industry	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya
Omer el Tigani (2011)	Impact of the implementation of ISO QMS on performance of participating workers	Relationship between ISO 9001 certification and customer satisfaction in public universities in Kenya

Source: Author (2022)

It is evident from the above summary that there is a gap in studies on ISO 9001 Certification and customer satisfaction in public universities. It is with this in mind that the study sought to address the existing gap in ISO 9001 Certification and customer satisfaction in Public Universities in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology that was used in the study. It includes the research design, location of the study, target population, sample and sampling procedures, data collection instruments, validity and reliability. It also includes data collection procedures, data analysis procedures, data presentation, and ethical considerations.

3.2 Research Design

A research design is the arrangement of conditions for collection and analysis of data with a view to combining relevance to the purpose of the research (Kothari, 2004). It provides the road map for the collection, measurement and analysis of data (Mathooko, 2007). Kothari (2004) adds that a research design is made up of the decisions about what, where, when, how much and by what means. This study adopted correlation research design and utilized both qualitative and quantitative approaches (mixed methods) to investigate the relationship between ISO 9001 Certification and Customer Satisfaction in Public Universities in Kenya.

Creswell (2013) notes that a mixed method research is whereby a researcher collects, analyzes and mixes quantitative and qualitative data in a single study or series of studies to understand a research problem. This design was suitable for this research since it enabled the researcher to obtain well organized information on the relationship between independent and dependent variables.

The researcher adopted positivism research philosophy. Positivists believe that reality is stable and can be observed and described from an objective viewpoint without interfering with the phenomenon being studied (Levin, 1988). Crowther and Lancaster (2008) add that positivism is of the opinion that only factual knowledge gained through observation including measurement is trustworthy. Research findings in this kind of study are usually observable and quantifiable. In positivism studies, the role of the researcher is limited to data collection and interpretation in an objective way. Crowther and Lancaster (2008) argue that as a general rule, positivist researches often utilize deductive approach and therefore a researcher can only draw conclusions from facts gathered and analyzed.

3.3 Location of the Study

This study was undertaken in public universities in Kenya. There were 31 public universities in Kenya. These universities are spread across the country. Out of these, 15 had been awarded ISO 9001 QMS certification (KEBS, July 2019). A sample of 8 universities were used for the study. These universities were coded as A, B, C, D, E, F, G and H.

3.4 Target Population

Mugenda and Mugenda (2003) argue that population is a complete set of individuals, cases or subjects with common observable characteristics. A target population is a large population from which sample populations are drawn. The target population for this study were 227,088 students, 15 Quality Assurance Officers (QAOs), 130 Deans of Schools and Heads of Sections, 15 ISO Coordinators and 15 Internal Auditors of the 15 public universities in Kenya that had been awarded ISO 9001 certification. The QAOs, ISO Coordinators and Internal Auditors were each 15. Students were chosen as the target

group because they are the consumers of the services offered by the universities. They are therefore the customers of the universities and are better placed to give the level of satisfaction with the services they receive. QAOs are in charge of ensuring that quality services are offered by the universities. They were therefore chosen because they are in a good position to provide relevant data on quality assurance and the training that they receive in the universities.

Deans of Schools and heads of Sections deal directly with the students on a daily basis. They were therefore included as a target population because of the services they render to the students and know the processes and procedures they are to undertake to ensure that they get satisfactory services. ISO Coordinators are in charge of ISO 9001 certification and are in a position to provide relevant data on the support they receive from the university management. Internal Auditors check the universities' compliance with the set standards by carrying out audits. They are therefore better placed to provide data on the level of compliance with ISO 9001 certification standards by the universities. The target population per category is shown in Table 3.1.

Table 3.1

 Target Population per Category

University	Deans	Centers/ Institutes	Director ates	QAOs	ISO Coordin ators	Internal Auditors	Students Populatio n
University of Nairobi	22	15		1	1	1	84,000
Moi University	14	8	6	1	1	1	24,574
Murang'a University	6			1	1	1	4,000
Jaramogi Oginga Odinga University	10	2	3	1	1	1	17,200
University of Kabianga	7			1	1	1	7,700
Meru University	8			1	1	1	10,000
Machakos University	10			1	1	1	9,000
The Cooperative University	2		1	1	1	1	6,600
Maasai Mara University	5			1	1	1	3,600
South Eastern Kenya University	8			1	1	1	2,300
Technical University of Kenya	17	1		1	1	1	12,115
University of Eldoret	9			1	1	1	24,999
Embu University	4			1	1	1	4,000
Jomo Kenyatta University of Agriculture and Technology	5			1	1	1	6,000
Multimedia University	3			1	1	1	11,000
	130	26	10	15	15	15	227,088

Source: Author (2022)

3.5 Sample Size and Sampling Procedures

Oso and Onen (2009) observed that a sample is smaller group drawn from the target population selected procedurally as a representation. The main aim of sampling is to get accurate empirical data by using a smaller representative group leading to a reduction in the cost of the study.

3.5.1 Sample size

According to CUE (2018), there were 31 public universities in Kenya. From these universities, Kenya Bureau of Standards (KEBS, 2019) listed 15 public universities in Kenya that had been awarded ISO 9001 QMS certification. In this study the researcher targeted all those public universities that had been awarded ISO 9001 Certification. Eight (8) universities out of 15 which had been awarded ISO 9001 QMS certification were used for this study for optimum results (Mugenda & Mugenda, 2003). The central limit theorem (CLT) states that the distribution of sample approximates a normal distribution, Therefore if we take simple random samples of sample size (n=10) is less than 30, from the population and compute the mean for each of the samples, the distribution of sample means should be approximately normal (Mugenda & Mugenda, 2003).

Each of these universities had 1 QAO, Internal Auditor, and ISO Coordinator. All were used for the study. These made a total of 24. Deans of schools/faculties and heads of sections were 73. They were all used for the study. The researcher used the formula generated by Krejcie and Morgan (1970) and adapted by The Research Advisors (2006) as a sampling table (Appendix VIII), to get the number of students who would be respondents. The researcher selected 383 respondents for the study. A proportionate

sampling procedure was employed to ensure that the numbers of the samples were relative to the size of the stratum as shown in Table 3.2.

Table 3.2

Sample Size

University	Student enrolment	Sample	Director of Quality Assurance	Internal Auditor	ISO Coordinators	Deans and Heads of Sections
A	17,200	73	1	1	1	15
B	7700	34	1	1	1	7
C	9000	38	1	1	1	10
D	4000	16	1	1	1	6
E	3600	16	1	1	1	5
F	11,000	46	1	1	1	3
G	12,115	53	1	1	1	18
H	24,999	107	1	1	1	9
Total	89,614	383	8	8	8	73

Source: Author (2022)

3.5.2 Sampling procedures

The unit of sampling were public universities in Kenya that had been awarded ISO 9001 QMS certification. There were 31 public universities in Kenya. Of these, 15 had been awarded ISO 9001 certification (KEBS, 2019). The researcher used 8 universities for the study which constituted 53% of the target population. The researcher used the 8

universities because there was need to get optimum results (Mugenda & Mugenda, 2003). These universities were selected randomly where each of the 15 universities that had been awarded ISO 9001 certification was assigned a number. The researcher wrote numbers representing the universities on 15 pieces of paper which were then folded and put in a container. They were then mixed and 8 pieces of paper were picked each representing a university.

For each of the 8 public universities, there was 1 QAO/ Director of Quality, 1 Internal Auditor and 1 ISO Coordinator participated in the study. All the Deans and Heads of Sections in the 8 public universities also participated in the study. For students, the researcher used the formula by The Research Advisors (2006) which is a sampling table (Appendix VIII). Stratified random sampling was used to select the students who formed the sample to be studied. Students were stratified into 8 public universities which had been awarded ISO 9001 Certification. To get the sample for each university, the number of the students in the university was divided by the total number of the students in the sampled universities to yield factor x which was then multiplied by 383. The researcher selected proportionately 383 respondents from the 8 public universities for the research as illustrated in Table 3.3. Having calculated the proportional sample of students based on student's population in respective universities, the researcher allocated students in each of the different schools/faculties.

Table 3.3

Sampling Table of Students for the 8 Sampled Universities

University	Target population	Sample size of university targeted using factor x	Sample	Number of schools/ faculties	Distributi on per school/fa culty
A	17200	0.19	73	10	7
B	7700	0.09	34	7	5
C	9000	0.10	38	10	4
D	4000	0.04	16	6	3
E	3600	0.04	16	5	3
F	11000	0.12	46	3	15
G	12115	0.14	53	17	3
H	24999	0.28	107	9	12
Total	89614	1	383		

Source: Author (2022)

3.6 Data Collection Instruments

The researcher designed and used four sets of questionnaires for students and interview schedule for QAOs, Deans of schools and Heads of Sections, Internal Auditors; and ISO Coordinators to gather both qualitative and quantitative data. The instruments are described in more details in the subsequent sections.

3.6.1 Questionnaires for students

The researcher used a structured questionnaire to gather data from Student. The questionnaires had both open-ended and closed questions as well as Likert scale type of questions based on the research objectives. Creswell (2013) and Kothari (2009) advocate for questionnaires as a preferred tool to collect data since it allows faster, efficient and convenient data collection. The questionnaire for students had six sections. Section 'A' had questions on background or personal information while Section 'B-F' had questions addressing the four objectives of the study thus: training, Quality Management Support, System audit and Quality Management System procedures as well as dependent variable which was customer satisfaction in public universities in Kenya respectively.

3.6.2 Questionnaire for quality assurance officers, deans of schools and heads of sections and internal auditors

The researcher utilized a questionnaire containing open ended and closed questions for the data collection from QAOs, Deans of schools and Heads of Sections and Internal Auditors. The questionnaire was tailored towards the objectives of the study. According to Orodho (2004), questionnaires are very versatile tools since they provide critical access to key informants' opinions which make it possible to measure people's opinions on subject matters, it also make it possible to measure preferences, attitudes, perception and beliefs. The questionnaire had two sections. Section "A" had items on background information of the respondent; Section "B" had items on the relationship between Quality Assurance Officers' training, Quality Management System's audit and Quality Management System's procedures and customer satisfaction in public universities in Kenya.

3.6.3 Interview schedule for ISO coordinators.

The researcher utilized an interview schedule to collect data from ISO Coordinators. The interview schedule was tailored towards the objective of the study. According to Orodho (2004), an interview schedule provides critical access to key informants' opinions, which make it possible to measure people's opinions on subject matters. Interview was vital for this research because the researcher was able to ask probing and supplementary questions as well as developed a good relationship with the respondents. The researcher was also able to make a goal-directed attempt to obtain reliable and valid verbal responses from interviewees. The interview schedule had two sections. Section "A" had items on background information of the respondent; Section "B" had items on the relationship between Management Support and customer satisfaction in public universities in Kenya.

3.6.4 Document analysis

This research made reference to quality reports and customer satisfaction surveys. These are records that show the extent the universities utilize Quality Management approaches anchored on principles of Leadership, Customer focus, Involvement of people, Systems approach, Process approach, Continuous improvement which are basis of ISO 9001 Certification which was the focus of the study. The documents would provide the basis for assessing customer satisfaction in public universities in Kenya. The instrument would have the year and the composite score.

3.6.5 Validity of research instruments

Validity refers to the degree to which an instrument measures what it is supposed to measure (Kothari 2004). Creswell (2013) suggests that one should use different methods to evaluate validity. According to him, the researcher should use at least two strategies. The items were formulated based on the problem being studied in order to maintain

relevance and consistency to the problem. Two validity tests were assessed: face validity test and internal construct validity.

The researcher analyzed the content and the objectives of the study to ensure that they were a representative of the universe items to be studied. This type of validity is called content validity. The researcher sought expert advice from supervisors and colleagues in the Department of Educational Administration, Planning and Management to ensure that the instruments had content validity. To ensure face validity, the researcher ensured that the format of the questions was attractive to the respondents, making them short and concise. The instrument had reasonable number of pages.

Orodho (2005) notes that construct validity is used when the interest is to find out the extent to which a particular measure is related to other variables with which it is expected to on logical grounds. To ensure construct validity, the researcher formulated hypotheses and developed items representing the constructs under investigation. If the data gathered would be found to be consistent to the hypotheses formulated, the instruments would be considered valid for data collection.

3.6.6. Reliability of research instruments

When the instruments were ready, they were presented to a sample that shared the same characteristics with the actual sample (Mugenda & Mugenda, 2003). The researcher carried out a pilot study in two public universities that had been awarded ISO 9001 QMS certification but were not part of the study. This enabled the researcher to find out the reliability of data collected using the instruments. The pilot study helped the researcher determine if the instruments would be dependable over a period by checking if the questions had intended meaning to the participants, examined continuity of flow

and detection of early warning signs on item variability, length and timing of the instrument.

Mugenda and Mugenda, (2003), describe reliability as the level to which outcomes are dependable over a period and a correct illustration of the total populace being studied. If the outcomes of an investigation could be replicated using a comparable methodology, the tool then could be regarded as reliable. In order to establish the reliability of the questionnaire items before the actual data collection, a reliability test was carried out. In this study, reliability of the questionnaire items was carried out using Cronbach's alpha technique (Using SPSS version 21). The findings are provided in table 3.4 which displays the reliability coefficient of the items as follows, overall average Cronbach's alpha reliability score of main student questionnaire was $\alpha = 0.812$.

The best Cronbach's alpha reliability score was reported for management support with $\alpha = 0.921$, followed by system audit with $\alpha = 0.886$, quality assurance training had a score of $\alpha = .820$, quality management system procedures had $\alpha = 0.800$ while the construct of customer satisfaction had a score of $\alpha = .780$. The findings meant that the questionnaire which was the main instrument used in this study was very reliable. As a measure of criterion related validity or instrumental validity, the reliability of this instrument was compared to related studies. Sultan and Wong (2014) used an instrument with alpha (α) $= 0.8462$ and considered it reliable. While Ling and Lih (2005) interpreted an overall Cronbach's $\alpha = 0.8339$ as reliable in examining the relationship between service quality and customer preferences. As clearly explained by Mugenda and Mugenda, (2003), as a rule of thumb, a reliability of 0.7 and above is considered as sufficient and therefore recommended.

Table 3.4

Reliability Results

Construct items	Cronbach's Alpha	N of Items
Customer Satisfaction	0.780	36
Quality Assurance Training	0.820	9
Management Support	0.921	9
System Audits	0.886	9
Quality Management System Procedures	0.800	9
Average α Score	.812	72

Source: Author's computation from data (2022)

3.7 Data Collection Procedures

Data collection was undertaken in three phases. The first phase involved obtaining a research permit from National Commission for Science, Technology and Innovation (NACOSTI) with an introductory letter from the Directorate of Graduate Studies, University of Kabianga. After the permit had been granted, the researcher made reconnaissance trip to the research area, met with the relevant officers of the universities to explain the purpose of the research, sought permission and set the date which was appropriate to administer the tools that were used in the study.

The second phase involved making data collection instruments. Piloting and testing of the instruments used the same category of participants from two public universities that did not form the sample of the study but were ISO 9001 certified. The pilot study was undertaken to determine if the data collection instruments were clear to the respondents. Restructuring, removal or addition of the items was made where necessary. The researcher organized training for 2 enumerators who would assist the lead researcher in data collection.

The third and last phase involved data collection. The procedure for data collection involved drop and pick for the student's questionnaire as the main unit of study, tools were left with the respondents for a week to be picked as stipulated. For the key informants which included QAOs, Deans of schools and Heads of Sections, Internal Auditors; and ISO Coordinator, the researcher booked appointments for them to give an appropriate time to do the interviews. The researcher visited the key informants at their universities to interview them as per their appointments.

3.8 Data Analysis and Presentation

 According to Mugenda and Mugenda (2003), the filled and collected questionnaires were checked for completeness, errors and omissions. They were tabulated and coded. Data analysis involved qualitative data from open-ended question and quantitative procedures for data collected using closed-ended questions in the questionnaires. Quantitative procedures involved both descriptive and inferential statistics. This started by first describing the background information of the respondents in the questionnaire to profile their characteristics.

The study initialized by establishing Customer Satisfaction in public universities in Kenya which was the depedent variable of the study as perceived by students. This was based on assessing customer satisfaction of students as a perception using 5 point Likert scale Strongly Disagree (SD)= 1, Disagree (D)= 2, Neutral (N)=3, Agree (A)=4 and Strongly Agree (SA)=5. The researcher summarized the customer satisfaction scores using frequency distribution and measure of central tendency. The step was followed by tabulation of customer satisfaction surveys scores which was and compared using analysis of variance and trend scores.

The preceding sections in the questionnaire were descriptive statistic and inferential statistics of the four study objectives as follows: Spearman correlation was used to establish the existence of significant relationship between each of four independent variables with customer satisfaction. Non parametric Probit regression analysis was used to test the research hypotheses, determine the existence of a significant relationship between the variables under study and to ascertain the predictive power of ISO 9001 Certification on customer satisfaction. The choice of non parametric statisticsal tests which included spearman and probit was necessitated by the fact that both depedent and indepdent variables were ordinal value obtained from likert score. Nonparametric procedures based on the rank, median and range are appropriate for analyzing Likert scale data, as are distribution free methods such as tabulations, frequencies and contingency tables (Ling and Lih, 2005). Probit regression model was used in estimating the relationship between dependent and independent variables. The central idea is that there is a latent likert metric score underlying the ordinal responses observed by the analyst.

The qualitative data obtained from the interviews and open-ended questions in the questionnaire was reported in a narrative manner and organized thematically. The result of the analysis was displayed by use of graphs and frequency tables. The model was as shown in Appendix VII. Table 3.5 shows data analysis per hypothesis.

Table 3.5

Data Analysis per Hypothesis

	Hypothesis	Independent Variable	Dependent Variable	Statistical Test
$H_0 1$	There is no statistically significant relationship between Quality Assurance Officers' Training and Customer Satisfaction in Public Universities in Kenya.	Quality Assurance Training	Customer Satisfaction	• Spearman Correlation • Probit Regression
$H_0 2$	There is no statistically significant relationship between Management Support of Quality Management System and customer satisfaction in public universities in Kenya	Management Support of Quality Management System	Customer Satisfaction	• Spearman Correlation • Probit Regression
$H_0 3$	There is no statistically significant relationship between Quality Management System Audit and Customer Satisfaction in Public Universities in Kenya.	Quality Management System Audit	Customer Satisfaction	• Spearman Correlation • Probit Regression
$H_0 4$	There is no statistically significant relationship between Quality Management System Procedures and Customer Satisfaction in Public Universities in Kenya.	Quality Management System Procedures	Customer Satisfaction	• Spearman Correlation • Probit Regression

Source: Author (2022)

3.9 Ethical Considerations

Ethical issues are a pre-requisite when conducting research and must be considered in the design and development phase (Keyton, 2006). Researchers using people or animals as their subjects should carry out their studies giving special attention to the ethical issues (Kombo & Tromp, 2006). Ethical issues that were dealt with during the study included informed consent, access, acceptance, and confidentiality. Furthermore, every measure was taken to comply with confidentiality, honesty and emotional or physical care of the research subjects.

When carrying out this study, the principle of informed consent was addressed by explaining the purpose of the study to participants, making them aware that participation was optional and that they could choose to or not to participate. Anonymity was ensured by telling the respondents not to indicate their names on the questionnaires. Confidentiality was also ensured in that the study responses were not to be disclosed to any other person not directly involved in the study. Debriefing of the participants about the findings of the study was done for those respondents who were interested to know the findings of the study. An authorization permit was sought by the researcher from National Commission for Science, Technology and Innovation (NACOSTI) before carrying out the study. Finally, the document was scanned for plagiarism.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter provides results and discussions in reference to the relationship between ISO 9001 Certification and Customer Satisfaction in public universities in Kenya. The chapter includes the following: the study response rate, reliability scores for the final pilot test, respondents background and demographic information, relationship between Quality Assurance Officers' Training and customer satisfaction in public universities in Kenya, relationship between Management Support of Quality Management System and customer satisfaction in Public Universities in Kenya, relationship between Quality Management System's Audit and customer satisfaction in public universities in Kenya and relationship between Quality Management System's Procedures and customer satisfaction in public universities in Kenya.

