

**EFFECT OF ISO 9001 IMPLEMENTATION ASPECT OF LEADERSHIP AND
CUSTOMER FOCUS ON PERFORMANCE OF TVET INSTITUTIONS IN WESTERN
REGION, KENYA**

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ABSTRACT

International Organization for Standardization 9001 Quality Management System (QMS) have been applied around the world and in all sectors of the economy. QMS was initially designed for the manufacturing sector and have recently become a popular choice for educational systems worldwide. QMS have been a target in performance contracts for all public institutions in Kenya. Despite the fact that ISO 9001 have been implemented by many public institutions, only 43% of technical vocational education and training institutions have been ISO 9001 certified. Prior studies have focused on ISO 9001 implementation in SME's, universities and manufacturing sectors in Kenya but have ignored specific leadership and customer focus aspects in its implementation in TVET institutions in the western region of Kenya. Therefore the relationship between leadership and customer focus aspects in ISO 9001 implementation and performance of TVET institutions is not known. The main study purpose is to determine effect of ISO 9001 implementation on performance of TVET institutions in western region of Kenya. Specific objectives are to: establish effect of leadership on performance of TVET institutions western region of Kenya and establish effect of customer focus on performance of TVET institutions western region in Kenya. The study is guided by leadership for quality theory in a conceptual framework where leadership and customer focus are independent variables and performance is the dependent variable. The study used correlation survey design with a target population of 61: 7466 students; and 595 staff. A sample of 366 (339 students and 27 staff) were generated through stratified sampling. Questionnaires were used to collect primary data and were reliable ($\alpha = 0.729$). Using regression analysis, results showed that leadership ($\beta_1 = -.244, p = .000$) and customer focus ($\beta_2 = -.387, p = .000$) aspects of ISO 9001 implementation have significant negative relationship with performance meaning both leadership and customer focus reduced performance. The study concludes that leadership and customer focus aspects of ISO 9001 implementation have a significantly negative effect on performance of TVET institutions in western region of Kenya. The study recommends that TVET institutions should improve leadership and customer focus aspects of ISO 9001 implementation in order to achieve improved performance. The study is significant to the management of TVET institutions and adds to the body of knowledge to academicians in the field of strategic management and Total Quality Management.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

ISO 9001 standards provide a framework for quality management in organizations. The challenge to the organization is to invest in the monitoring of quality in such a way as to improve profitability and effectiveness. Although this quality management system was designed for manufacturing, ISO 9001 standard have become a popular choice for educational systems worldwide (Bevans-Gonzales & Nair, 2004; Karapetrovic, 2002; Peters, 1999; Singh & Sareen, 2006; Thonhauser, 2005; Zuckerman & Rhodes, 2000). The literature surrounding ISO 9001 implementation in education indicates that the application of ISO 9001 standards to education remains debatable, the implementation process is time-consuming and difficult, and the subject is understudied empirically (Lundqvist, 1997; Thonhauser & Passmore, 2006).

ISO is an acronym for International Organization for Standardization. The word has its origin in the Greek word '*isos*' which means equal (Summers, 2000). ISO has developed more than 18,000 International Standards and some 1,100 new ISO standards are published every year. The ISO Survey of Certifications (2012) revealed that there are more than 1,300,000 ISO 9001 certificates in the world in more than 176 countries. Approximately 50% of businesses are certified, or in process to upgrade to the new ISO 9001 9001:2008 standard. This data when compared to Kenya, out of the 54 TVET institutions only 43% were ISO certified as at Feb 2015 (KEBS 2015). This percentage compares well with other businesses in the world. What is not known is the effect of leadership and customer focus on performance of TVET institutions.