4.2 Presentation of Results

The following section details the results, presentation and discussion on the relationship between ISO 9001 Certification and customer satisfaction in public universities in Kenya.

4.2.1 Response rate

The target population for this research were the students, QAOs, Deans of Schools and Heads of Sections, the ISO Coordinators and the Internal Auditors of the 15 public universities in Kenya that had been awarded ISO 9001 certification. The findings are in Table 4.1.

Table 4.1

Response Rate

	Questionnaire & Interview Guide Issued	Questionnaires Returned	Percentage of Response
Students	383	300	78.3
QAOs	8	8	100
Deans of Schools and Heads of Sections	73	65	89.0
Internal Auditors	8	8	100
ISO Coordinators Interview Guide	8	8	100
Total	480	389	81.0

Source: Author's Data (2022)

The study targeted 383 university students from 8 sampled institutions which were ISO certified out of which 300 responded and 83 did not respond, which provided a response rate of 78.3%. As for QAOs, internal auditors and ISO coordinators, all of them responded while 65 out of 73 of dean of schools and head of sections accounting to 89.0%. The overall response rate for the study was 81.0% which was judged to be adequate enough for analysis and reporting. Mugenda (2010) recommend a response rate of above 70.0% as adequate enough for analysis and reporting.

4.2.2 Background information of the respondents

The background information was intended to give an understanding of the respondents, their involvement, and aptitude in the study. This was important for the credibility of the study findings.

4.2.2.1 Demographic profile of university students

This section presents a brief description of the demographic characteristics of students as the key unit of the study. Such a description was important in providing a better understanding of the key respondents included in the study and therefore provide a good foundation for a detailed discussion of the results based on the stipulated objectives of the study. The demographic characteristics included gender, age, year they joined university and faculty. The findings on demographic profile of the students who participated in the study are in Table 4.2.

Table 4.2

Demographic Profile of University Students

		Frequency	Percentage %
Gender	Male	162	54.1
	Female	138	45.9
	Total	300	100
Age	18-25 Years	163	54.5
	26-35 Years	80	26.5
	36-45 Years	57	19.0
	Total	300	100
Years Joined University	Year 2014-2016	107	35.7
	Year 2017-2019	193	64.3
	Total	300	100
Years in the University	Below 1 Year	12	4.0
	1-2 Year	101	33.6
	3-4 Years	166	55.4
	5-6 Years	15	5.0
	Above 7 Years	6	2.0
	Total	300	100
Faculty			
	Science and Technology	76	25.3
	Business and Economics	96	32.1
	HRM	30	10.0
	Education	78	26.0
	Health Sciences	7	2.3
	Natural Sciences and Environment	9	3.0
	Engineering and Geo Spatial	4	1.3
	Total	300	100

The study established that on gender distribution of participants of the study, the majority 162 (54.1%) were male while female accounted for 138 (45.9%). The findings implied that there was not much divergence between distribution of male and female students. Concerning age distribution of the respondents, the study established that the overall age ranged from 18 years to 45 years and above. Majority, 163, (54.5%) of the respondents were found to be in age bracket of between 18-25 years, followed by those who were between 26- 35years who were 80 (26.5%), while the minority was in the age bracket of between 35-45 years of age. Therefore, the largest proportion of respondents accounting to 81.0% was young and in the productive age ranges of between 18-35 years. This implied that majority of the students were young and would be expected to express themselves openly.

The study found out that majority of students from the 8 universities joined university in the year between 2017-2019 accounting for 193 (64.3%), followed by those who joined between 2014-2016 accounting for 107 (35.7 %). On the same vein, it was established that most of students had been in the university for 3-4 years accounting for 166 (55.4%) and the least had stayed in the university for 5-6 years and less than 1 year accounting for 21(7.0%). This shows that most students had stayed in the university long enough to address the issues in question.

Majority of the respondents who participated in the study were undertaking Business and Economics at 96 (32.1%), followed by Education at 78 (26.0%) and Science and Technology at 77 (25.5%). This was considered to be important in the provision of study responses. This shows that a fairly well representation of students across schools.

4.2.2.2 Demographic profile of informants

This section presents a brief description of the background characteristics of key informants who included QAOs, Internal Auditors, Deans of Schools/Faculties and Heads of Sections. The information consisted of length of stay in their position and their academic qualification. The findings on demographic profile of the staff are as shown in Table 4.3.

Table 4.3

Respondents Demographic Information for Staff

		Frequency	Percentage
Highest Academic Qualifications	Doctorate	45	50.0
	Masters	31	35.0
	Bachelors	9	10.0
	Diplomas	4	5.0
	Total	89	100
Years worked at the position	Below 5	17	18.8
	6-10 Years	11	11.8
	11-15 Years	11	12.1
	16-20 Years	6	6.6
	21-25 Years	12	13.6
	26-30 Years	21	23.5
	Above 30 Years	12	13.6
	Total	89	100

Source: Author's Data (2022)

Table 4.3 provided demographic information on respondents who included QAOs, Internal Auditors, Deans of Schools and Faculties and Heads of Sections. They were asked to indicate their highest academic qualifications where it was established that 45 (50.0 %) had acquired a doctorate degree, followed by 31 (35.0%) who had acquired a

master's degree qualification while the rest who were 13 (15.0%) had acquired bachelor's degree and diplomas. From the findings, it was established that majority had experience of more than 20 years accounting to 45 (50.0%). Those with experience of between 11-20 years accounted to 17 (18.7%) and the least had experience of less than 10 years. The findings display adequate competence of the respondents towards the provision of credible data based on their experience in their professions.

4.2.3 Customer satisfaction

Students' satisfaction was evaluated based on the perspective of the students of service provided by the ISO 9001 certified universities. Students' perspective was preferred because they were the universities' immediate customers who experienced the service provided by the institution and were therefore best placed to answer questions on their perceived service experience at the university.

4.2.3.1 Degree of customers satisfaction with service delivery at ISO 9001 certified universities

To establish degree of satisfaction in the university, the study adopted 'outside approach' where by perception of students on customer satisfaction was assessed using statements measured by 5 level likert scale where 1 = Strongly Disagree (SD), 2 = Disagree (D), 3= Neutral (N), 4 =Agree (A) and 5=Strongly Agree (SA). The number represents the strength or degree of opinion regarding students' satisfaction with services offered at the University. The findings on the degree of customer satisfaction of the students with the by the universities services rendered are in Table 4.4 in Appendix VIII.

The results from Table 4.4 in Appendix VIII show that largest proportion of students accounting for 232 (77.3%) agreed with the statement that the university provided

services as promised in the service charter. Most of the students accounting for 225(75.0%) also agreed that universities were reliable in handling student's service problems. This could be attributed to the satisfactory services reported by the students at the university. On matters related with lecturers, most students accounting for 270(90.0%) agreed with the statement that academic results had no errors, while 300 (100.0%) disagreed that there were no marks that were unaccounted for.

Respondents accounting for 150 (50.0%) agreed with the statement that they were likely to complete course in time. A customer can also be referred to as a consumer or a buyer (Rogers, 1995). The customer receives a product after giving out money or other valuable consideration. A customer can be either internal or external. An internal customer is an employee in the organization providing the product or service while an external customer is the beneficiary or purchaser of the product or service. Sudha (2013) names parents, students and sponsors as customers of the academic institutions.

On statement that the university registrar's office-maintained error free records, majority of the respondents accounting for 255(85.0%) disagreed. On the statement our examinations started at the right time, majority accounting for 207 (69.0%) agreed, while on the statement the university communicated and followed its calendar, 120 (40.0%) disagreed. The study also found that most of students accounting for 225(75.0%) agreed with the statements that university provided conducive and safe learning environment. Majority of the respondents accounting for 180(60.0%) agreed that the university had enough resources in the library facility. The respondents accounting for 150(50.0%) agreed with the statement that given an opportunity I would move to another university

and 180(60.0%) agreed with the statement that the university had adequate and modern resources for curriculum implementation.

Customer satisfaction components in certified work organizations are set out in International Organization for Standardization, ISO 9001. These components are made up of management responsibility, management of resources, realization of product or service, and analysis measurement and improvement. Apart from realizing external customer satisfaction, job satisfaction which result from satisfaction of internal customer needs would augment performance improvement resulting in satisfaction of the customer (Guimaraes, 2013).

It is evident from the findings in Table 4.4 that there are some aspects that the students, who are the customers in the universities, are satisfied with. However, they disagreed with some of the statements which portrays their dissatisfaction with the services of their universities. It important for the universities to ensure that the services they offer meet the needs of their customers. ISO 9001 certified universities should strive to satisfy their customers by implementing the standards set out in the QMS.

As pointed out by Guimaraes (2013), customer satisfaction components in certified work organizations are set out in International Organization for Standardization, ISO 9001. These components are made up of management responsibility, management of resources, realization of product or service, and analysis measurement and improvement. Apart from realizing external customer satisfaction, job satisfaction which results from satisfaction of internal customer needs would augment performance improvement resulting in satisfaction of the customer.

A study by Pamela and Lwakama (2010) observed that a customer who is satisfied has his or her expectations met or exceeded, experienced good service delivery, felt they were equitably treated, and thinks that he/she got value for money. Delivery of core services (the promise), comparative service quality (how the service is delivered, staff attitude/professionalism) and perceived value for money, (the difference between perceived benefits and costs) are the vital drivers of customer satisfaction (and future intention). In addition, accredited universities are expected to comply with the standards prescribed by the Commission for University Education and those which are contained in their charter (University Regulations, 2014).

4.2.3.2 Aggregate of customer satisfaction

Aggregate score of Customer was arrived at by total score based on a scale of 1-5 where; 1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4= Agree (A) and 5=Strongly Agree (SA) multiplied by 36 questions scale; therefore, the highest or maximum possible score or level for customer satisfaction could be 180 score (36 x 5) while the minimum score for customer satisfaction could be 36 points (1x36). Customer satisfaction scores are shown in Table 4.4.

Table 4.4

Customer Satisfaction Scores

	Descriptive Statistics				
	Median	Minimum	Maximum	Mean	Std. Deviation
Customer Satisfaction with University	150.0	36.00	170.00	157.0889	16.40052
Valid N (listwise)	300				

Source: Author's Computation from Data (2022)

Table 4.4 shows that Customer Satisfaction mean score of students in universities that participated in the study was 157.0889 and with a median of 150.0. Maximum score was 165.0 against a possible score of 180 and minimum was 36, this implies that majority of students were having high scores of customer satisfaction. Using the cutoff of the mean, the researcher sought to find out the frequency of customers who had high score of satisfaction as compared to lower score as shown in Table 4.4. Wong (2003) observes that customer satisfaction is the level or extent of fulfillment or contentment provided by the goods or services provided to customers. Customer satisfaction is defined as the degree of how an individual feels as a result of comparing a product's perceived performance or outcome in respect to his/her own expectations (Kotler, 1996). Table 4.5 shows customer satisfaction level of the services rendered at the university.

Table 4.5

Customer Satisfaction

		Frequency	Percent	Cumulative Percent
Valid	High Score of Customer Satisfaction	240	80.0	80.0
	Lower Score of Customer Satisfaction	60	20.0	20.0
	Total	300	100.0	

Source: Author's Computation from Data (2022)

Findings from Table 4.5 show that majority of students accounting for 90.7% had higher score of customer satisfaction and only 9.3% had low score for customer satisfaction.

Kotler and Armstrong (1999) argued that customer satisfaction involves creating, maintaining and sustaining strong relationships with customers, suppliers and employees with a goal of delivering long-term economic and social value to the stakeholders. It is measured by the number of repeat customers. Bruce (2007) adds that compliments by the customers, number of repeat customers, customer retention rate and the extent of satisfaction of customers are pointers of customer satisfaction. The ability of the firm to meet the service time requirement is directly related to the typical customer satisfaction index. When customers spend too much time on something they feel would have taken less time, they are dissatisfied with the service offered. Customer satisfaction was also analyzed based on schools as shown in figure 4.1:
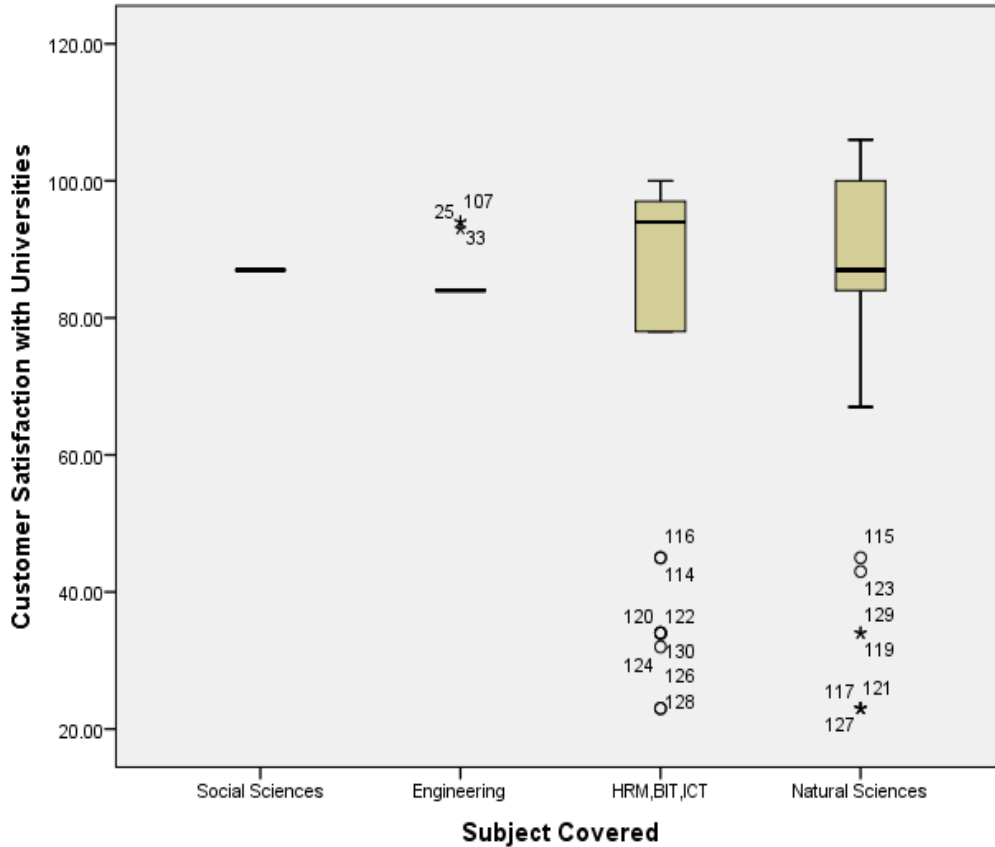
Figure 4.1 Customer Satisfaction based on Departments or Faculty
Source: Author (2022)

Figure 4.1 shows customer satisfaction from various schools. Customer Satisfaction seems to vary depending on schools, the Box plot for students in the Engineering and Social Science schools have similar pattern of low score of satisfaction, while the one for Sciences and Technology as compared to Natural Sciences was found to be comparatively longer which implies that students were having higher score of customer satisfaction. The study findings show varying levels of satisfaction in various schools which suggests that the implementation of set standards vary from school to school. Pamela and Lwakama (2010) observed that a customer who is satisfied, has their expectations met or exceeded, experienced good service delivery, felt they were equitably treated, and thinks that he/she got value for money. Delivery of core service (the

promise), comparative service quality (how the service is delivered, staff attitude/professionalism) and perceived value for money, (the difference between perceived benefits and costs) are the vital drivers of customer satisfaction (and future intention).
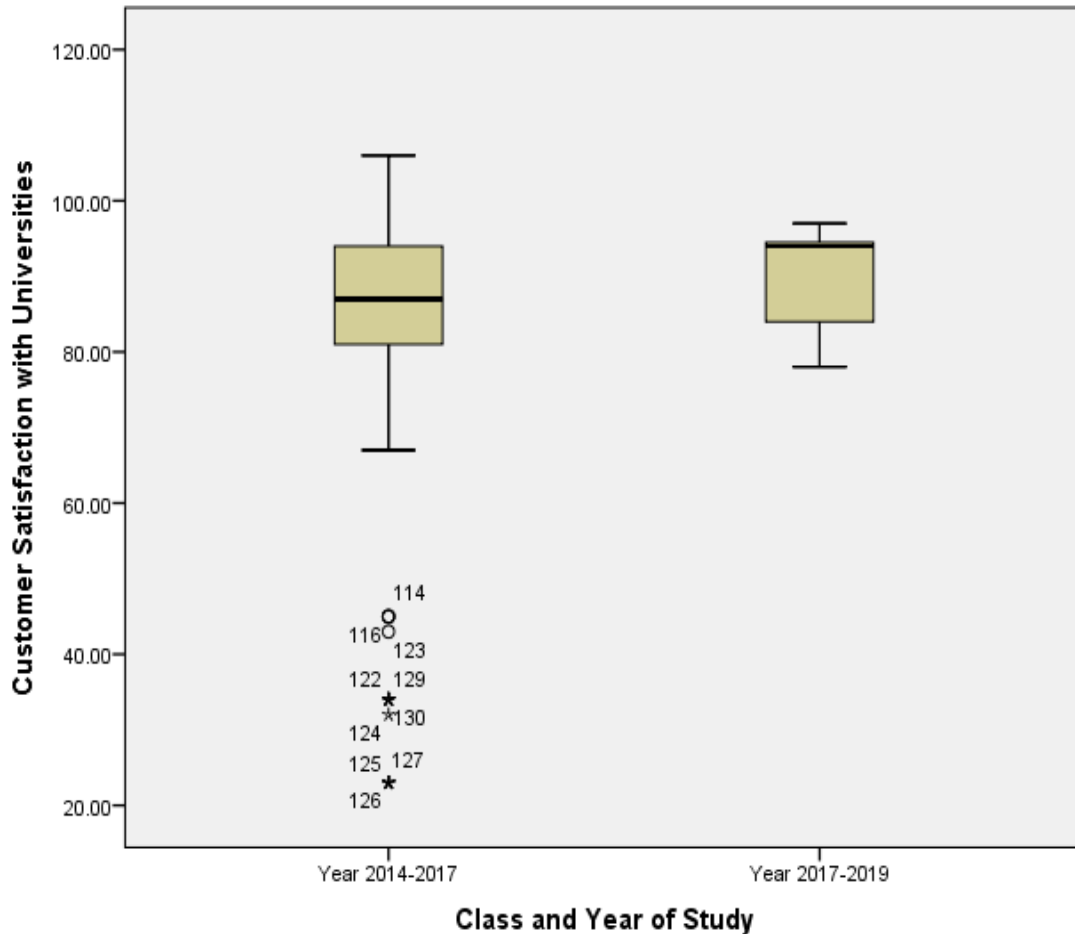
Figure 4.2 Customer Satisfaction Based on Class

Source: Author (2022)

Figure 4.2 shows that students who were in academic year 2014-2017 had higher score of satisfaction as compared to those who were in the year 2017-2019. This suggests that the students who had stayed longer in the university had understood the processes and

procedures in the university and would therefore follow them. On the other hand, the students who had stayed for a shorter period of time were not used to and did not fully understand the processes and procedures and therefore found challenges following them. Following the procedures and processes enhances consistency in service delivery. ISO 9001 certification increases organizations' ability to satisfy customer needs and customers can rely on that the products and services provided are of consistently good quality. ISO 9001 can also work as a tool to streamline the organization's processes and make them more efficient.

Since the ISO 9001 is reviewed every five years, it helps organizations to keep current in an ever-changing world (ISO. 2016). ISO 9001 is a management system standard for the quality processes within a company or an organization. This management system is considered as the most common used standard. A good QMS should improve customer satisfaction, address quality requirements of the customer and help an organization to comply with the relevant regulations outlined. Improved process performance and organizational capabilities will lead to greater customer satisfaction, and to be able to do this focus must also be on investigation of root-causes and preventive and corrective actions (Blummberg, 2011).