According to Heizer & Render (2009) quality has become so important that the world is uniting around a single quality standard which is the ISO 9001. Poksinska *et al*, (2005) defined ISO 9001 as a family of standards which relate to QMS that are designed to assist organizations in meeting their customer and stakeholders needs. ISO 9001 is an International Standard for quality requirements that strategic managers implement with the interest of their customers on the quality of goods and services they provide to ensure continual improvement in business to business dealings. The standard is generic, meaning that it can be applied to any organization

whether large or small, private or public regardless of the product or service delivered. ISO 9001 certification means that an organization is constantly delivering products and services that meet customer's quality and regulatory requirements while at the same time enhancing customer's satisfaction and sustaining performance. ISO 9001:2008 International Standard contains all requirements that an organization must address within their QMS, if they wish to be certified against the standard and all these are then implemented in the organization if they wish to maintain the certificate. According to Kenya Bureau of Standards (KEBS, 2000), ISO 9001 certificate must be renewed after every three years. During the implementation process, an organization has to review performance through regular internal audits and surveillance audits by certifying body to determine whether the QMS is working and what improvements needs to be made. ISO 9001 quality management aspects of implementation are fundamental of quality management. These aspects enable the top management to introduce good management practices in the organization. The aspects are leadership, customer focus, and involvement of people, process approach, systems approach, factual decision making and mutually beneficial supplier relationship.

Leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives. Part of the organization's management responsibility is its commitment toward ISO 9001 standard implementation. Top management commitment is explicitly apparent if an organization has: 1) set clear business goals; 2) manufacturing expertise; and 3) adopts the team work philosophy (Goffin & Szejczewski, 1996). Terziovski, *et al.* (2003) has shown that the willingness and innovation of the organization in implementing ISO 9001 quality system has increased the efficiency of business performance. Laszlo, (1998) has established in his Canadian case study that management commitment towards ISO 9001 implementation would also increase performance, overcome problems, and conflicts. Mohammad, *et al.*, (2010) have shown that top management commitment and support is very crucial to make improvement happen in the organization. Kumar & Harms (2002) have emphasized that organization should be very committed in educating its workforce toward ISO 9001 implementation. This will bring the issue of the awareness among organization staff.

Al-Refaie *et al.* (2012) has shown that ISO 9001 implementation has significant effect on performance of business firms. A research conducted by Capistrano (2008) in Philippines on 49 companies reported that ISO 9001 is not impacting company's financial performance in Philippines positively. Marti'nez-Costa & Marti'nez-Lorente (2007) analysed impact of ISO 9001 certification on companies' performance by using a sample of 713 companies. The results of the study depict that the companies' performance has worsened after ISO 9001 certification. Sadikoglu & Oclay (2014) in his study shows that overall TQM improves performance, however he establishes that leadership does not affect performance. The aforesaid research studies clearly indicate that leadership has significant effect on performance of business firms. The influence of leadership aspect of ISO 9001 implementation towards performance of TVET institutions is not known.

Customer is a key player in the whole ISO 9001 implementation process. The customer is the determinant factor that can provide a reasonable picture of a quality management system implementation. In order to address the customer focus aspect of quality standard, it would be necessary to define customers. In many specialized texts, customers are the end users. However, some customers are considered to be the producers of the services; these are called internal customers. Groocock, (2000) asserts that customers are categorized into three: a) Powerful; b) Weak; and c) Patient. Powerful customers are more influential on their suppliers than weak and patient customers. According to Terziovski, *et al* (2003) customer could put pressure on the organization to seek ISO 9001 certification. Malik *et al.* (2010) established that TQM policies and practices implementation increases performance in terms of quality and profitability. Sharma (2005) showed that ISO 9001 certification has an association with the financial performance of the organization. Total quality management (TQM) enhances the competitiveness which also enhances customer satisfaction when customer satisfaction and competitiveness increases ultimately business performance increases. Singh (2008) in his study on the relationship between ISO 9001 quality management practices and Australian firm's performance results showed that strong focus on customers could be of little value in creating steady processes hence insignificant in improving business performance. The reviewed research studies contrast in relation to customer focus aspect of ISO 9001 implementation and

performance for different businesses units. What is not certain to TVET institutions is the relationship between customer focus and their performance.

A study by Eagle and Brennan (2007) recommended the inclusion of the term "customers" to refer to students if it could retain positive aspects - promoting the legitimate interests of students in the higher education system - while avoiding such potentially negative aspects as the problematic idea that "the customer is always right". This view can be applied to educational institutions including Technical and Vocational Education and Training (TVET) learning institutions.

In Kenya, the primary objective of all TVET programs is the acquisition of relevant knowledge, practical skills and attitudes for gainful employment in a particular trade or occupational area.