4.2.3.3 Degree of customer satisfaction according to customer survey at ISO 9001 certified universities.

According to Commission for University Education, measurement of customer satisfaction has become a requirement of major public and private institutions of higher learning. CUE has come up with seven factors model that explain variations in customer satisfaction in universities as including customer's positive experience, commitment of

staff, availability of staff, recommendation of alternative processes, alternative sources of information by staff, approachability of management and assistance provided by the centre staff to customers. It is a requirement for universities to undertake customer satisfaction survey at least twice annually. These five dimensions are assessed by using a total of 44 statements that measure service quality; 22 statements measure consumers' expectations of the service and the other 22 statements assess consumers' perceptions of the actual performance of that service delivered by the service university, with each dimension assessed using the 4 to 5 statements. From the interviews carried out, it was established that most of the universities scored highly in the above aspects, reporting scores of above 70%. Respondent number 2 of ISO Coordinators said:

"Customer satisfaction surveys are carried out regularly in the university and our university has been recording impressive scores of above 70%."

They results of the surveys at the sampled universities were reported to have been increasing over the years. This could be attributed to the positive benefits of adoption of ISO 9001.

Brown and Clignet (2014) observed that institutions of higher learning up to recently placed insignificant emphasis on evaluating customer satisfaction, viewing the same as a reserve of commercial enterprises only. However, according to Kelysey and Bond (2015) the measurement of customer satisfaction has become a concern of academic institutions and this observation led them to identify seven factors that explained variations in customer satisfaction in universities as including customer's positive experience, commitment of staff, availability of staff, recommendation of alternative processes,

alternative sources of information by staff, approachability of management and assistance provided by the centre staff to customers.

4.2.4 Quality assurance officers' training in ISO 9001 certified public universities in Kenya

This was the first objective of the study, which was to determine the relationship between quality assurance training and customer satisfaction in public universities in Kenya. A five -point likert type scale was used to measure each of the sub-variable where 1 = Strongly Disagree (SD), 2 = Disagree l (N), 3= Neutral (A), 4 =Agree (A) and 5=Strongly Agree (SA). The number represents the strength or degree of opinion of respondents regarding quality assurance officers' training in ISO 9001 certified public university. The section also contains hypothesis testing of relationship between quality assurance training and customer's satisfaction which was done using spearman correlation and probit regression analysis.

4.2.4.1 Description of the quality assurance officer' training in ISO 9001 certified universities

The respondents' opinion was sought on the relationship between Quality Assurance training from students and QAOs' perspectives in relations to customer satisfaction in public universities in Kenya. The opinions were summarized using frequency distribution and percentages. The findings are as presented in Table 4.6, which captures the view of the students on the services they receive at the university.

Table 4.6

Description of the Quality of Training at ISO 9001 Certified Universities as Perceived by Students

Quality Training N=300	1-SD	2-D	3-N	4-A	5-SA	Total
1. The academic programs aims and objectives are understood by students	8.0	14.1	21.1	33.9	22.9	100.0
2.Students are given opportunities to become involved in programs operations	7.6	12.8	15.4	39.2	25.0	100.0
3. The assessments ensures that students attain requisite standards	20.1	18.1	15.4	31.0	15.4	100.0
4.Students provide training feedback on the courses and teachings	16.4	18.5	18.2	29.7	17.2	100.0
5.There is a system for taking students and lecturers views on improving quality in line with ISO 9001 Standards	6.5	10.7	15.1	43.2	24.5	100.0
6.The Quality Assurance Officers' trainings are meant to ensure that quality services are offered at the university	7.9	12.5	15.3	34.3	30.0	100.0
7.The training programs are revised or updated regularly in line with ISO 9001 standards	3.9	8.0	15.6	46.4	24.2	100.0

The first statement sought opinion of the students on the academic programs' aims and objectives as understood by students in their respective universities; 8.0% and 14.1% dissented with the statement, 21.1% were neutral, 33.9% were in agreement and 22.9% were in strong agreement. On the second statement that the students are given opportunities to become involved in programs operations, 7.6% and 12.8% dissented with the statement, 15.4% were neutral, majority consisting of 39.3% were in agreement and 25% were in strong agreement.

On the statement on whether the assessments undertaken at the universities ensured that students attained requisite standards, majority of the respondents accounting for 31.0% were in agreement as well as another 15.6% in strongly agreement, 15.4% were nuetral, 20.1% were in disagreement while 18.1% were in strong disagreement. Regarding whether the universities provided training feedback on the courses and teaching, 29.7% were in agreement while 17.2% were in strongly agreement.

Most of the respondents also agreed with the statement that the universities had ensured that there was a system for taking students' and lecturers' views on improving quality in line with ISO Standards as was established by majority of respondents with 43.2% in agreement while 24.5% were in strong agreement. The study also affirmed that majority of students had the opinion that that the universities has ensured that training was meant to ensure that quality services were offered at the university and that training programs was revised or updated regularly in line with ISO 9001 standard as was obtained with 46.4% in agreement and 24.2% in strong agreement.

The study findings compare with those by Harris et al. (2008) who established that the training competency embalmed by the institution management plays the key role in promoting the satisfaction of the customers. The findings imply that ISO 9001 Certification at universities seem to have done a lot in enhancing training through use of the various methods as well as quality assurance and benchmarking. Therefore, in response to an increasingly competitive marketplace, growing research attention is being devoted to factors that contribute to desired consumer satisfaction (Lao and Chuang 2004). Some researchers argue that employee training has more positive effect on customer satisfaction rather than other human resource practices.

4.2.4.2 Description of the quality assurance officers' training at ISO 9001 certified universities as perceived by quality assurance officers

The QAOS were asked to rate their level of agreements on opinions that reflected the Quality Assurance Officers' training in the various universities A five -point Likert type scale was used to measure each of the sub-variable and the results were presented in tables. The 5 point Likert scale was used where 1 = Strongly disagree (SD), 2 = Disagree (D) 3=Neutral, 4 =Agree (A) and 5=Strongly Agree (SA). The findings are as presented in Table 4.7 which shows the perception of the QAOs.

Table 4.7

Level of Quality Training from Quality Assurance Officers' Perception

Quality Assurance Training N=8	1=SD	2=D	3=U	4=A	5=SA	Total
	%	%	%	%	%	
1.University encourages and supports QAOs training	0	12.5	12.5	37.5	37.5	100.0
2.Training of QAOs is carried out regularly	0	12.5	25.0	25.0	37.5	100.0
3.QAOs are encouraged to undertake on-the-job training	25.0	25.0	37.5	12.5	0	100.0
4.QAOs are encouraged to undertake off-the-job training	0	12.5	12.5	37.5	37.5	100.0
5.The trainings are meant to ensure quality services are offered at the university	62.5	25.0	12.5	0	0	100.0
6.The training of QAOs has a positive relationship with customer satisfaction at the university	12.5	25.0	50.0	12.5	0	100.0
7.The training programs of QAOs should be revised and updated	50.0	25.0	12.5	12.5	0	100.0
8.QAOs are rewarded after training	0	0	0	50.0	50.0	100.0
9.QAOs expect rewards and compensation after training	25.0	75.0	0	0	0	100.0

Source: Author's Computation from Data (2022)

The findings in Table 4.7 show that a large proportion of QAOs accounting to 75.0% who participated in the study agreed with the statement that the university encouraged and supported training of QAOs, 12.5% was neutral while 12.5% disagreed. The view is in agreement with most of students' perception that the level of training of staff had improved since adoption of ISO 9001 in most of the public universities. Students mentioned that the universities seemed to have prioritized training of QAOs because they played a very crucial role in ensuring that services offered meet the needs of their clients.

According to Harris et al. (2008), Quality Assurance Officers/ Directors of Quality play a very important role in ensuring that institutions offer quality services to its customers. They ensure that the institutions adhere to the set quality standards. Their training is therefore very important because it equips them with requisite knowledge and skills to carry out their duties effectively. Provision of quality services will enhance customer satisfaction. Training is categorized into two. These are on-the-job and off-the-job training. The views are also in agreement with (Harris, Willis, Simons & Underwood, 2018) training is the imparting of requisite skills, competencies and knowledge through teaching or instruction.

Largest proportion of QAOs accounting to 62.5% strongly affirmed that their universities ensured that training of QAOs was carried out regularly, however 12.5% dissented while 25.0% were neutral. The views were shared by majority of students who noted that they had noted gradual improvement in trainer's ability, capacity and accomplishment at the place of work. Others mentioned that trainers had improved and were discharging their duties diligently and with confidence. As noted by Harris et al (2008), Quality Assurance Officers/ Directors of Quality play a very important role in ensuring that institutions offer

quality services to its customers. They ensure that the institutions adhere to the set quality standards. Regular training is therefore very important because it equips them with requisite knowledge and skills to carry out their duties effectively. This is because they need to cope with the ever-changing customer needs.

In regard to whether QAOs were encouraged to undertake on-the-job training or off-the job training, the findings in Table 4.7 shows that 50.0% of the respondents agreed that QAOs were encouraged to undertake on-the-job training rather than off the job training at 12.5%. Harris et al. (2008) argue that on-the-job training is done in a normal working situation, with the use of actual tools, equipment, documents or materials that trainees use when they are fully trained. This kind of training is thought to be effective especially for vocational work. Off-the-job training is carried out away from the normal working environment. This means that the employee when undergoing such training does not productively work.

The study also evaluated whether trainings undertaken at the universities by QAOs were meant to ensure quality services were offered at the universities. The findings showed that 87.5% of the respondents agreed, while 12.5% were neutral and none dissented. The study agrees with Thompson and Kolsky (2004) who emphasized that training brings about job satisfaction among the employees thus enabling them to perform better. They further noted that organizations which invest in training of their employees are likely to achieve better results in the long run. Nakauka (2008) adds that they are able to perform with excellence after training and that their desire to excel goes up after such trainings.

The study also sought to establish whether training of QAOs had a positive relationship with customer satisfaction at the university where 50.0% of the respondents agreed, while 50.0% of the respondents disagreed. The training of QAOs is aimed at ensuring that the services offered are of desirable quality and meeting the needs of the customers (Nakauka, 2008; Thompson and Kolsky, 2004). After training, therefore, QAOs are able to perform their duties better hence bringing about customer satisfaction.

The study found that the largest proportion of QAOs accounting for 75.0% were in agreement that training should be revised or updated to enhance the capacity of QAOs to address issues of quality in the university, 12.5% were neutral while 12.5% dissented. This is in agreement with opinion of students on need to innovate on courses and curriculum regularly.

Other findings obtained were that all, 100.0%, QAOs disagreed that university enhanced rewards and compensation for QAOs after the training. However, majority of QAOs accounting to 87.5% agreed that QAOs expected enhanced rewards and compensation from the university after training. The study agrees with Beardwell, Holden and Claydon (2004) in their study which Cheramie et al. (2007) concurs that after training or development, employees usually expect rewards especially because they have used more effort or have acquired better skills. The reward can be increase in pay, promotion or being appointed to a more demanding and a higher status.

According to Thompson and Kolsky (2004) organizations which invest in training of its employees are likely to achieve better results in the long run. It was also observed by Nakauka (2008) that they are able to perform with excellence after training and that their

desire to excel goes up after such trainings thus more likely to bring about customer satisfaction.

4.2.4.3 Entry qualification of staffing before and after ISO 9001 certification

The study sought to find out whether the entry point of, lecturers and senior staff has changed for the universities since the adoption of ISO 9001 certification as compared to previous period before adoption of ISO 9001 certification. This was reported by the Quality Assurance Officers as follows in Table 4.8, which shows the entry qualifications of the staff before and after ISO 9001Certification.

Table 4.8

Entry Qualification of Staff before and after ISO 9001 Certification

Level	Before ISO 9001 Certification	After ISO 9001 Certification
Full Professors	5%	25%
Associate Professors	15%	30%
Doctorate (PHD)	30%	40%
Masters	50%	5%
Total Percentage	100	100

Source: Author's Data (2022)

The findings in the Tables 4.8 above show that the universities being studied had hired and retained more highly qualified staffs in their departments and sections in faculties immediately after the certification by ISO 9001 as compared to the period before the certification where it can be seen from Table 4.8. The bulk of the staff was in the lower cadre of entry but the trend changed after the certification where majority had higher qualification standards. The study also found that universities facilitated continuous

upgrade of skills, as a large component of QAOs had undertaken on job training more than off job training. ISO certification seems to have necessitated the universities to organize such training which is in agreement with Harris, Willis, Simons and Underwood (2008), who argued that training imparts requisite skills, competencies and knowledge. The main aim of training is to improve one's ability, capacity and accomplishment at the place of work.

4.2.4.4 Relationship between quality assurance officers' training and customer satisfaction

In order to establish the relationship between the independent variables and the students' satisfaction in ISO 9001certified universities in Kenya, inferential analysis was done to test hypothesis. This was done using cross tabulation, Spearman Rho Correlation and Probit analysis modeling. The P-Values are used to make conclusions regarding the relationship among the variables. The results are presented in tables and figures.

For this objective, the dependent variable of the study was customer satisfaction while Quality Assurance Officers' training was the independent variable both measured using 5-point Likert scale. The study first undertook a descriptive analysis of the relationship between two category variables namely customer satisfaction and Quality Assurance Officers' training. The variables were both categorical where a 5-point Likert scale was used to measure and score the ordinal scale, which was summarized into two levels for easier cross tabulation. The results of cross tabulation are as shown in Table 4.9. The table shows the results of cross tabulation of Quality Assurance Officers' training and customer satisfaction.

Table 4.9

Cross Tabulation of Quality Assurance Officers' Training and Customer Satisfaction

		Quality Assurance Training in ISO 9001 Certified Universities			
		Positive	Negative	Total	%
Customer satisfaction in public universities in Kenya	Satisfied	150	90	240	80.0
	Not Satisfied	10	50	60	20.0
	Total	160	140	300	
		53.3	47.7		100

Source: Author's Computation from Data (2022)

A descriptive association can be seen that there was a significant association between the perception of Quality Assurance Officers' training in ISO 9001 certified universities with overall customer satisfaction with the universities in that 150 out of 240 students said there were satisfied with university after ISO 9001 certification. Therefore, 53.3% had positive perception of Quality Assurance Officers' training in the universities. In order to establish whether that relationship was significant the data was analyzed using Spearman's correlation, which is designed to examine the strength and direction of a relationship between two ordinal variables.

The hypothesis for this objective is that there is no statistically significant relationship between Quality Assurance Officers' training and customer satisfaction in public universities in Kenya. Since both were ordinal scale, Spearman's correlation was applied between overall customers' satisfaction (dependent variable) and Quality

assurance officers' training's 9 dimensions (independent variable) measured by 5-point Likert scale in order to identify the association between variables. The results were presented in form of a scatter plot as shown in Figure 4. 4. A scatter plot was also presented to show the relationship between Quality Assurance Officers' training and students' satisfaction. The Y-axis represents dependent variable (students' satisfaction) while the X- Axis represents independent variable (Quality Assurance Officers' Training). The results are as shown in Figure 4.3.
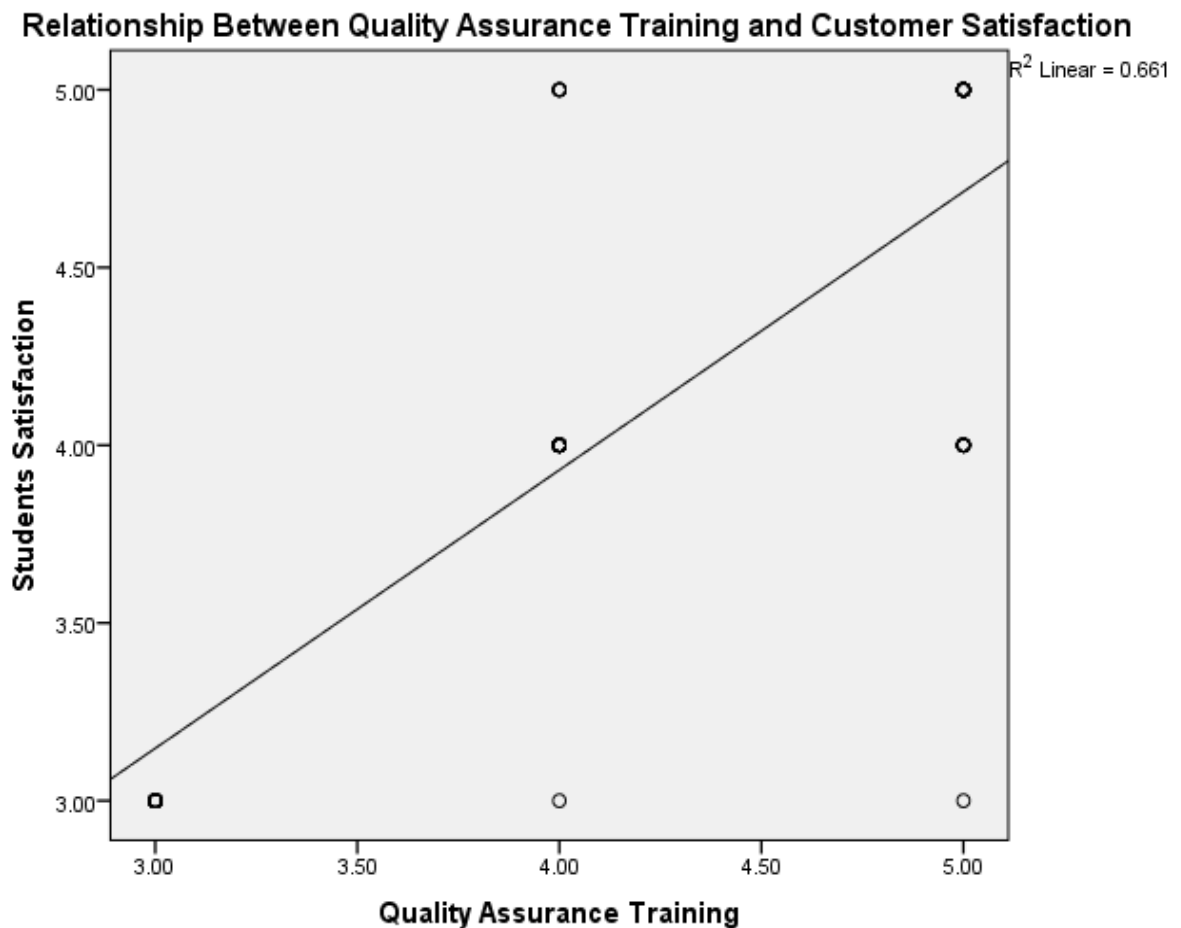
Figure 4.3 Spearman's Correlation of Quality Assurance Training and Customer Satisfaction

Source: Author (2022)

The scatter plot diagram indicates a positive gradient which is an indication that Quality Assurance Officers' training positively and significantly influences students' satisfaction. According to CUE, universities in Kenya are often under pressure to quickly gain ISO 9001 certification. This agrees with Sudha, (2013) that ISO certified organizations should create a work environment that is conducive. The organization needs to communicate the importance of individual contribution and importance of trust and collaboration, throughout the organization. There should also be recognition of the individuals' contribution, performance and learning. Surveys, communication of the result and self-evaluation of performance should also be conducted.

Kotler and Armstrong (2010) add that customer satisfaction involves creating, maintaining and sustaining strong relationships with customers, suppliers and employees with a goal of delivering long-term economic and social value to the stakeholders. It is measured by the number of repeat customers. Bruce (2007) adds that compliments by the customers, number of repeat customers, customer retention rate and the extent of satisfaction of customers are pointers of customer satisfaction. The ordered Probit regression model was used to determine the variation coefficients between dependent and independent variable as shown in Table 4.10.

Table 4.10

Contribution of Quality Assurance Officers' Training towards Customer Satisfaction

	Coef	Std.Err	Z	P value	[95% Conf. Interval]
Quality Assurance Training	.9630	0.6531	14.21	0.00	0.7912821
Number of Obs.	300				1.11341
Pseudo R ^{2}	0.1540				

Source: Author's Computation from Data (2022)

The P-value parameter estimates was reported as 0.000 which was significant being less than 0.05 statistical threshold of rejecting or accepting hypothesis. The meaning was that independent variable (Quality Assurance Officers' training) was significantly related with the students' satisfaction with ISO certified universities. Further analysis also shows that at a confidence interval of 95%, a unit change (increase) in Quality Assurance Officers' training can explain up to 79.1% (0.7912) of students' satisfaction therefore rejecting null hypothesis and accepting the alternative hypothesis that Quality Assurance Officers' training had a positive significant influence on the students' satisfaction among ISO 9001 certified public universities in Kenya. The findings implied that Quality Assurance Officers' training had a significant influence on customer satisfaction since an increase in the value of Quality Assurance Officers' training would strengthen the level of customer satisfaction.

According to Kotler and Armstrong, (2010), Customer satisfaction is measured by analysing customer feedback as this can accurately rate satisfaction. Successful organizations have continuous focus on improving themselves. It is essential for an organization to maintain the level of performance, and to be prepared for internal and external changes. Therefore, to enhance improvement of the organization, it needs to promote improvement objectives at any level of the organization, and educate and train the people how to apply tools and methodologies. Thompson and Kolsky (2004) emphasize that training brings about job satisfaction among the employees thus enabling them to perform better. They further note that organizations which invest in training of its employees are likely to achieve better results in the long run. It was also observed by Nakauka (2008) that they are able to perform with excellence after training and that their desire to excel goes up after such trainings. Although the literature above point to what are achieved as a result of training and their influence on customer satisfaction, Cheramie, Sturman and Walsh (2007) posit that management in an organization are usually hesitant while investing in its customer satisfaction for a number of reasons.

Standa (2008) noted that quality assurance is an on-going activity through which an educational institution ensures that quality and standards of its academic activities are maintained or improved. Lenga (2010) also noted that each university is supposed to establish an Internal Quality Assurance (IQA) structure, having a Standing IQA Committee, developing an IQA policy and mechanisms/processes for implementing the same, customizing a harmonized student evaluation instrument used to evaluate all courses, and putting in place Faculty/School based Curriculum Design and Review Committees.

Research by Pamela and Lwakama (2010) observes that a customer who is satisfied has his or her expectations met or exceeded, experienced good service delivery, felt they were equitably treated, and thinks that he/she got value for money. Delivery of core service (the promise), comparative service quality (how the service is delivered, staff attitude/professionalism) and perceived value for money, (the difference between perceived benefits and costs) are the vital drivers of customer satisfaction (and future intention). The importance of each of these drivers varies across the services. However, the two very important ones for overall customer satisfaction are delivery of core service (what is delivered) and the perceived value (a feeling by customers that they got value)

4.2.4.5 Qualitative data on level of quality assurance Officers' training as described by quality assurance officers

The qualitative views of   Quality Assurance Officers regarding Quality Assurance Officers' training on ISO 9001 Certification were first reported in a narrative manner and then organized thematically. The following is summary of emerging themes with their verbatim.

Quality training by the universities

It emerged that most universities focused to gain ISO 9001 certification as a means towards branding the universities as explained in the following excerpts from respondent number 4 who was the Quality Assurance Officer and participated in the study:

"We have seen that training brings about job satisfaction among the employees thus enabling them to perform better. Every university should aim at improving customers-oriented training to its customers because these customers are the very reason why the

university exists that they are able to perform with excellence after training and that their desire to excel goes up after such trainings".

Provision of opportunities for training by the university management

It emerged from the interview of the QAOs that the university management provided the necessary support towards the training of QAOs as noted from the words of respondents number 1 and number 6 respectively.

"Regular trainings are carried out, the university has ISO Champions who are implementers, advisors, auditors and secretariat who are representatives from various departments"

"Training programs need to be sustained by improving the frequency and contents so that staffs at the university can be conversant with ISO 9001 so they understand the requirements for their job, the importance of meeting customer requirements and how their job contributes to meeting the Quality Policy"

Olayo (2005) in his study of selected universities in Kenya found that employees were motivated by availability of adequate training because training enhanced work performance. However, it was found that possession of skills without adequate resources does not enhance efficiency. In addition, he found that adequate training opportunities helped to building capacity of employees. Ndegwa (2007) further noted that public universities should give priority to staff training to building capacity which is very important in improving efficiency.

4.2.5 Management support of quality management system in the ISO 9001 certified public universities

This was the second objective of the study which was to establish the relationship between Management Support of Quality Management System and customer satisfaction in public universities in Kenya. In this survey, management support was operationalized into; capacity building, QMS, availability of resources and Quantity and Quality of policy/objectives and compliance to standards that has been implemented following ISO 9001 certification. A five -point Likert type scale was used to measure each of the sub-variable where 1 = Strongly Disagree (SD), 2 = Disagree l (N), 3= Neutral (A), 4 =Agree (A) and 5=Strongly Agree (SA). The number represents the strength or degree of opinion of respondents regarding management support of quality management system in ISO 9001 certified public university. The sections also contained hypothesis testing of relationship between management support of quality management system and customer's satisfaction which was done using spearman correlation and Probit regression analysis.

4.2.5.1. Description of level of management support of quality management system at ISO 9001 certified universities

The respondents' opinion in relations to the extent to which management had supported universities since inception of ISO 9001 Certification was sought. The opinions were summarized using frequency distribution and percentages. The findings are as presented in Table 4.11, which shows the level of Management Support of Quality Management system as expressed by the students.

Table 4.11

Level of Management Support of Quality Management System as Perceived by Students

N= 300	Management Support	1=SD	2=D	3=U	4=A	5=SA	Total
1	University management is committed to provide the resources for the education services	6.5	10.9	19.9	42.2	20.5	100
2	Management ensures that staff and administration are easily accessible to the students	3.5	13.8	15.9	45.3	21.1	100
3	University management ensured establishment and review of quality policy and quality objectives	12.0	12.8	21.1	33.9	20.2	100
4	University management provide a customer-oriented environment in the university	4.4	12.8	13.3	43.8	25.7	100
5	Management of the university developed quality policy and objectives	5.5	14.8	14.9	45.0	19.8	100
6	Management ensures establishment and review of quality policy and quality objectives	9.9	16.2	26.0	26.0	21.9	100
7	Management ensures students' views are sought in order to enhance the ISO certification standards	18.2	21.6	12.6	26.8	20.8	100
8	Management has high level of commitment in ensuring that university maintain ISO 9001 Certifications	6.5	10.7	15.1	43.2	24.5	100
9	Management ensures establishment of opportunities/capacity of building QMS which aids in enhancing students' performance	10.2	9.4	14.6	38.8	27.0	100

Source: Author's Computation from data

The first statement sought the opinion of the students on whether the university management is committed to provide the resources for the education services where 6.5% and 10.9% disagreed with the statement, 19.9% were neutral, 42.2 % were in agreement and 20.5% were in strong agreement. According to Kanji (2013), management commitment is a very vital component that determines the success of QMS. Lack of management support is the most common pitfall. Strategies for change are more likely to fail in the absence of a positive commitment. For any organization to succeed what is required is more than just a business strategy that is sound; a quality culture is required to support the strategy.

On the second statement that the management ensures that staff and administration are easily accessible to the students, 3.5% and 13.8% dissented with the statement, 15.9% were neutral, majority consisting of 45.3% were in agreement and 21.1% were in strong agreement. McBride, Lovelock, Dirks, Welch and Shepherd (2015) note that the top management' responsibility in the firm is to provide an environment that is customer-oriented while ensuring the provision of customer driven services. Therefore, top management should prepare for change and make the necessary arrangements to accommodate it.

On the statement on whether the university management ensured establishment and review of quality policy and quality objectives, majority of the students accounting to 33.9% agreed as well as another 20.2% were in strongly agreement, 21.1% were neutral while 12.8% together with 12.0% dissented.

Regarding whether the university management provided a customer-oriented environment in the university, 43.8% agreed as well as 25.8% were in strong agreement.

Most of the respondents also agreed with statement that management of the university developed quality policies and objectives as was established by majority of respondents with 45.0% in agreement while 19.2% strongly agreed.

The study also affirmed that majority of the students had the opinion that the management ensured establishment and review of quality policy and quality objectives and that the management ensured students' views were sought in order to enhance the ISO certification as was obtained by 21.9% in disagreement while 26.8% and 20.8% in agreement and strong agreement respectively.

On the statement on whether the management has high level of commitment in ensuring that the universities maintain ISO 9001 Certifications, majority of the students accounting to 43.2% agreed as well as another 24.5% were in strong agreement, 15.1% were neutral while 10.7% together with 6.5% dissented. Lastly, on whether the management ensured establishment of opportunities/capacity of building QMS which aided in enhancing students' performance 38.8% as well as 27.1% either strongly agreed or agreed, 14.6% were neutral, while only 9.4% disagreed with 10.2% in strong disagreement.

4.2.5.2 Level of management support of IS0 9001 certification in the selected universities

The study sought to establish from ISO Coordinators the extent to which management provides them with resources, staffing, technology and capacity for departments and sections in order to support the ISO 9001 certification in the universities. The ISO Coordinators reported that the management of the universities provided more than enough resources both financially and materially in order to support ISO Certification in

the universities. Management support could be seen in terms of development of new sections and departments with staffing who support ISO 9001Certification.

4.2.5.3 Qualitative data on level of management support as described by ISO coordinators

The qualitative views of ISO Coordinators regarding management support on ISO 9001 Certification were first reported in a narrative manner and then organized thematically. The following is summary of emerging themes with their verbatim.

University availing required resources

The major emerging theme from ISO Coordinators was that universities availed resources towards ISO 9001 Certification requirements. Some of the universities allocated more than enough resources, as explained in the excerpts below from one of the ISO Coordinators interviewed. Respondent number 2 said:

"Universities avail enough resources towards ISO 9001 Certification requirements. There is a surplus of the resources allocated towards ISO Certification requirements. The university management is so much committed in ensuring that ISO 9001 Certification succeeds."

Universities Act (2012) requires that QMS procedures and activities are to be supported by universities that have been certified especially in provision of resources in support of ISO programs. These programs are meant to ensure that the activities performed in the organizations follow the stated channel, enhance consistency and reduce complaints and conflicts.

Level of commitment by the university management.

The management of the universities were very much committed in ensuring that the universities maintained the standards as espoused in ISO 9001 Certification. This was captured in the words of respondent number 7 who said:

"There is high level of commitment of the management in ensuring that the universities maintain ISO Certification. The university has appointed ISO champions in various departments."

Top management should prepare for change and make the necessary arrangements to accommodate it (Kanji, 2013). McBride, Lovelock, Dirks, Welch and Shepherd (2014) add that the top management' responsibility in the firm is to provide an environment that is customer-oriented while ensuring the provision of customer driven services. Similar findings by Magd (2013) have also shown that management commitment was behind the success of ISO implementation in the business organizations.

Involvement of management in practices of ISO 9001

It emerged from the interview that the vice chancellors are very much involved in the practices of ISO as summarized in the verbatim below from respondent number 3.

"ISO is vice chancellors led and rarely delegate."

Kanji (2013) argued that management commitment is a very vital component that determines the success of QMS. Lack of management support is the most common pitfall. Strategies for change are more likely to fail in the absence of a positive

commitment. It is therefore important that the university management is fully involved in the practices of ISO so as to provide the necessary leadership.

Management view of ISO 9001 certification in relation to customer satisfaction

It was noted from the interview that the management saw ISO 9001 certification as very crucial in enhancing customer satisfaction at the university as quoted from the words of respondent number 8.

"ISO 9001Certification is key to customer satisfaction because it enhances service delivery, efficiency and effectiveness."

Customer survey

Most of the universities carried out customers surveys to ascertain the level of customer satisfaction in the university. They reported that the ratings were very high. This was supported by the sentiments of respondent number 5.

"It is a requirement that customer surveys are carried out regularly in the university. The most recent surveys are rating at above 70% which shows that our customers are satisfied with the quality of services we offer."

According to Meyer and Rowan (2009), organizations adopt ISO 9001 certification for various reasons, for example, external factors such as consideration that certification is important for enhancing their market reputation (Lowrey, 2005), seeking certification in order to match their competitors who seem to be doing well (Chua & Petty, 2010) and in response to the demands posed by customers, suppliers, trade unions or government to whom its businesses is largely dependent could influence the organizations to adopt QMS.

Olayo (2005) in his study of selected universities in Kenya found that employees were de-motivated by inadequate availability of resources. This also failed to enhance work performance. It was noted that possession of skills without adequate resources does not enhance efficiency. In addition, he found that inadequate training opportunities for capacity building de-motivated the employees. Ndegwa (2007) further noted that public universities failed to give priority to staff training yet building capacity is very important in improving efficiency.

Kelysey and Bond (2001) observe that the measurement of customer satisfaction is now an issue that has to be looked into by academic institutions. Sampaio (2010) notes that internal motivations are present in those companies that are really committed to the continuous improvement of their internal processes and therefore, aim to achieve effective organizational improvements. External motivations, on the other hand, are related mostly to promotional and marketing issues, customers and market pressures and market share enlargement goals. Even though all organizations present both kinds of motivations to some extent, only one is usually the most predominant and determines the organizations' decision to become ISO 9001 certified. Miguel (2009) observed, that from marketing advantages of certification in ISO 9001 standards, has received numerous reviews by researchers. Proponents of the marketing advantage of the acquisition of the standards are keen on establishing the fact that the assurances to the customers results to prominence of the firm.

The studies conducted by Santos and Millan (2012), all point towards the imperativeness of quality in market prominence. Firms in the manufacturing industry, just like any other industry, thrive on the prominence of their marketing mix, including product, pricing,

place and promotion which are also drawn from accreditation in ISO 9001 standards. While most of the studies cited above seem to agree that implementation of QMS significantly influenced Customer Satisfaction, a study carried out on QMS and Customer Satisfaction in Kenya Aviation Industry suggests otherwise. It was noted that ISO 9001:2008 certification of organizations within the aviation industry had no significant relationship to customer satisfaction (Rukaria, 2014).

4.2.5.4 Relationship between management support of quality management system and customer satisfaction

In order to establish the relationship between the independent variables and the students' satisfaction in ISO 9001 certified public universities in Kenya, inferential analysis was done to test hypothesis. This was done using cross tabulation, Spearman Rho Correlation and Probit analysis modeling. The P-Values are used to make conclusions regarding the relationship among the variables. The results are presented in tables and figures. For this objective, the dependent variable of the study was customer satisfaction while Management Support of QMS was the independent variable both measured using 5 level ordinal Likert scale. The study first undertook a descriptive analysis of the relationship between two category variables namely customer satisfaction and management support on ISO 9001 certified universities. The variables were both categorical where a 5 level likert scale was used to measure and score the ordinal scale which was summarized into two levels for easier cross tabulation. The results of cross tabulation is as shown in Table 4.13. The table shows the results of cross tabulation of the level of management support of QMS.

Table 4.12

Cross Tabulation of Level of Management Support of Quality Management System and Customer Satisfaction

		Management Support on ISO Certified Universities			
		Positive	Negative	Total	%
Customer satisfaction in public universities in Kenya	Satisfied	166	74	240	69.1
	Not Satisfied	30	30	60	31.9
	Total	196	104	300	
		84.6	13.4		100

Source: Author's Computation from Data (2022)

A descriptive association can be seen that there was association between management support for ISO 9001 certification and level of outcome in terms of overall customer satisfaction with the universities in that 166 out of 240 students (69.1%) who said they were satisfied with universities' ISO 9001 certification attributed it to management supporting the universities in terms of capacity, resources, technology and research innovation. In order to establish whether that this relationship was scientifically significant, the data was analysed using Spearman's correlation which is used to examine the strength and direction of a relationship between two ordinal variables.

The null hypothesis for this objective stated that there was no statistically significant relationship between Management support on ISO Certified Universities and customer satisfaction in public universities in Kenya. Since both were ordinal scale, Spearman's

correlation was applied between overall customers' satisfaction (dependent variable) and Management Support of QMS 9 dimensions (independent variable) measured by 5 level Likert scale in order to identify the association between variables. . The Y-axis represents Dependent variable (Students' satisfaction) while the X- Axis represents Independent variable (Management support on ISO Certified Universities). The results are as shown in Figure 4.4.
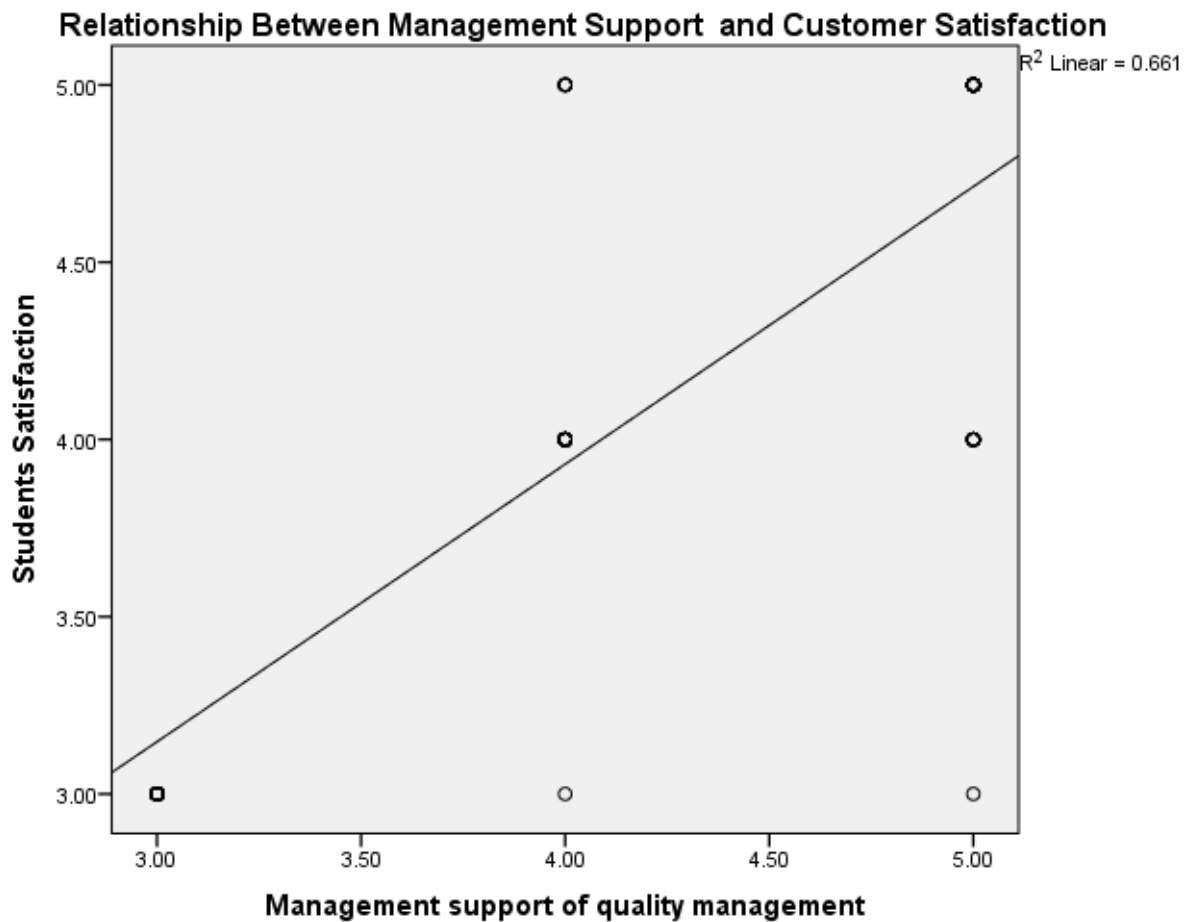
Figure 4.4 Relationship between Management Support and Customer Satisfaction

Source: Author (2022)

The scatter plot diagram indicates a positive gradient which is an indication that Management Support of QMS in ISO certified public universities positively and

significantly influences students' satisfaction. The ordered probit regression model was used to determine the variation coefficients between dependent and independent variable, as shown in the table below.