According to sessional paper Number 1 of 2005 and Number 14 of 2012, there has been need to reform education and training in Kenya's tertiary education, including TVET. TVET is premised on the principle "education and training for the workplace".

"...The TVET philosophy is based on national development agenda and in particular, Vision 2030. The Vision 2030 places great emphasis on the link between education and the labour market, the need to create entrepreneurial skills and competences, and strong public and private sector partnerships. This has considerable importance for the kind of education and training system required to deliver the requisite skills, competencies and attitudes. As such there will be need to address issues related to quality, service delivery, curriculum, relevance, teacher development and management at all levels as well as trainers in the areas of technology and entrepreneurial skill development (GOK, 2012)".

The TVET Act (2013) established the TVET Authority whose mandate is to promote access, equity, quality and relevance in Technical and Vocational Education and Training by regulating, inspecting, registering, accrediting and licensing institutions and programmes.

The overall goal of TVET is to provide relevant and adequate skills for industrial and economic development in line with the aspirations identified in Kenya's Vision 2030 and the Constitution of Kenya (2010). The main objective of TVET is to develop and effectively co-ordinate and harmonize TVET system that will be capable of producing quality skilled human resource with the right attitudes and values required for growth and prosperity of the various sectors of the economy.

In the last decades, several factors have contributed to raising public concern over higher education institutions quality, leading to the emergence of quality measurement and improvement devices such as performance indicators, accreditation, programme and institutional assessment and quality audits and there have been attempts to import models from the private sector into higher education systems and institutions (Sarrico, *et al*, 2010). This has led to the emergence of a debate on the applicability of the quality management principles, methodologies and tools to the higher education sector. Several concerns have been raised about the non-applicability at all of these management principles, especially because they were derived from industry and had nothing to do with higher education ethos (Harvey, 1995; Maassy, 2003; Birnbaum 2000; Kells, 1995; Pratasavitskaya & Stensaker, 2010). Whether the implementation of ISO 9001 quality management dimensions of leadership and customer focus are applicable in TVET institutions is not known.

In Kenya, the implementation of ISO 9001 QMS by tertiary institutions including TVET institutions commenced in the financial year 2008/2009 as a target in performance contract. The purpose was to ensure that all public institutions provide quality services to their customers. Despite all these effort made by the Government of Kenya, TVET institutions in western region have had less than optimal performance. The Ministry of Education Science and Technology in Kenya statistics show that there are 54 public technical and vocational training institutions in Kenya of which 14 are located in western region, (MOEST, 2013). KEBS (2015) certification records indicate that 43% of technical training institutions are ISO 9001 certified in Kenya. In western region of Kenya only 35% of technical and vocational training institutions are ISO 9001 certified.

1.2. Statement of the Problem

Most organizations, including TVET institutions identify leadership and customer satisfaction as the ultimate goal to be achieved in order to gain and sustain competitive advantage over competitors. The customer base of TVET institutions, which comprise of students, have reportedly expressed dissatisfaction as evidenced during the students strike that have taken place in seven TVET institutions over the past five years. The causes of the said strikes have been reported as poor management and insufficient facilities. Invariably, this may be interpreted to

imply challenges in leadership and unsatisfactory customer focus. Since 2010, various TVET institutions in Kenya have been ISO 9001 certified. ISO 9001 implementation entails embracing the quality management principles namely; leadership, customer focus, involvement of people, process approach, systems approach, continuous improvements, factual decision making and mutual beneficial supplier relationship. Leadership has been identified as core to sustaining QMS 9001 implementation and certification. Customer focus on the other hand is considered the most important aspect with regard to ISO 9001 implementation. This study strives to determine the effect of ISO 9001 implementation aspect of leadership and customer focus on performance of TVET institutions in western region, Kenya.

1.3 Objectives of the Study

The main objective of this study is to examine the effect of ISO 9001 implementation aspect of leadership and customer focus on performance of TVET institutions in western region, Kenya.

The specific objectives of the study are to:

Establish effect of leadership on performance of TVET institutions in western region of Kenya.

Establish effect of customer focus on performance of TVET institutions in western region of Kenya.

1.4. Research Questions

This study was guided with the following research questions:

What is the effect of leadership on performance of TVET institutions in western region in Kenya?

What is the effect of customer focus on performance of TVET institutions in western region of Kenya?

1.5 Scope of the study

The study is limited to ISO 9001 certified public TVET institutions registered by the Ministry of Higher Education, Science and Technology operating in Western region of Kenya. The scope of the study is limited to two ISO 9001 implementation dimensions namely the role of leadership in steering ISO 9001 implementation and how TVET institutions responds to customer issues.

1.6. Justification of the study

The implementation of ISO 9001 in public sector firms and especially higher and middle level institutions is going to greatly improve service delivery and its applicability. This study will provide insights to top management in TVET institutions to carefully choose an implementation strategy that will ensure competitiveness and how best organizations can tackle issues relating to their customers. The findings of this study should guide the government on framing useful policy guidelines on these institutions. Management of TVET institutions should use the findings to streamline their management approaches and practices. Academicians should anchor future research on the recommendations hereof and find additional literature on Strategic Management and Total Quality Management on the study in addition to the already existing ones.

1.7 Conceptual Framework

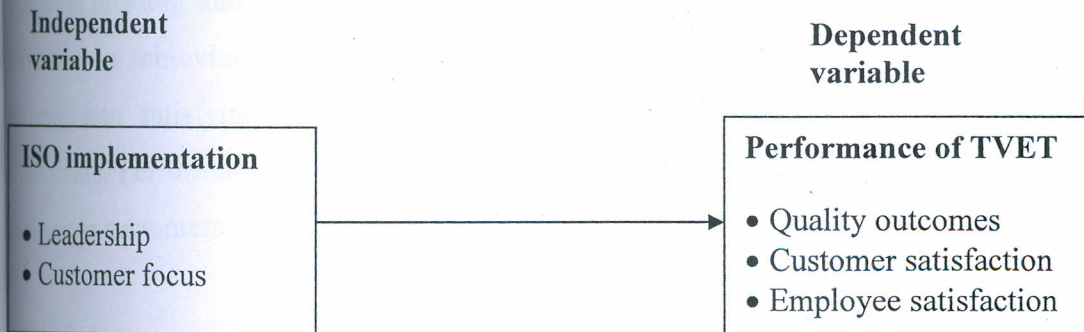


Figure 1.2: A relationship between ISO 9001 implementation and performance of TVET institutions in western region.

Source: *Self Conceptualization*, (2014)

This study identifies the independent variables as ISO 9001 implementation which consists of leadership and customer focus. The dependent variable is performance of TVET institutions which consists of quality outcomes, customer satisfaction and employee satisfaction. These are categorical variables with levels measured on a scale of 1 to 5. The relationship hypothesizes that perceived good leadership and customer focus leads to improved performance. The researcher has considered two ISO 9001 implementation dimensions since the respondents chosen for the study among others were students whose perceptions were critical in the study. This hypothesis is also supported by (Ahire & O'shaughnessy, 1998).

CHAPTER TWO

LITERATURE REVIEW

This study reviewed both theoretical and empirical literature relevant to the research area of study.

2.1 Theoretical literature Review

2.1.1 Leadership for Quality theory.

This study integrates leadership and customer focus by embedding key leadership constructs in organizational processes and performance. ISO 9001 implementation requires use of various ISO principles which includes; leadership, customer focus, Involvement of people, process approach, system approach, continual improvement, factual approach to decision making and mutual beneficial supplier relationship. This study focuses on two aspects of ISO 9001 implementation of leadership and customer focus and their influence on organizational performance. Leadership involves creating and maintaining the internal environment in which people can become fully involved in achieving the organization's objectives while customer focus means putting one's energy into satisfying customers and understanding that profitability comes from satisfied customers. Performance is measure of how well organizations are managed and the value they deliver to customers and other stakeholders.

This study is guided by leadership for quality theory propounded by Lasksham (2006).

According to Larsson & Vinberg (2010), Lasksham, (2006) does present a theoretical model which integrates value of TQM, leader's traits and leader behaviours with the outcomes of leader effectiveness and units' performance.

The theory postulates that the degree to which leaders communicate the importance of internal and external customers to the unit members will be positively related to the unit's performance. The degree to which leaders view their internal and external customers as partners in a cooperative relationship will also be positively related to the unit's performance.