Table 4.13

Contribution of Management Support of Quality Management System towards Customer Satisfaction

	Coef	Std.Err	Z	P value	[95% Conf. Interval]
Management support on ISO Certified Universities	.8120	0.4109	10.99	0.020	0.6471
Number of Obs.	300				1.08101
Pseudo R ^{2}	0.1120				

Source: Author's Computation from Data (2022)

The p value parameter estimates was reported as 0.020 which was significant being less than 0.05 statistical threshold of rejecting or accepting hypothesis. The meaning was that independent variable (Management Support of QMS in ISO certified public universities) was significantly related with the students' satisfaction with ISO 9001 certified public universities. Further analysis also shows that at a confidence interval of 95%, a unit change (increase) in Management Support of QMS in ISO certified public universities

can explain up to 64.7% (0.6471) of student's satisfaction therefore rejecting null hypothesis and accepting the alternative hypothesis that Management Support of QMS in ISO 9001 certified universities had a positive significant effect on the students' satisfaction among ISO 9001 certified universities in Kenya. The findings implied that management support has a significant influence on customer satisfaction since an increase in the value of management support of QMS would strengthen the level of customer satisfaction.

According to Skizypek (2006), Juran proposed that the quality of the university is the level to which it satisfies the growing needs of surroundings and helps the students in their development. Reichheld (2012) says quality management system as a system of management which provides direction and control to an institution concerning quality. Quality Management System (QMS) is a management technique that is used within an organization to let employees know what is expected for production of desired quality of products and services and to influence the action of employees in completing tasks according to the set standards.

Similar findings by Magd (2013) have also shown that management commitment was behind the success of ISO implementation in the business organizations. Yong-zhong et al. (2009) investigated the relationship between managerial commitment, customer orientation, job satisfaction, service efforts and service quality of a service employee. Their research method was based on self-regulation theory and established a conceptual model for determining the relationship between managerial commitment to service quality (MCSQ) and emotional response to serve quality. The results of the analysis indicated that MCSQ was highly influenced by the orientation of the service employee

towards the customer, which therefore, affects the service quality in service delivery processes.

4.2.6 Quality management system's audit in ISO certified public universities in Kenya

This was the third objective of the study which was to establish the relationship between Quality Management System's audit and customer satisfaction and customer satisfaction in Public Universities in Kenya. In this research, system auditing was operationalized into: Types of audits, frequency of audits, support in the audits department, compliance with audits standards. A five -point Likert type scale was used to measure each of the sub-variable where 1 = Strongly Disagree (SD), 2 = Disagree l (D), 3= Neutral (N), 4 =Agree (A) and 5=Strongly Agree (SA). The number represents the strength or degree of opinion of respondents regarding System's Audit in ISO 9001 Certified Public University. The sections also contained hypothesis testing of relationship between Quality Management System's Audit and customer's satisfaction which was done using Spearman correlation and Probit regression analysis.

4.2.6.1 Description of quality management system's audit as perceived by students

The respondents were asked to provide their opinion in relations to Quality Management System's Audit and how it relates to customer satisfaction in public universities in Kenya. The opinions were summarized using frequency distribution and percentages. The findings are as presented in Table 4.15, which shows the level of QMS audit as perceived by the students.

Table 4.14

Level of Quality Management System's Audit as Perceived by Students

	System's Audit	1=SD	2=D	3=N	4=A	5=SA	Total
1	Reports of the quality audits are acted upon immediately by the university	22.9	34.1	23.7	8.1	11.2	100
2	Reports of the quality audits are made available to the students of the university	20.8	42.2	19.9	10.9	6.5	100
3	Issues of missing marks are addressed	12.5	0	0	37.5	50.0	100.0
4	University ensures compliance with ISO 9001 Certification and other university requirements dealing with quality of services	16.7	21.6	35.9	14.1	11.7	100
5	University organizes for and ensures that quality audits are carried out in the university services regularly	25.8	43.8	13.3	12.8	4.4	100
6	University ensures compliance with regulatory requirements	19.3	44.3	16.4	12.0	8.1	100
7	University accounts for all the students at all levels in the university	17.7	34.6	16.7	17.7	13.3	100
8	University upgrades auditing process to address students needs	20.0	43.0	19.9	10.9	6.5	100
9	Quality audits bring customer satisfaction in the universities	19.3	44.0	16.7	11.0	9.0	100

Source: Author's Computation from Data (2022)

The first statement sought opinion of the students on whether reports of the quality audits were acted upon immediately by the university where 34.1% disagreed and 22.9%

strongly disagreed with the statement, 23.7% were neutral, only 11.2 % were in agreement and 8.1% were in strong agreement. On the second statement whether reports of the quality audits were made available to the students of the university majority of the respondents constituting 42.2% disagreed and 20.8 disagreed strongly with the statement while 15.9% were neutral. Respondents accounting for 10.9% were in agreement and 6.5% were in strong agreement.

On the issue of missing marks and whether they were addressed without delay by the university, the findings were that the whole proportion of the respondents accounting to 100% disagreed that issue of missing marks was addressed without delay. This is in agreement with students that the major challenge they face at the universities despite attainment of ISO 9001 certification was lack of audit which results in cases of missing marks as well as delayed completion rates which was a major challenge identified. It is a requirement that universities in Kenya adhere to University Regulations. The 2017 Quality Audit report revealed glaring discrepancies. The Commission had instructed all universities to establish and strengthen their internal quality assurance structures, systems and mechanisms by 30th June 2017. The findings agree with CUE (2017) audit report which exposed failure to adhere to the processes and procedures at the universities which had resulted in issues such as students losing marks, delayed completion and failure to account for students at all time.

Regarding whether the university ensured compliance with ISO 9001 Certification and other university requirements dealing with quality of services, majority accounting for 35.9% were neutral, 21.6% disagreed while 16.7% strongly disagreed strongly with the statement.

Most of the respondents accounting for 43.8% also disagreed with statement that the university organized for and ensured that quality audits were carried out in the university services regularly. The study also affirmed that majority of students accounting for 44.3% disagreed with the opinion that the university ensured compliance with regulatory requirements. Majority of the respondents accounting for 34.6% disagreed with the statement that the university accounted for all the students at all levels in the university. Most of the respondents also either disagreed or strongly disagreed with statement that the university upgraded the auditing process to address students' needs as mentioned by the 43.0% and 20.0% respectively. Regarding whether quality audits bring customer satisfaction at the universities, most of the respondents also either disagreed or strongly disagreed with statement as mentioned by 44.0% and 19.3% of the respondents respectively, 16.7% were neutral while only 11.0% and 9.0 agreed or strongly agreed respectively.

4.2.6.2 Description of level of quality management system's audit as perceived by auditors

The QAOS were asked to rate their level of agreements on the statements that reflected the Quality Management System's audit in the various public universities. A five -point Likert type scale was used to measure each of the sub-variable and the results were presented in tables. The 5-point Likert scale was used where 1 = Stronly Disagree (SD), 2 = Disgree (D), 3 = Neutral (N), 4 = Agree (A) and 5 =Strongly Agree (SA). The findings are as presented in Table 4.15.

Table 4.15

Quality Management System's Audit as Perceived by Auditors

	1=SD	2=D	3=U	4=A	5=SA	Total
1. Internal audit is carried out regularly	37.5	50.0	12.5	0	0	100.0
2. External audit is carried out regularly	0	12.5	62.5	25.0	0	100.0
3. Reports of the quality audits are acted upon	0	12.5	37.5	25.0	25.0	100.0
4. Reports of the quality audits are made available	0	0	12.5	12.5	75.0	100.0
5. University ensures compliance with ISO 9001 certification requirements	12.5	12.5	50.0	12.5	12.5	100.0
6. Delayed completion rates are addressed	12.5	12.5	50.0	12.5	12.5	100.0
7. University accounts for all the students	0	0	0	25.0	75.0	100.0
8. All the academic programs are approved	0	0	0	12.5	87.5	100.0
9. Quality audits bring customer satisfaction	0	0	12.5	37.5	50.0	100.0

Source: Author's Computation from Data (2022)

The findings in Table 4.15 show that a large proportion of internal auditors who participated in the study accounting for 87.5% agreed that audit was carried out regularly in the university, 12.5% were neutral and none disagreed. However, on whether external audit was carried out regularly, the study found that 25.0% auditors disagreed, 12.5 % agreed, while the majority accounting for 62.5% were neutral.

Respondents were also asked whether reports of the quality audits were acted upon immediately by the university where the findings were that the largest proportion of respondents accounting for 50.0% disagreed with the view, 37.5% were neutral while only 12.5% agreed. These are the same views which were echoed by students regarding challenges they face because of lack of feedback of complaints regarding auditing of systems in place. The study findings disagree with Keller and Pyzdek (2013) who noted the need to review the audit and act on their recommendations. It is essential for universities to act on the recommendations of the audit quickly so as to improve on the non-conformities which will assist the universities in ensuring that their customers are satisfied.

Respondents were also asked to indicate their level of agreement or disagreement on whether the reports of the quality audits were made available to the customers of the university. The findings indicated that the largest proportion of respondents accounting to 87.5% disagreed while 12.5% was neutral. Students across the universities in Kenya recently voiced their grievances. They raised pertinent issues, among them was the quality of education they receive which pointed to their dissatisfaction with the services they received. They also complained that the audit report was not made available to them (The Standard, January 11, 2018).

On whether delayed completion rates at the university were addressed by the university the study similarly found that the whole proportion of the respondents accounting to 100% disagreed which is in agreement with assertion made by students. In regard to whether the university accounted for all the students at all levels in the university the largest proportion of the respondents accounting to 7 (87.5%) disagreed, while 12.5% was neutral. The findings agree with CUE (2017) which in its report identified unaccounted for marks, delayed rates of completion, and failure to account for students at all levels as some of the issues affecting the customers of universities in Kenya.

The study sought to establish whether all the academic programs offered at the university were approved. It was found that 50.0% of the respondents agreed, 12.5% was neutral, while 37.5% disagreed. On the issue of university ensuring adherence to ratios of full time to part time staff, the findings showed that the respondents accounting to 87.5% disagreed, while 12.5% agreed. This is also in agreement with students' complaints as reported in the study. Among issues that were identified by the report prepared by CUE after undertaking audit was that some universities were found not to have instituted internal quality assurance policies, systems and mechanisms, in line with the Universities Regulations (CUE, 2017).

Regarding whether universities ensured compliance with ISO certification requirements, 50.0% of the respondents agreed, 12.5% was neutral while 37.5% disagreed. The study findings agree with a study by Okibo and Kimani (2013) on the Effectiveness of ISO 9001:2008 Certification on Service Delivery of Public Universities in Kenya found that proper organization of processes as a result of ISO certification influences public

universities' service delivery. This would then bring about customer satisfaction. However, there seemed to be lapses in the implementation of the procedures thus bringing about dissatisfaction of the customers.

On whether Quality audits had a relationship with customer satisfaction in public universities in Kenya, 75.0% of the respondents disagreed, while 25.0% of the respondents agreed. Carnero and Delgado (2012) note that when auditing, the objective should be the detection and diagnosis of problems, the provision of solutions to found non-conformities, and the adaption of a maintenance function to the specification of the chosen standard. This shows that despite the results of the study, quality audits are very importance in checking the level of compliance with the set standards. Rajendran and Devadasan (2005) also note that quality audit was fairly new and hitherto unknown in universities. Although this may have changed now, there is need to fully comprehend the importance of quality auditing.

4.2.6.3 Relationship between quality management system's audit and customers satisfaction

In order to establish the relationship between the independent variables and the students' satisfaction in ISO 9001 certified the universities in Kenya, inferential analysis was done to test hypothesis. This was done using cross tabulation, Spearman Rho Correlation and Probit analysis modeling. The P-Values are used to make conclusions regarding the relationship among the variables. The results are presented in tables and figures. For this objective, the dependent variable of the study was customer satisfaction while Quality Management System's Audit was the independent variable both measured using 5 level ordinal Likert scale.

The study first undertook a descriptive analysis of the relationship between two category variables namely customer satisfaction and Quality Management System's Audit on ISO certified public universities. The variables were both categorical where a 5-point Likert scale was used to measure and score the ordinal scale which was summarized into two levels for easier cross tabulation. The results of cross tabulation is as shown in Table 4.16. The table shows cross tabulation for QMS audit and customer satisfaction.

Table 4.16

Cross Tabulation of Quality Management System's Audit and Customer Satisfaction

		System Audits on ISO Certified Universities.			
		Positive	Negative	Total	%
Customer satisfaction in public universities in Kenya	Satisfied	40	200	240	83.3
	Not Satisfied	20	40	60	17.7
	Total	60	240	300	
		84.6	13.4		100

Source: Author's Computation from Data (2022)

A descriptive association can be seen that there was a s significant association between Quality Management System's Audits for ISO certification and level of outcome in terms of overall customer satisfaction with the universities in that 200 out of 240 students (69.1%) who said they were not satisfied with the university attributed it to low level of auditing capacity in the ISO 9001certified public universities. In order to establish whether this relationship was scientifically significant, the data was analyzed

using Spearman's correlation which is used to examine the strength and direction of a relationship between two ordinal variables.

The null hypothesis for this objective stated that there was no statistically significant relationship between Quality Management System's Audit in ISO 9001 certified public universities and customer satisfaction in public universities in Kenya. Since both were ordinal scale, Spearman's correlation was applied between overall customers' satisfaction (dependent variable) and Quality Management System's Audit dimensions (independent variable) measured by 5-point Likert scale in order to identify the association between the variables. The results were presented in form of a scatter plot as shown in Figure 4.5. A scatter plot was also presented to show the relationship between Quality Management System's Audit in ISO certified public universities and students' satisfaction. The Y-axis represents dependent variable (students' satisfaction) while the X- axis represents independent variable (Quality Management System's Audit in ISO certified public universities). The results are as shown in figure 4.5.

Relationship Between Quality Management System Audit and Customer Satisfaction
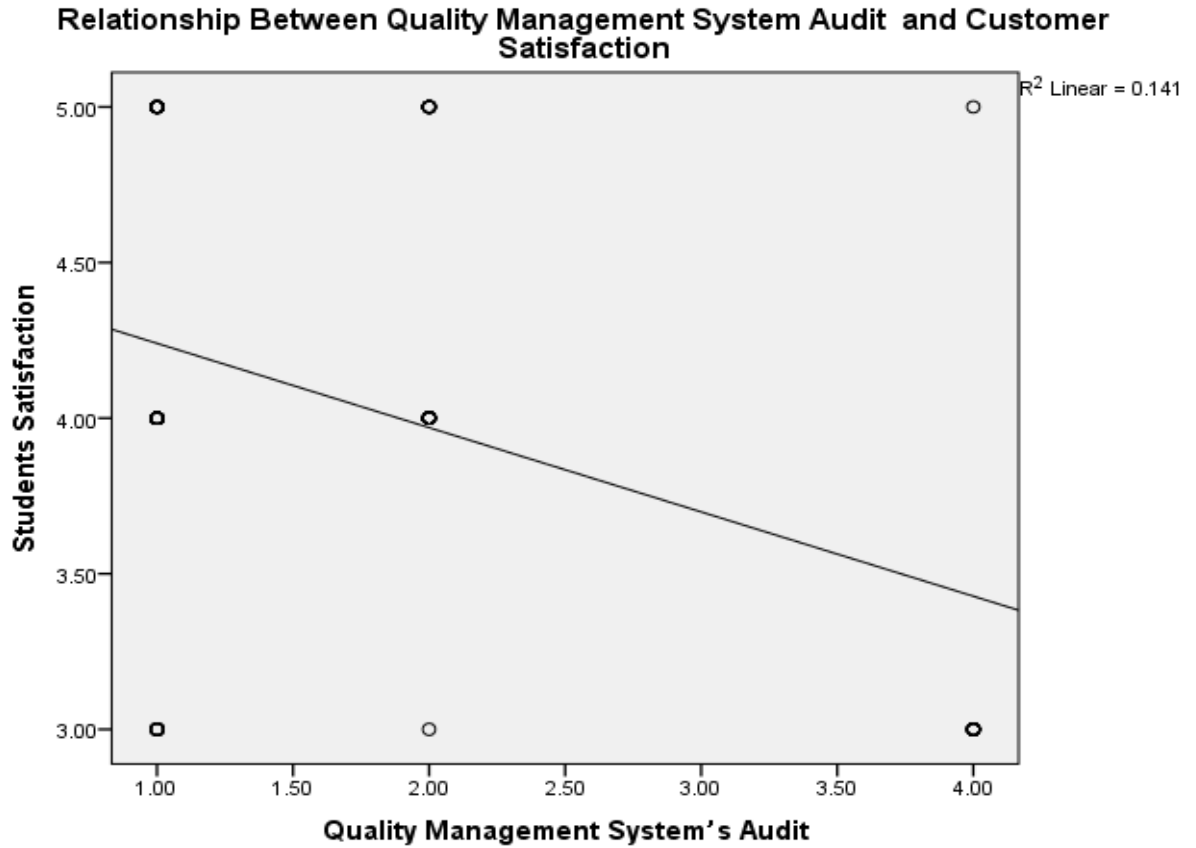
Figure 4.5 Relationship between Quality Management System's Audit and Customer Satisfaction
Source: Author (2022)

The scatter plot diagram indicates a negative gradient which is an indication that QMS Audit in ISO 9001 certified public universities did not significantly influenced students' satisfaction. The ordered probit regression model was used to determine the variation coefficients between dependent and independent variables as shown in Table 4.17 below.

Table 4.17

Contribution of Quality Management System's Audit on Customers Satisfaction

	Coef	Std.Err	Z	P value	[95% Conf. Interval]
System Audits on ISO Certified Universities	.7310	0.222	3.531	0.231	0.01681
Number of Obs.	300				0.03191
Pseudo R ^{2}	0.0120				

Source: Author's Computation from Data (2022)

The P-value parameter estimates was reported as 0.231, which was not significant being more than 0.05 statistical threshold of rejecting or accepting hypothesis. The meaning was that independent variable (QMS Audit in ISO certified public universities was not significantly related with the students' satisfaction in ISO 9001certified public universities. Further analysis also showed that at a confidence level of 95%, a unit change (increase) in QMS Audit in ISO 9001 certified public universities can explain up to 1.68% (0.1681) of student's satisfaction therefore accepting null hypothesis and rejecting the alternative hypothesis. Therefore, QMS Audit in ISO 9001 certified public universities had a no significant effect on the students' satisfaction among ISO 9001 certified public universities in Kenya.

Karapetrovic and Willborn (2000) note that auditors need to collect and verify audit evidence independently and objectively and to evaluate against audit criteria. They add that an audit will be effective and efficient when the auditors are not directly responsible to the function or organization to be audited, which applies to the principle of independency. Magd (2013) suggests that auditing is an action, intended to collect information to evaluate against pre-set criteria. As noted, by Mautz and Sharaf (2010) quality management system auditing is largely founded on financial auditing.

4.2.6.4 Qualitative data on quality of management system audit as described by auditors

The qualitative views of internal auditors regarding quality management system audits on ISO 9001 Certification were first reported in a narrative manner and then organized thematically. The following is summary of emerging themes with their verbatim.

Auditing

According to the internal auditors, the university management ensured that the quality policy and objectives were developed and adhered to through internal audits and sensitization of the staff. This was supported by sentiments of respondent number 1 who said:

"Internal audits are regularly carried out in the university to check whether the staff at the university adheres to the quality policy and the objectives. They are regularly sensitized about the university quality policy and the objectives though some may compromise the standards set because of the personalities."

Russell (2002) suggested that internal auditing process should be controlled as per ISO 9001:2008 to achieve improvements. This is exactly what the standard is talking about.

The standard in clause 8.2.2 "Internal audit" is requesting ISO 9001 users (certified organizations) to effectively implement and maintain an internal audit process to ensure implicitly the effectiveness and efficiency of the quality management system performance (ISO 9001, 2008).

4.2.7 Quality management system's procedures in ISO 9001 certified public universities in Kenya

This was the fourth objective of the study which was to establish the relationship between Quality Management System's Procedures and customer satisfaction in public universities in Kenya. In this survey, Quality Management System's Procedure was operationalized into: standardized policies and procedure, quality policy, internal management reviews, service charter and availability of feedback and complaints management. A five -point Likert type scale was used to measure each of the sub-variable where 1 = Strongly Disagree (SD), 2 = Disagree (D) 3= Neutral (N), 4 =Agree (A) and 5=Strongly Agree (SA). The number represents the strength or degree of opinion of respondents regarding QMS procedures in ISO 9001 certified public universities. The section also contains hypothesis testing of relationship between Quality Management System's Procedures and customer satisfaction that was done using Spearman correlation and Probit regression analysis.

4.2.7.1 Description of quality management system's procedures

The respondents' opinion was sought on relationship between Quality Management System's Procedures and QAOs' perspectives in relations to customer satisfaction in public universities in Kenya. The opinions were summarized using frequency distribution

and percentages. The findings are as presented in Table 4.18. The table shows the perception of students on QMS procedures.

Table 4.18

Level of Quality Management System's Procedures as Perceived by Students

Quality Management System's Procedures N=300	1 SD	2 D	3 U	4=A	5=SA	Total
1. University possesses standardized policies and procedures	13.3	17.7	16.7	34.6	17.7	100
2. Staff at university have clear departmental responsibilities	4.4	12.8	13.3	43.8	25.8	100
3. University adheres to QMS procedures	14.1	11.7	21.6	35.9	16.7	100
4. University has and adheres to Quality Policy	6.5	10.9	19.9	42.2	20.5	100
5. University performs internal audits	12.0	12.8	21.1	33.9	20.2	100
6. The department/section has a service charter	12.5	14.8	12.0	29.9	30.8	100
7. The department/section adheres to the service charter	9.9	16.1	26.0	27.0	21.9	100
8. The department/section gives complaints and compliments book	21.1	16.7	15.1	20.1	27.0	100

Source: Author's Computation from Data (2022)

On the statement that the university possessed standardized policies and procedures, 13.3% and 17.7% dissented with the statement, 16.7% were neutral, majority consisting of 34.6% were in disagreement and 17.7% were in strong agreement. On the statement on whether the staff at university had clear departmental responsibilities, respondents accounting to 43.8% agreed as well as another 25.8% were in strongly agreement, 13.3% were neutral while 12.8% together with 4.4% dissented.

Regarding whether the university adhered to QMS procedures, 35.9% agreed as well as 16.7% was in strongly agreement. Most of the respondents also agreed with statement that the university performed internal audits as was established by majority of respondents with 33.9% in agreement while 20.2% were in strong agreement.

The study also affirmed that majority of students had the opinion that the department/section had a service charter and that the department/section adhered to the service charter by 27.0% in strong agreement, with 20.1% in agreement while 16.7% disagreed and 21.1% in strong disagreement. With the adoption of ISO 9001quality management system, most of the universities have developed documents such as service charters and quality manuals outlining how they are going to operationalize the principles of the standard. Service charters showing the services rendered, time taken and the cost implication if any, are found in strategic places in the universities. Quality manuals state the quality policy as well as the procedures of carrying out the activities in the universities so as to meet the standard set.

4.2.7.2 Description of quality management system procedures' as perceived by staff
The QAOs were asked to rate their level of agreements on statements that reflected the Quality Management System's procedures in the various universities A five -point Likert type scale was used to measure each of the sub-variable and the results were presented in tables. The 5-point Likert scale was used where 1 = Strongly disagree (SD), 2 = Disagree(D), 3= Neutral (N), 4=Agree (A) and 5= Strongly agree (SA). The findings are as presented in Table 4.19. The table shows the perception of staff on QMS procedures.

Table 4.19

Level of Quality Management System's Procedures in the ISO Certified Universities as Perceived by Staff

N=65	1=SD	2=D	3=N	4=A	5=SA	Total
1. University possesses standardized policies and procedures	0	0	12.5	37.5	50.0	100
2. Staff at university have clear departmental responsibilities	12.5	12.5	50.0	12.5	12.5	100
3. University adheres to QMS procedures	37.5	12.5	12.5	25.0	12.5	100
4. University has and adheres Quality Policy	0	0	12.5	12.5	75.0	100
5. University performs internal audits	12.5	12.5	37.5	25.0	12.5	100
6. The department/section has a service charter	12.5	12.5	0	37.5	37.5	100
7. The department/section adheres to the service charter	11.5	25.0	50.0	0	12.5	100
8. The department/section gives complaints and compliments						100
9. QMS procedures have a positive influence on customer satisfaction at the university	0	0	12.5	25.0	62.5	

N=65

Source: Author's Computation from Data (2022)

The study sought to establish whether the university possessed standardized policies and procedures where the respondents accounting for 37.5% agreed while 50.0% strongly agreed. The view is in agreement with most of student's perception that the university possessed standardized policies and procedures. The study agrees with Universities Act (2012) which spells out QMS procedures on how activities were to be supported by the

universities and procedures undertaken in organizations that have implemented the standard especially in provision of resources in support of ISO programs. These were meant to ensure that the activities performed in the organizations follow the stated channel, enhance consistency and reduce complaints and conflicts.

Regarding whether staff at the university had clear departmental responsibilities, majority of the respondents could neither agree nor disagree (50.0%), 12.5% agreed while 12.5% strongly agreed. This differed with students' view that the staff at the university had clear departmental responsibilities. The students may not have had a clear understanding of the roles of the members of staff at the university. However, they may have noted how activities were being undertaken and arrived at such a conclusion.

Respondents were also asked to indicate whether staff at the university adhered to QMS procedures where a majority constituting 37.5% strongly disagreed, 25.0% agreed while 12.5% strongly agreed. Most of the students, however, agreed that the staff at the university followed the QMS procedures. QMS procedures state how activities are to be undertaken in organizations that have implemented the standard. They are meant to ensure that the activities performed in the organizations follow the stated channel, enhance consistency and reduce complaints and conflicts.

The study also sought from the respondents whether the university had and adhered to quality policy. A majority of the respondents accounting for 75.0% strongly agreed, 12.5% agreed while 12.5% were neutral. The study agrees with the Universities Act (2012) which spells out the need by all the universities in Kenya to put in place internal

quality assurance mechanism to ensure adherence to standards, quality and relevance in the institution in line with the provisions of the Act.

Respondents were asked to indicate whether the universities performed internal audits. A majority of the respondents accounting for 37.5% agreed while 37.5% were neutral. Respondents were also asked to indicate whether the departments and sections in the university had service charter where 37.5% agreed while 37.5% strongly agreed. This agreed with students' view where a majority had agreed that the departments and sections in the universities had service charter. Service charters are documents showing the services rendered, time taken and the cost implication if any, and are usually found in strategic places in the universities.

Respondents were also asked to indicate whether what was spelt out in the service charter was adhered to at the university. A majority of the respondents accounting to 50.0% were neutral, 25.0% disagreed while 12.5% strongly agreed. This disagreed with students' view where the a majority of the students had expressed that what was spelt out in the service charter was not being adhered to.

Respondents were also asked to indicate whether the university provided complaints and compliments books in the departments and sections. A majority of the respondents accounting for 62.5% strongly agreed with the statement, 25.0% agreed while 12.5% were neutral. This view was in agreement with the view expressed by the students where a majority were in agreement that the departments and sections in the universities provided complaints and compliments books. This provided an avenue for receiving

feedback on the services provided by the universities. This would enhance the quality of service delivery by the universities.

4.2.7.3 Relationship between quality management system's procedures and customer satisfaction in selected public universities

In order to establish the relationship between the independent variable and customer (the students') satisfaction in ISO 9001 certified public universities in Kenya, inferential analysis was done to test hypothesis. This was done using cross tabulation, Spearman Rho Correlation and Probit analysis modeling. The P-Values are used to make conclusions regarding the relationship among the variables. The results were presented in tables and figures. For this objective, the dependent variable of the study was customer satisfaction while QMS Procedures was the independent variable, both measured using 5-point ordinal Likert scale. The findings are in Table 4.20. The study first undertook a descriptive analysis of the relationship between the two categories of variables namely customer satisfaction and QMS Procedures in ISO 9001 certified public universities. The variables were both categorical where a 5-point Likert scale was used to measure and score; the ordinal scale was summarized into two levels for easier cross tabulation. The table below shows cross tabulation of QMS procedures and customer satisfaction.

Table 4.20

Cross Tabulation of Quality Management System procedures and Customer Satisfaction

		System Procedure on ISO Certified Universities			
		Positive	Negative	Total	%
Customer satisfaction in public universities in Kenya	Satisfied	150	90	240	83.3
	Not Satisfied	30	30	60	17.7
	Total	180	120	300	
		83.3	16.7		100

Source: Author's Computation from Data (2022)

A descriptive association can be seen that there was a significant association between customer satisfaction and QMS Procedures in ISO 9001 certified public universities in that 150 out of 240 students (83.3%) who said they were satisfied with the university ISO 9001 certification attributed it to implementation of system procedures at the universities. In order to establish whether this relationship was scientifically significant; the data was analyzed using Spearman's correlation which was used to examine the strength and direction of a relationship between two ordinal variables. The findings are in Figure 4.6.

The null hypothesis for this objective stated that there was no statistically significant relationship between QMS procedures in ISO certified public universities and customer satisfaction in public universities in Kenya. Since both where ordinal scale Spearman's correlation was applied between overall customers' satisfaction (dependent variable) and QMS procedures dimensions (independent variable) measured by 5 level Likert scale in

order to identify the association between variables. The results were presented in form of a scatter plot as shown in Figure 4.6. A scatter plot was also presented to show the relationship between QMS procedures in ISO certified public universities and students' satisfaction. The Y-axis represents dependent variable (students' satisfaction) while the X- axis represents independent variable (QMS procedures on ISO certified public universities) shown in Figure 4.6.
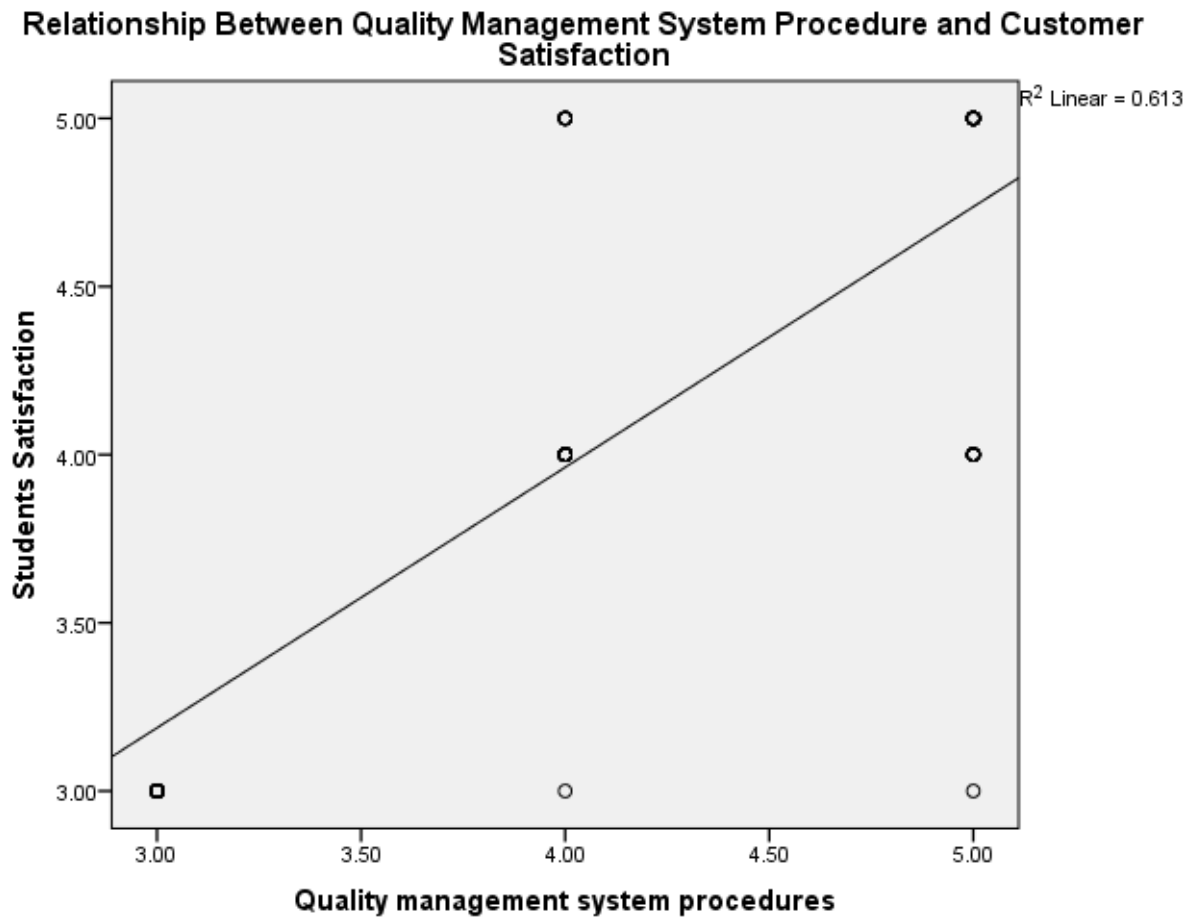
Figure 4.6 Relationship between Quality Management System's Procedures and Customer Satisfaction

Source: Author (2022)

The scatter plot diagram indicates a positive gradient, which is an indication that QMS Procedures in ISO 9001 certified public universities positively and significantly influenced students' satisfaction.

The ordered Probit regression model was used to determine the variation coefficients between dependent and independent variable as shown in table 4.21.

Table 4.21

Contribution of quality management system procedures on customer satisfaction

	Coef	Std.Err	Z	P value	[95% Conf. Interval]
QMS Procedures in ISO 9001 Certified Public Universities	.9991	0.2222	9.80	0.031	0.600
Number of Obs.	300				1.002
Pseudo R ^{2}	0.1230				

Source: Author's Computation from Data (2022)

The P-value parameter estimates was reported as 0.0310, which was significant being less than 0.05 statistical threshold of rejecting or accepting hypothesis. The meaning was that the independent variable (QMS Procedures in ISO 9001 certified public universities) was significantly related with the customer (students') satisfaction in ISO 9001 certified public universities in Kenya. Further analysis also showed that at a confidence level of

95%, a unit change (increase) in QMS Procedures in ISO 9001 certified public universities could explain up to 60.0% (0.600) of customer (students') satisfaction therefore rejecting null hypothesis and accepting the alternative hypothesis that the QMS procedures had a positive significant influence on the students' satisfaction among ISO 9001 certified public universities in Kenya. The findings implied that QMS Procedures had a significant influence on customer satisfaction since an increase in the value of QMS Procedures would strengthen the level of customer satisfaction.

A study by Okibo and Kimani (2013) on the Effectiveness of ISO 9001:2008 Certification on Service Delivery of Public Universities in Kenya found that proper organization of processes as a result of ISO certification influences public universities' service delivery. This would then bring about customer satisfaction. However, sometimes lapses in the implementation of the procedures may occur thus bringing about dissatisfaction of the customers.

4.2.7.4 Qualitative data on quality management system procedures as described by departmental/ section heads

The qualitative views of Departmental/ Section heads regarding management support on ISO 9001 Certification were first reported in a narrative manner and then organized thematically. The following is summary of emerging themes with their verbatim.

Support of quality policy

According to Departmental/ Section heads university management ensured that the quality policy and objectives were developed and adhered to through internal audits and sensitization of the staff. They reported that the university was very supportive towards

ensuring that each department or section performed their activities following the laid down procedures in order to satisfy the customer through consistency.   Respondent number 10 said:

"The university has a quality policy and objectives. Staffs at the university are regularly sensitized about the university quality policy and the objectives."

Though the university played its role in sensitization of the staff, not all of them adhered all the time to the laid down procedures. This was supported by the sentiments of respondent number 23 who said:

"While the staffs at the university have been adequately sensitized on the need to adhere to the quality policy and the objectives, some may compromise the standards set because of the personalities."

Universities provide customer oriented environment

It emerged that most universities focused to gain ISO 9001 certification as means towards branding the universities as explained in the following excerpts from the Heads of Departments or Sections who participated in the study.

"It is an unarguable fact that getting ISO certified comes with many benefits to the university. You will create easy but effective processes that will improve the performance of employees because they will know exactly what to do. However, the certification does more than improving your internal morale; it also has a profound effect on how customers relate to your university. Every university aims to provide customers-oriented services to its customers because these customers are the very reason why the university

exists. Every university aspires to be truly market leader by acquiring ISO 9001 certification."

Support on controls and assessment

According to Heads of Departments and Sections, university management ensured that the quality policy and objectives were developed and adhered to through internal audits and sensitization of the staff. This is explained from the excerpts below from the respondents:

"The university has a quality policy and objectives."

"Internal audits are regularly carried out in the university to check whether the staff at the university adheres to the quality policy and the objectives."

"Staffs at the university are regularly sensitized about the university quality policy and the objectives."

Universities Act (2012) spells out the need by all the management in organizations together with the organizational staff to provide leadership for the quality management systems. This responsibility includes availing of requisite resources to all the staff to ensure enhanced delivery of service for the realization of the organization's vision and mission; establishment and review of the quality policy and quality objectives to ensure conformity to the quality standards (Cane & Sheila, 1996; Soltani, 2005; Aly & Abedalfattah 2013).

An ISO 9001 certification increases organizations' ability to satisfy customer needs, and customers can rely on that the products and services provided are of consistently good quality. ISO 9001 can also work as a tool to streamline the organization's processes and

make them more efficient. Since the ISO 9001 is reviewed every five years, it helps organizations to keep current in an ever-changing world (ISO 9001:2008 Standard).

ISO 9001 certification increases organizations' ability to satisfy customer needs and customers can rely on that the products and services provided are of consistently good quality. This is because the QMS procedures provide spell out how the services are supposed to be carried out, which if all the staff will adhere to, there will be consistency. ISO 9001 can also work as a tool to streamline the organization's processes and make them more efficient.

4.2.8 Summary of contribution of independent variables to customer satisfaction in ISO 9001 certified public universities in Kenya

The overall contribution of the combination of independent variables was presented using the probit model that analyzed the individual factors which included quality assurance training, QMS audit, management support of QMS and QMS procedures to the dependent variable (student's satisfaction). The overall model output is as shown in Table 4.22.

Table 4.22

Overall Model of the Contribution of Independent Variables to Customer Satisfaction in ISO 9001Certified Public Universities

	Coef	Std.Err	Z	P value	[95% Conf. Interval]
Variables					
Quality Assurance Officers' Training	.9630	0.6531	14.21	0.00	0.791
Management Support of QMS	.8120	0.4109	10.99	0.020	0.647
QMS Audits	.7310	0.222	3.53	0.231	0.168
QMS Procedures	.9991	0.2222	9.80	0.031	0.600
				0.042	0.700
Number of Obs.	300				

Source: Author's Computation from Data (2022)

The findings were that combined force of independent variables, which were Quality Assurance Officers' training, Management Support of Quality Management System, Quality Management System audit and Quality Management System procedures accounted for 0.70 or 70.0% variation of customer satisfaction in the ISO 9001certified public universities in Kenya under study with likelihood ratio chi-square of 0.70. A P-value of .042< 0.050 implied that the overall proposed model was statistically significant.

Only one independent variable (QMS audit) was not significant in the relationship with customer satisfaction, which was evidenced by P- value which was greater than critical P-value of $0.05 (P > 0.05 < 0.21)$. Overall, the study found that at a confidence level of 95%,

the combined change of 12.8% could be witnessed in customer (students') satisfaction in a unit change of the four factors. Independently, variable of Quality Assurance Officers' training with 79.1% was the most significant and positively related with customer satisfaction, followed by Management Support of QMS with 64.7%, the third was QMS procedures with 60.0% and the last was QMS Audit with 16.8%.

4.3 Discussion of Results

The first objective sought to establish whether there exists a significant relationship between Quality Assurance Officers' training and customer satisfaction amongst ISO 9001 certified public universities in Kenya. Cross tabulation, Spearman and Probit regression led the study to establish that customer satisfaction was influenced by Quality Assurance Officers' training in the ISO 9001certified public universities in Kenya. Universities that provided Quality Assurance Officers' training had significant likelihood ratio chi-square of 79.1% of satisfying their customers (students) with services delivery. Further the study established a P-value of .000<0.050 thereby rejecting the null hypothesis. The alternate hypothesis, there is a statistically significant relationship between quality assurance officers' training and customer satisfaction in public universities in Kenya, was accepted. Therefore, universities that invested in training of their employees were likely to achieve better results in the long run since they were able to perform with excellence after training and that their desire to excel would go up after such trainings. It was observed by Nakauka (2008) that they are able to perform with excellence after training and that their desire to excel goes up after such trainings.

The second objective sought to establish whether there existed a significant relationship between Management Support of QMS and customer satisfaction in ISO 9001 certified

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public universities in Kenya. Cross tabulation, Spearman and Probit regression led the study to establish that at confidence interval of 95%, a unit change (increase) in Management Support of QMS in ISO 9001 certified public universities could explain up to 64.7% (0.6471) of customer (student's) satisfaction. With a P-value of 0.020<0.050, the null hypothesis was rejected. The alternate hypothesis, there is a statistically significant relationship between management support of Quality Management System and customer satisfaction in public universities in Kenya, was accepted. McBride, Lovelock, Dirks, Welch and Shepherd (2015) add that the top management' responsibility in the firm is to provide an environment that is customer-oriented while ensuring the provision of customer driven services. Therefore, top management should prepare for change and make the necessary arrangements to accommodate it.

Third objective was to establish whether Quality Management System's audit in ISO 9001 certified public universities is related with customer satisfaction. Cross tabulation, Spearman and Probit regression led the study to establish that at confidence interval of 95%, a unit change (increase) in QMS audit in ISO 9001certified public universities could only explain only 1.6% (0.1681) of customer (students) satisfaction. With a P-value of 0.231<0.050, the null hypothesis was accepted. Quality Management System audits in ISO 9001certified universities had no significant influence on the customer (students) satisfaction in ISO 9001 certified public universities in Kenya. Karapetrovic and Willborn (2000) note that auditors need to collect and verify audit evidence independently and objectively, and to evaluate against audit criteria. They add that an audit will be effective and efficient when the auditors are not directly responsible to the function or organization to be audited, which applies to the principle of independence.

The fourth objective was to establish whether QMS procedures in ISO certified public universities had an influence on customer satisfaction in public universities in Kenya. Cross tabulation, Spearman and Probit regression led the study to establish that at a confidence interval of 95% , a unit change (increase) in QMS procedures in ISO certified public universities could explain up to 60.0% (0.600) of customer (students) satisfaction The P-value parameter estimates was reported as 0.0310 which was significant, thus the null hypothesis was rejected. The alternate hypothesis, there is a statistically significant relationship between Quality Management System's procedures and customer satisfaction in public universities in Kenya, was accepted. The study results show that most universities possessed standardized policies and procedures that ensured customers satisfaction. The respondents agreed that staff at university had clear departmental responsibilities for standardization of management processes.

CHAPTER FIVE

SUMMARY, CONLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides summary of findings, conclusion and recommendations on the study. The purpose of this research was to investigate the Relationship between ISO 9001 Certification and Customer Satisfaction in public universities in Kenya.

5.2 Summary

The following are the summaries of major findings guided by the results:

5.2.1 Quality assurance training and customer satisfaction

The study found that there was a statistically significant relationship between Quality Assurance Officers' training and customer satisfaction in public universities in Kenya. The null hypothesis that there is no statistically significant relationship between Quality Assurance Officers' training and customer satisfaction was therefore rejected. Majority of Quality Assurance Officers who participated in the study agreed with the statement that the university encouraged and supported training of QAOs. The view is in agreement with most of students' perception that the level of training of staff had improved since adoption of ISO 9001certification in most of public universities in Kenya.

Students mentioned that the universities seemed to have prioritized training of QAOs because they played a very crucial role in ensuring that services offered met the needs of their clients. The largest proportion of QAOs affirmed that their universities ensured that training of QAOs was carried out regularly. The views were shared by majority of the students who noted that they had noted gradual improvement in trainer's ability, capacity and accomplishment at the place of work. Others mentioned that trainers had improved and were discharging their duties diligently and with confidence. Regular training was

therefore very important because it equipped them with requisite knowledge and skills to carry out their duties effectively. This is because they need to cope with the ever-changing customer needs.

The study found that the universities which invested in the training of their employees were more likely to achieve better results in the long run since they were able to perform with excellence after training and that their desire to excel went up after such trainings. The study found that Quality Assurance Officers/ Directors of Quality played a very important role in ensuring that institutions offered quality services to its customers. They ensured that the institutions adhered to the set quality standards. Their training was therefore very important because it equipped them with requisite knowledge and skills to carry out their duties effectively. The study found that most universities encouraged QAOs to undertake on-the-job training rather than off the job training. The on-the-job training was done in a normal working situation, with the use of actual tools, equipment, documents or materials that trainees used when they were fully trained. This kind of training was thought to be effective especially for vocational work.

The study found that the largest proportion of QAOs were in strong agreement that training should be revised or updated to enhance the capacity of QAOs to address issues of quality in the university. Other findings obtained were that the largest proportion of QAOs disagreed that university enhanced rewards and compensation for QAO after the training. However, majority agreed that QAOs expected enhanced rewards and compensation from the university after training. Organizations are often under pressure to quickly gain ISO 9001 registration. Meeting the requirements of the standard in a short period of time can prove a formidable obstacle for a small organization. Since most

organizations do not possess the necessary expertise internally, they may be inclined to hire external experts to provide the necessary technical expertise and manpower.

However, having a functioning and documented QMS requires more than that; in particular, assurance that all employees clearly know what is expected of them and how they can contribute to the attainment of their organization's goals. This will likely require the preparation and implementation of a training plan tailored specifically to the unique characteristics and maturity level of the organization. With limited studies that have been done regarding the effect of staff training practices on customer satisfaction, this study may be beneficial and can contribute to the literature where the interaction between staff training and customer satisfaction has not been obviously determined. The university should be focused on employee training, because it is believed that it helps to achieve the highest levels of satisfied consumers. Subsequently, universities have to consider the effectiveness of employee training as a strong contributor to attaining organizational goals. This investigation will determine the link and the influence of staff training practices on customer satisfaction in order to fill the gap in the literature.

5.2.2 Management support of quality management system and customer satisfaction

The study found that the management of the universities provided sufficient support for QMS. The null hypothesis that there is no statistically significant relationship between management support and customer satisfaction was therefore rejected. This support is very important as it directly affects the customers of the university. The study found that universities availed required resources on time to ISO 9001 certification requirements. Some of the universities provided surplus resources towards ISO 9001 Certification requirements. This had led the universities to provide a customer-oriented environment.

The universities in the study had developed documents such as service charters and quality manuals outlining how they were going to operationalize the principles of the standard. Service charters showing the services rendered, time taken and the cost implication if any, were found in strategic places in the universities. Quality manuals stated the quality policy as well as the procedures of carrying out the activities in the universities so as to meet the standard set. However, some of the members of staff as was noted sometimes compromised the standards.

The study found that management of the universities had developed quality policies and objectives and internal quality assurance mechanism to ensure adherence to standards, quality and relevance in the institution in line with the provisions of the Universities Act. It was also noted that there was a high level of commitment by the management of the universities towards ISO 9001 Certification. The management was also involved in the practices of ISO 9001.

The study found that most of the universities did follow Standards and Guidelines also known as University Standards for Accreditation and Operations which provided a road map of what a university was expected to do so as to satisfy the needs of its customers. Respondents said that although the universities ensured that the quality policy and objectives were adhered to, university management had challenges in ensuring the provision of customer driven services. The study found that most of the university management ensured establishment and review of quality policy and quality objectives. The universities also had developed service charter and carried customer satisfaction surveys regularly.

5.2.3 Quality audit and customer satisfaction

The study found that there was a weak and insignificant relationship between Quality Audits and customer satisfaction in public universities in Kenya. The null hypothesis that there is no statistically significant relationship between Quality Management System audits and customer satisfaction was accepted. The study found that the universities had two types of audits. These were internal and external audits. Most of the universities sampled undertook auditing regularly as required by ISO 9001 standards. The results showed that a large proportion of internal auditors who participated agreed that internal audit was carried out regularly in the university. However, it was found out that external audit was not carried out regularly. Majority of the respondents disagreed with the statement that reports of the quality audits were acted upon immediately by the university.

It emerged from the study that reports of the quality audits were not made available to the customers of the university. On issue of missing marks, the respondents disagreed with the statement that they were addressed without delay by the university. The respondents disagreed with the statement that delayed completion rates at the university were addressed. In regard to whether the university accounted for all the students at all levels in the university, the largest proportion of the respondents disagreed. The study sought to establish whether all the academic programs offered at the university were approved. Majority of the respondents agreed. On the issue of university ensuring adherence to ratios of full time to part time staff, the findings showed that the respondents overwhelmingly disagreed.

Majority of the respondents agreed that universities ensured compliance with ISO regulatory requirements. On whether quality audits had a relationship with customer satisfaction in public universities in Kenya, a large proportion of respondents disagreed. A QMS is not going to produce the expected results unless it is fully functional. While auditing must therefore verify the existence of the necessary documentation, it must also focus on the functionality of the QMS. The measurement of the functionality and the qualitative and financial impacts of QMS have been the subject of several studies. Included among the categories used to measure functionality and performance improvement, two are particularly noteworthy for our purposes: management commitment and employee involvement.

A Quality Management System cannot be functional in the absence of those the two characteristics. Therefore, as a minimum, internal and external auditors should continually verify top management's commitment to increased organization-wide quality awareness and improvement in addition to employee involvement in the design, implementation, operation, and improvement of quality related processes and procedures.

5.2.4 Quality management system's procedures and customer satisfaction

The study found that there was a significant relationship between Quality Management System's procedures and customer satisfaction in public universities in Kenya. The null hypothesis that there is no statistically significant relationship between Quality Management System's procedures and customer satisfaction was therefore rejected. The study results showed that most universities possessed standardized policies and procedures that ensured customers satisfaction. The respondents agreed that staff at the

university had clear departmental responsibilities for standardization of management processes. Regarding whether the university adhered to QMS procedures, a large proportion of the respondents agreed.

In regard to whether universities adhered to quality policy, majority of the respondents agreed. The universities were found to be performing internal audits and management reviews periodically. The department/section at the university was found to be having a service charter to the clients. However, a majority of the respondents disagreed that the department/section adhered to the service charter. The department/section, it was found, gave complaints and compliments books to be filled when the students visited the department/section.

5.3 Conclusions

The following conclusions were made from the findings supported by the results of the study.

(i) Quality Assurance Officers' training is very important in ensuring customer satisfaction. Most of QAOs recognized that training was important in order to improve their level of competencies and judgment in undertaking their functions as well as capacity to deliver ISO 9001 standards in service delivery. To improve customer satisfaction, QAOs regular training can help in ending the compromising of the quality standards at the universities. Training of QAOs in line with ISO 9001 standards would help the institutions to adhere to set of quality standards given in the university charter and ISO 9001standards. Training of QAOs would help the officers to develop capacity and knowhow to carry out their duties effectively which in the end would improve provision of services and hence enhanced customer satisfaction. The study found that training was done most as on-job training rather than off-job

training. However, training was found to be crucial by QAOs since it would help to improve their capacity, job satisfaction and eventually customer satisfaction.

(ii) From the results about Management Support of Quality Management System, the study found that the management offered a lot of financial support to Quality Management System at various universities that were ISO 9001 certified. Top management was expected to support the activities geared towards attainment of high quality services at the universities; in this case, the management was found to be offering leadership for change process in order to accommodate ISO 9001certification strategies. The study also found that to ensure success of ISO 9001 Certification, it was critical for the management of the universities to support other staff involved in overall quality management programs at the universities. Quality culture needed to be nurtured or inculcated in the universities. The study found that top management took full responsibility of providing favorable environment that was in tandem with ISO 9001 certification, which was supposed to be customer oriented and customer driven services though there were challenges arising from those who compromised the standards set.

(iii) The study established that universities undertook both internal and external audits. However, internal audits were being carried out regularly unlike external audit. The reports of the audits nevertheless were not acted upon such as addressing the issue of delayed completion rates as well as offering programs that were not approved. Additionally, it was found that reports of audits were not made available to customers. The study also found that the universities did not adhere to the

regulations as stipulated in Universities Regulations and their service charters. This could be the cause of dissatisfaction with the services offered by the universities.

(iv) The study found that universities had improved quality management procedures in wake of ISO 9001 certification. The study similarly came to a conclusion that though universities had developed service charters and quality manuals which were hanged at strategic places, the level of adherence was very low. In summary it was found that the implementation of these procedures would lead to customer satisfaction because of enhanced consistency and quality of services. Students as customers expect that they would receive services due to them at the university. However, sometimes because of failure to adhere to the procedures concerns may be raised such as on the issues of missing marks, delayed rates of completion and failure to account for all students.

5.4 Recommendations

The following recommendations were made from the study:

(i) Training programs for quality assurance officers needed to be enhanced by both the university and CUE to make them more effective and timely so that they could meet the intended benefit to improve quality standards of services offered at the universities.

(ii) Top management commitment to success of Quality Management System was needed if culture of quality services was to succeed at universities in line with ISO 9001 certification.

(iii) There was need to audit regularly the extent of compliance by the universities with ISO 9001 Certification standards to establish the extent to which the universities

were adhering to the standards and the results made available to the all stakeholders.

(iv) All stakeholders needed to commit themselves to enforcement and engagement towards implementation of ISO 9001 standards at the university.

5.5 Suggestions for Further Research

The following were suggestions for further research:

i. A comparative study of both private and public universities which are ISO 9001 certified to determine their levels of customer satisfaction.

ii. Relationship between ISO 9001 Certification and efficiency of service delivery at the university.

iii. The role of the university management in customer satisfaction at public universities in Kenya.

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APPENDIX I: QUESTIONNAIRE FOR QUALITY ASSURANCE OFFICERS

My name is Boiyon Edward Kiplangat a PhD student in Educational Management at the University of Kabianga in Kericho County Kenya. The purpose of this questionnaire is to collect information on the relationship between ISO 9001 Certification and Customer Satisfaction in public universities in Kenya. The information provided will be used for the current study only and will be treated with utmost confidentiality. Your participation in the study is voluntary.

Please place a tick (√) inside the box that expresses your answer to the questions or statements.

SECTION A

Personal Data

1. Highest Academic Qualifications:

Doctorate ☐   Masters ☐   Bachelors ☐   Diploma ☐

2. How many years have you worked at this position?

Years	Below 5	6-10	11-15	16-20	21-25	26-30	Above 30
Please tick (√)							

SECTION B

3. a. What is the current entry point for your job position after ISO 9001 certification?………………………………………………………………………

How does this compare with the period before ISO 9001 Certification?……………………………………………………………………………….

b. Why does the university train Quality Assurance Officers?

…………………………………………………………………………………………

…………………………………………………………………………………………

c. How often are these trainings done?..

....

d. The following are statements on the relationship between Quality assurance training and Customer satisfaction in Public Universities in Kenya. For each of the practice, please tick appropriately. The respondents are requested to tick only on the level of agreement with opinion that reflects the quality assurance training in your organization and how it relates to customer satisfaction. The 5 point Likert scale is used where **5 = Strongly Agree (SA), 4 = Agree (A), 3=Neutral (N), 2=Disagree (D), 1=Strongly Disagree (SD).**

		1=SD	2=D	3=N	4=A	5=SA
1	University encourages and supports training of Quality Assurance Officers.					
2	Training of Director Quality Assurance Officers is carried out regularly.					

3	Quality Assurance Officers are encouraged to undertake on-the-job training.				
4	Quality Assurance Officers are encouraged to undertake off-the-job training.				
5	The trainings are meant to ensure that quality services are offered at the university.				
6	The training of Quality Assurance Officers' training has a positive relationship with customer satisfaction at the university				
7	Training programs should be revised or updated to enhance the capacity of Quality Assurance Officers to address issues of quality in the university				
8	The university enhances rewards and compensation for Quality Assurance Officer after the training				
9	Quality Assurance Officer expects enhanced rewards and compensation from the university after training				

Thank you for your participation

The End

APPENDIX II: QUESTIONNAIRE FOR DEANS OF SCHOOLS/FACULTY AND HEADS OF SECTIONS

My name is Boiyon Edward Kiplangat a PhD student in Educational Management at the University of Kabianga in Kericho County Kenya. The purpose of this questionnaire is to collect information on the relationship between ISO 9001 Certification and Customer Satisfaction in public universities in Kenya. The information provided will be used for the current study only and will be treated with utmost confidentiality. Your participation in the study is voluntary.

Please place a tick (√) **inside the box that expresses your answer to the questions or statements.**

SECTION A

Personal Data

1. Highest Academic Qualifications:

   Doctorate ☐   Masters ☐   Bachelors ☐   Diploma ☐

2. How many years have you worked at this position?

Years	Below 5	6-10	11-15	16-20	21-25	26-30	Above 30
Please tick (√)							

SECTION B

3. a. The respondents are requested to tick only on the level of agreement with opinion that related the Quality Management System procedures in your organization and how

they related to Customer Satisfaction. The 5 point Likert scale is used where 5 = Strongly

Agree, 4 = Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree

Statements related to QMS procedures	1=SD	2=D	3=N	4=A	5=SA
University possess standardized policies and procedures that ensure customers satisfaction					
Staff at university have clear departmental responsibilities which ensure that management processes are standardized					
University adheres to QMS procedures					
University has and adheres to Quality Policy					
University performs internal audits and management reviews periodically					
The department/section has a service charter to the clients					
The department/section adheres to the service charter					
The department/section gives complaints and compliments books to be filled when the students visit the department/section					
QMS procedures have a positive influence on customer satisfaction at the university					

b.   What   is   the   role   of   the   university   on   quality   policy   and objectives?...
....

c. How does the university view ISO 9001 certification in relation to customer satisfaction   at   the university?...
....

d. How does the university ensure that quality policy and objectives are adhered to?...

....

Thank you for your participation

The End

APPENDIX III: QUESTIONNAIORE FOR INTERNAL AUDITORS

My name is Boiyon Edward Kiplangat a PhD student in Educational Management at the University of Kabianga in Kericho County Kenya. The purpose of this questionnaire is to collect information on the relationship between ISO 9001 Certification and Customer Satisfaction in public universities in Kenya. The information provided will be used for the current study only and will be treated with utmost confidentiality. Your participation in the study is voluntary.

Please place a tick (√) inside the box that expresses your answer to the questions or statements.

<u>**SECTION A**</u>

Personal Data

1. Highest Academic Qualifications:

Doctorate ☐   Masters ☐   Bachelors ☐   Diploma ☐

2. How many years have you worked at this position?

Years	Below 5	6-10	11-15	16-20	21-25	26-30	Above 30
Please tick (√)							

<u>**SECTION B**</u>

3.a. Explain the role of the university in the development of quality policy and objectives?

....

....

b. How does the university ensure that the quality policy and objectives are adhered to?

………………………………………………………………

……………………………………………………………………………………..

c. The respondents are requested to tick only on the level of agreement with opinions expressed by the items relating to Quality Management System audit relates and Customer Satisfaction. The 5 point Likert scale is used, where **5 = Strongly agree (SA), 4 = Agree (A), 3=Neutral (N), 2=Disagree (D), 1=Strongly disagree (SD).**

	System audit	**1= SD**	**2=D**	**3= N**	**4=A**	**5=SA**
1.	Internal audit is carried out regularly in the university.					
2.	External audit is carried out regularly in the university.					
3.	Reports of the quality audits are acted upon immediately by the university.					
4.	Reports of the quality audits are made available to the customers of the university.					
5.	University ensures compliance with ISO 9001 Certification and other university requirements dealing with quality of services					
6.	Delayed completion rates at the university are addressed by the university					
7.	University accounts for all the students at all levels in the university					

8.	All the academic programs offered at the university are approved					
9.	Quality audits have a relationship with customer satisfaction in public universities in Kenya					

Thank you for your participation.

The End

APPENDIX IV: INTERVIEW GUIDE FOR ISO COORDINATORS

My name is Boiyon Edward Kiplangat a PhD student in Educational Management at the University of Kabianga in Kericho County Kenya. The purpose of this interview is to collect information on the relationship between ISO 9001 Certification and Customer Satisfaction in public universities in Kenya. The information provided will be used for the current study only and will be treated with utmost confidentiality. Your participation in the study is voluntary.

1. How would you explain the position of the university in terms of availing resources towards ISO certification requirements?

....

....

2. How would you describe the level of commitment of the university management in ensuring that the university maintains ISO 9001 certification?

....

…………………………………………………………………………………………..

3. Explain to what extend you would describe the involvement of the university management in practices of ISO?

....

....

4. Explain how the management at the university views ISO 9001 certification in relation to customer satisfaction…………………………………………………………...................................

....

5. It is a requirement that universities carry out customer surveys to determine the level of satisfaction of their customers. Explain whether that happens and what the scores of such surveys

are...

....

APPENDIX V: QUESTIONNAIRE FOR STUDENTS

My name is Boiyon Edward Kiplangat a PhD student of Educational Management at the University of Kabianga Kericho County. The purpose of this questionnaire is to investigate the Relationship between ISO 9001 Certification and Customer Satisfaction in public universities in Kenya. The information provided will be used only for the current study. The responses will be treated with utmost confidentiality. Your participation is voluntary.

Please place a tick (√) inside the box that expresses your answer to the questions or statements.

SECTION A

Personal Data

1. Age category

☐   ☐   ☐   ☐

  18 years and 25   25-35 years   35-45 Years   45 years and above

2. Gender: Female ☐   Male   ☐

3. Faculty/School…………………………………………………………………

4. Which year did the join the university? ....

5. How many years have you been in this university?

Years	Below 1	1-2	3-4	5-6	Above 7
Please tick (√)					

SECTION B

The following statements and questions relate to Customer Satisfaction. Please tick in the box the extent to which you perceive the following statements relating to Customer Satisfaction, where 1 = Strongly Disagree (SD), 2 = Disagree (D), 3= Neutral (N), 4 =Agree (A) and 5=Strongly agree (SA). The number represents the strength or degree of your opinion regarding student's satisfaction with services offered at the University.

	Service Quality	**1=SD**	**2= D**	**3= N**	**4=A**	**5=SA**
1	The university provides services as promised in the service charter					
2	The university is reliable in handling my service problems					
3	My academic results have no errors					
4	There are no marks that are missing					
5	I am likely to complete my course in time					
6	The university registrar's office maintains error free records					
7	Our examinations start at the right time					
8	Our examination results are published at the right time					
9	The university communicates effectively any developments and the university calendar					

10	The support staff are quick and willing to help me and respond to my queries					
11	I believe the university gives quality education					
12	The conduct of my lecturers instill confidence in me					
13	The university provides safe and conducive learning environment					
14	The front office staff have knowledge to answer my enquiries					
15	I am satisfied by the evaluation done by my lecturers					
16	My lecturers are approachable and willing to help me					
17	My lecturers display competence in teaching					
18	My lecturers are available for consultation outside class time					
19	The employees have the customers' best interest at heart					
20	The front office staff are punctual in opening the office					
21	The university operation time is convenient to me					
22	The university has adequate and modern resources for curriculum implementation					
23	The university has a neat and well stocked library facility					
24						

	The website of my university is informative					
25	The university has conducive accommodation facilities					
26	The university has conducive facilities for extra curriculum					
27	The course content is taught as outlined in the curriculum					
28	The examinations are within the course content taught					
29	The curriculum prepares me adequately for the job market					
30	The process followed to get admission to the university is clear					
31	The process of making payment to the university is convenient					
32	The new student orientation process is informative					
33	Given an opportunity I would move to another university					
34	Overall, I am satisfied by this university					
35	I am willing to come back for further studies in this university					
36	I am willing to recommend this university to someone else					

SECTION C: LEVEL OF MANAGEMENT SUPPORT OF QUALITY MANAGEMENT SYSTEM

The following are statements on the relationship level of management Support of Quality Management System in the ISO 9001 Certified Universities. The respondents are requested to tick one of the number [1] to [5]. The number represent the strength or degree of your opinion regarding level of level of Management Support of Quality Management System in the ISO 9001 Certified Universities. The 5 point Likert scale is used where 1 = Strongly Disagree (SD), 2 = Disagree (D), 3= Neutral (N), 4 =Agree (A) and 5=Strongly agree (SA).

		1=SD	2=D	3=U	4=A	5=SA
1	University management is committed to provide the resources for the education services					
2	Management ensures that staff and administration are easily accessible to the students					
3	University management ensured establishment and review of quality policy and quality objectives					
4	University management provide a customer-oriented environment in the university					
5	Management ensures students views are sought in order to enhance the ISO certification					

		1 SD	2 D	3 U	4=A	5=SA
6	Management has high level of commitment in ensuring that Universities maintain ISO Certifications					
7	Management ensures establishment of opportunities/capacity of building QMS which aids in enhancing students performance					

SECTION D: QUALITY ASSURANCE OFFICERS TRAINING

The following are statements relating to Quality Assurance Officers' training in the ISO 9001 certified public universities. The respondents are requested to tick one of the numbers [1] to [5]. The number represents the strength or degree of your opinion regarding level of quality assurance training in the ISO 9001 Certified Universities. The 5-point Likert scale is used where 1 = Strongly Disagree (SD), 2 = Disagree (D), 3= Neutral (N), 4 =Agree (A) and 5=Strongly Disagree (SD)

		1 SD	2 D	3 U	4=A	5=SA
1	The academic programs aims and objectives are understood by the students					
2	Students are given opportunities to become involved in programs operation					
3	Assessment ensures that the students attain requisite standards					

4	Students provide training feedback on courses and teachings					
5	There is a system for taking students' and lectures' views on improving quality in line with ISO 9001 standards					
6	The Quality Assurance Officers' training is meant to ensure that quality services are offered at the university					
7	The training programs are revised					

SECTION E QUALITY MANAGEMENT SYSTEM AUDIT

The following are statements relating to Quality Management System Audit in the ISO 9001 certified public universities. The respondents are requested to tick one of the numbers [1] to [5]. The number represents the strength or degree of your opinion. The 5-point Likert scale is used where 1 = Strongly Disagree (SD), 2 = Disagree 1 (N), 3= Neutral (A), 4 =Agree and 5=Strongly agree (SA).

	System audit	1=SD	2 =D	3 =N	4=A	5=SA
1	Reports of the quality audits are acted upon immediately by the university					
2	Reports of the quality audits are made available to the Students of the university					
3	University ensures compliance with ISO 9001					

	Certification and other university requirements dealing with quality of services					
4	University organizes for and ensures that quality audits are carried out in the university services regularly					
5	University ensures compliance with regulatory requirements					
6	Issues of missing marks are addressed without delay by the university					
7	University upgrades auditing process to address students' needs					
8	University accounts for all the students at all levels in the university					
9	Quality audits bring customer satisfaction in the university					

SECTION QUALITY MANAGEMENT SYSTEM PROCEDURES

The following are statements relating to Quality Management System procedures in the ISO 9001 certified public universities. The respondents are requested to tick one of the numbers [1] to [5]. The numbers represent the strength or degree of your opinion. The 5-point Likert scale is used where 1 = Strongly Disagree (SD), 2 = Disagree l (N), 3= Neutral (A), 4 =Agree (A) and 5=Strongly agree (SA).

	Statements related to QMS procedures	1=SD	2=D	3=N	4=A	5=SA
1	University possesses standardized policies and procedures that ensure customers satisfaction					
2	Staff at university have clear departmental responsibilities which ensure that management processes are standardized					
3	University adheres to Quality Management System procedures which are: document control, control of records internal auditing, control of non-conforming products corrective action and preventive action					
4	University has and adheres to Quality Policy					
5	University performs internal audits and management reviews periodically					
6	The department/section has a service charter to the clients					
7	The department/section adheres to the service charter					
8	The department/section gives complaints and compliments books to be filled when the students visit the department/section					

Thank you for your participation

The End

APPENDIX VI: UNIVERSITIES THAT HAD BEEN AWARDED ISO 9001 QMS CERTIFICATION AS AT JULY 2019

UNIVERSITY	DATE
1. University of Nairobi	6/4/2009
2. Jomo Kenyatta University of Agriculture and Technology	29/7/2009
3. Moi University	4/12/2009
4. Muranga University	5/3/2012
5. Jaramogi Oginga Odinga University of Science and Technology	20/6/2012
6. University of Kabianga	15/8/2012
7. Meru Universityof Science and Technology	21/5/2013
8. Machakos University	8/5/2014
9. The Cooperative University of Kenya	11/7/2014
10. Maasai Mara University	30/10/2014
11. South Eastern Kenya University	25/11/2014
12. University of Embu	2/12/2014
13. Multi Media University	23/2/2016
14. Technical University of Kenya	3/5/2016
15. University of Eldoret	20/6/2016

Source: KEBS, 2019

APPENDEX VII : PROBIT REGRESSION MODEL

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta 4 X_4 + \varepsilon$

Where:

Y = Customer Satisfaction in Public Universities in Kenya

β_0 = Constant Term

β= coefficients of determination

X_1= Quality Assurance training

X_2= Quality Management System procedures

X_3= Quality Management System audit

X_4= Management Support of Quality Management

ε = Error Term

APPENDIX VIII: DEGREE OF CUSTOMER SATISFACTION WITH SERVICES

N=300	Strongly Agree		Agree		Neutral		Disagree		Strong Disagree	
	F	%	F	%	F	%	F	%	F	%
Services provided as in the service charter	122	40.6	110	36.7	30	10.0	19	6.33	19	6.33
The university handles service problems effectively	105	35.0	120	40.0	30	10.0	30	10.0	15	5.0
My academic results have no errors	210	70.0	60	20.0	30	10.0	0	0.0	0	0.0
There are no marks that are unaccounted for	210	70.0	90	30.0	0	0	0	0	0	0
Courses completed in time	0	0	15	5.0	135	45.0	90	30.0	60	20.0
Registrar has error free records	165	55.0	90	30.0	30	10.0	15	5.0	0	0
Our examinations start at the right time	0	0	36	12.0	207	69.0	48	16.0	9	3.0
Exams reports produced on time	30	10.0	90	30.0	90	30.0	60	20.0	30	10.0
The university communicates follows its calendar	30	10.0	90	30.0	90	30.0	60	20.0	30	10.0
Support staffs respond to queries	0	0	30	10.0	90	30.0	60	20.0	120	40.0
University gives quality education	90	30.0	90	30.0	90	30.0	30	10.0	0	0.0
Lecturers instill confidence	0	0	0	0	60	20.0	90	30.0	150	50.0
University provides conducive and safe learning environment	210	65.0	60	20.0	30	10.0	15	5.0	0	0.0
Front office staff answer queries	210	70.0	90	30.0	0	0	0	0	0	0
Students satisfied with their evaluation by lecturers	0	0	15	5.0	135	45.	90	30.	60	20.0

						0		0	
Lecturers are approachable	165	55.0	90	30.0	30	10.0	15	5.0	0	0
Lecturers are competent in teaching	90	30.0	57	19.0	117	39.0	36	12.0	0	0
Lecturers available for consultation	210	70.0	90	30.0	0	0	0	0	0	0
Staff have students' best interest	122	40.6	110	36.7	30	10.0	19	6.33	19	6.33
Staffs are punctual always	105	35.0	120	40.0	30	10.0	30	10.0	15	5.0
University has adequate and modern resources for curriculum implementation	210	70.0	60	20.0	30	10.0	0	0.0	0	0.0
University has enough resources in the library	210	70.0	90	30.0	0	0	0	0	0	0
The website of university is informative	0	0	15	5.0	135	45.0	90	30.0	60	20.0
The accommodation at the university is conducive	165	55.0	90	30.0	30	10.0	15	5.0	0	0
The university has enough facilities for extra curriculum	0	0	36	12.0	207	69.0	48	16.0	9	3.0

APPENDEX IX : MAP SHOWING UNIVERSITIES LOCATION
MAP

COUNTIES OF KENYA
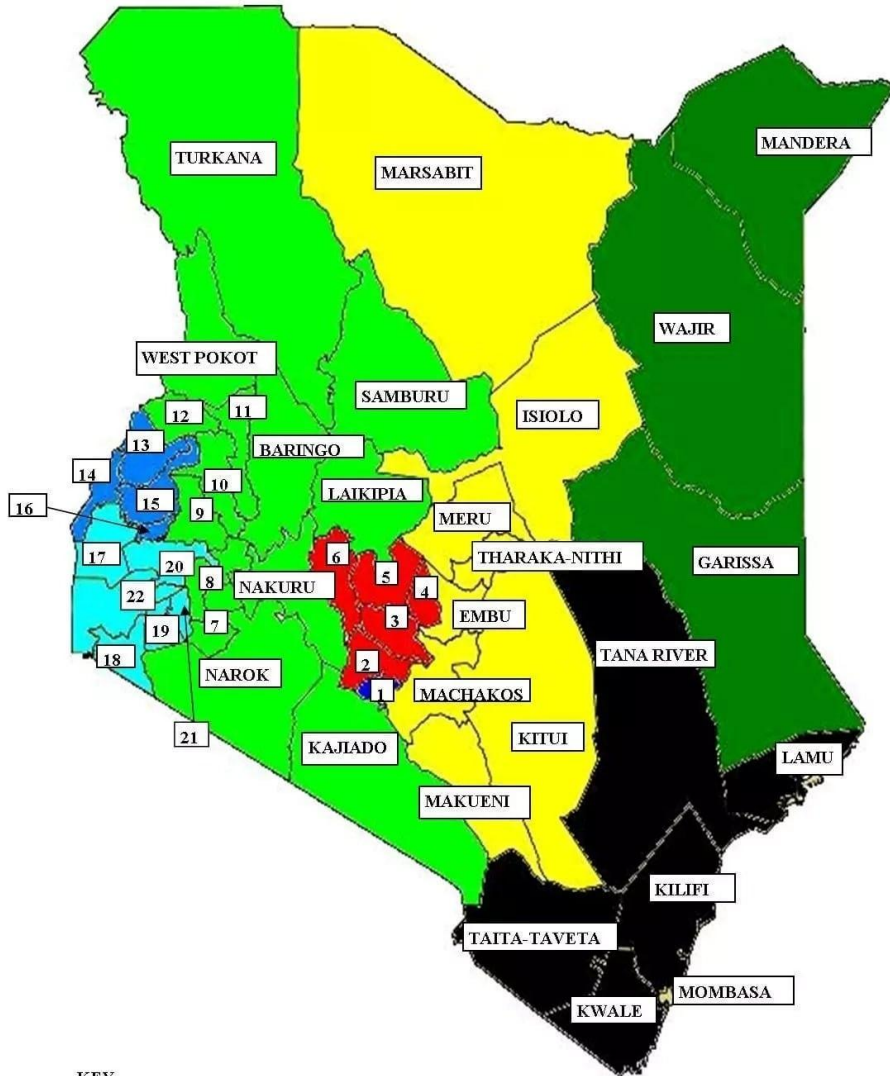
KEY

1. NAIROBI	**8.** KERICHO	**15.** KAKAMEGA	**22.** HOMA BAY
2. KIAMBU	**9.** TRANS NZOIA	**16.** VIHIGA	
3. MURANG'A	**10.** UASIN GISHU	**17.** SIAYA	
4. KIRINYAGA	**11.** ELGEYO-MARAKWET	**18.** MIGORI	
5. NYERI	**12.** NANDI	**19.** KISII	
6. NYANDARUA	**13.** BUNGOMA	**20.** KISUMU	
7. BOMET	**14.** BUSIA	**21.** NYAMIRA	

APPENDIX X: SAMPLING TABLE

Required Sample Size[†]

Population Size	Confidence = 95%				Confidence = 99%			
	Margin of Error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
300,000,000	384	784	1537	9603	663	1354	2654	16586

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APPENDIX XI: CERTIFICATE OF ETHICAL CLEARANCE

UNIVERSITY OF KABIANGA

ISO 9001:2015 CERTIFIED
OFFICE OF THE DIRECTOR, BOARD OF GRADUATE STUDIES

REF: PHD/DEM/0009/16

Date: 8th August, 2019

Edward Kiplangat Boiyon,
EAPM Department,
University of Kabianga,
P.O Box 2030- 20200,
KERICHO.

Dear Mr. Boiyon,

RE: CLEARANCE TO COMMENCE FIELD WORK

I am glad to inform you the Board of Graduate Studies during its meeting on 17th July, 2019 approved your research proposal entitled **"Relationship between ISO 9001 Certification and Customer Satisfaction in Public Universities in Kenya".**

I am also acknowledging receipt of two copies of your corrected Proposal.

You are now free to commence your field work on condition that you obtain a research permit from NACOSTI.

Please note that, you are expected to publish at least two (2) papers in a peer reviewed journal before final examination (oral defence) of your Doctoral thesis.

Thank you.

Yours Sincerely,

0 8 AUG 2019

Prof. J. K. Kibett
DIRECTOR, BOARD OF GRADUATE STUDIES.

cc   1. Dean, SE
       2. HOD, EAPM Department
       3. Supervisors

APPENDIX XII: LETTER OF INTRODUCTION FROM SCHOOL OF POST GRADUATE

UNIVERSITY OF KABIANGA
ISO 9001:2015 CERTIFIED
OFFICE OF THE DIRECTOR, BOARD OF GRADUATE STUDIES

Tel.020-2172665
Email: bgs@kabianga.ac.ke

P O Box 2030-20200
KERICHO, KENYA

OUR REF: UOK/BGS/020/VOL.2/245

DATE: 1ST OCTOBER, 2019

TO WHOM IT MAY CONCERN

RE: RECOMMENDATION; MR. EDWARD BOIYON – REG. NO: PHD/DEM/0009/16

I wish to certify that the person whose particulars appear above is a bona fide student of the University of Kabianga undertaking a PhD study in Educational Management. He is currently collecting data for his PhD study entitled "Relationship between ISO 9001 Certification and Customer Satisfaction in Public Universities In Kenya."

His research proposal was presented to the Board of Graduate studies on 17th July, 2019. The proposal was approved, however, since the study did not involve human or animal health specimens, it was exempted from the University's Research and Ethic's Committee approval.

Any assistance accorded to him will be highly appreciated.

Yours faithfully,

0 1 OCT 2019

Prof. J. K. Kibett
DIRECTOR, BOARD OF GRADUATE STUDIES

Cc   Chair, IREC Committee

APPENDIX XIII: RESEARCH AUTHORISATION : PERMIT

REPUBLIC OF KENYA

NACOSTI

NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 407016

Date of Issue: 09/September/2019

RESEARCH LICENSE

This is to Certify that Mr., EDWARD BOIYON of University of Kabianga, has been licensed to conduct research in Kericho, Machakos, Muranga, Nairobi, Narok, Siaya, Uasin-Gishu on the topic: Relationship between ISO 9001 Certification and Customer Satisfaction in Public Universities in Kenya for the period ending : 09/September/2020.

License No: NACOSTI/P/19/1380

407016

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION

Verification QR Code

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