It is evident of the leadership for quality theory that leadership aspect of ISO 9001 implementation is imperative for effective units performance, the theory actually informs customer focus for a leadership point of view and therefore influences performance.

2.2 Empirical Literature Review

2.2.1 Leadership and Performance

Nderitu *et al.* (2013) conducted a study to determine the effect of quality management practices on the performance of public primary schools within Nakuru municipality, Kenya. The study used a census survey of all the 60 head teachers. Descriptive survey design and regression analysis technique was used to analyze data. The study results established that quality management practices (top management commitment at $p = .045$, $p < 0.05$ teamwork, continuous improvements at $p = .013$, $p < 0.05$, were found to significantly influence academic performance among schools. Nevertheless elements such as Training ($p = .052$, $p > 0.05$ and Customer focus at $p = .065$, $p > 0.05$ were not found to significantly influence academic performance in the schools. The study concluded that school heads should put more effort in customer relations.

Alharbi & Yusoff, (2012) conducted a study was to determine the relationships between leadership styles (transformational leadership style, transactional leadership style and laissez-faire leadership styles), and quality management practices in Saudi public hospitals. A cross-sectional survey method was used to conduct this study. Results of the study revealed that the transformational leadership style has a significant, positive relationship with quality management practices. Based on the results, it recommended that hospitals recruit leaders with transformational style.

Sun, (2000), in his empirical study on the relationship between TQM, ISO 9001 certification and business performance improvement on a survey conducted in Norway, established that the TQM criteria (enablers) such as quality leadership, human resource development and quality information contribute to improvement of business performance. However, none of these TQM enablers individually but collectively contribute to improvement of performance. The study also established that ISO 9001 standards are partially related to the implementation of TQM and the improvement of business performance.

Capistrano (2008) in his exploratory study to determine whether acquiring an ISO 9000 certification has a significant effect on Philippine business organizations' respective financial measures linked to performance. The results of the study showed that there are improvements in some performance measures after certification, although not statistically significant. There are

also some firms that showed declining performance. He concluded that quality management in general – is not fully understood, appreciated, and implemented in Philippines as much as in other countries.

Owino *et al.* (2011) conducted a study which investigated how effectively university managers have played their role in quality assurance. This study utilized descriptive survey design and a sample of 127 lecturers and 502 students from four universities was used. The results indicated that private universities perform better than public universities in management of quality education. Kenyan public universities suffer from insufficient teaching and learning resources and a leadership that does not satisfactorily engage its stakeholders in decision making. It was recommended that managers of the universities should deliberately take short term leadership courses to boost their managerial skills as a significant step towards delivery of quality education.

Martínez-Costa & Martí'nez-Lorente (2007) analyzed impact of ISO 9001 certification on companies' performance by using a sample of 713 companies. The study objective measures of performance and also used two methodologies to analyze the problem: the comparison between certified and non-certified firms and a longitudinal analysis to test for possible increases in results. The results of the study depicted that the companies' performance worsened after ISO 9001 certification and also revealed that ISO 9001 only tells about the existence of the quality management system but does not guarantee improved performance.

From the empirical literature, there is agreement that leadership and commitment by top management contributes positively towards performance of business concerns (Nderitu *et al.* 2013; Alharbi & Yusoff, 2012). These findings also indicate that there is a significant and positive relationship between the manager's motives for adopting ISO 9001 certification and business performance (Sun, 2000). In contrast, other empirical studies have differed in relation of leadership and indicate that ISO 9001 only tells about existence of QMS but does not guarantee organization performance while others studies established that company's performance worsened after ISO 9001 certification due to managements reluctance to provide resources and empowerment of employees (Owino, *et al* 2011; Capistrano, 2008; Martí'nez-Costa &

Martínez-Lorente, 2007). Specific studies relating to leadership aspect of ISO 9001 to performance of TVET institutions in western region of Kenya is not available, therefore not known.

2.2.2 Customer focus and Performance

Awino *et al.* (2012) conducted an empirical study on the effect of total quality and competitive advantage on Kenya's horticultural industry. The study used a cross-sectional survey and a census approach that targeted 51 companies registered with the Horticulture Development Authority (HCDA) as of June 2010 as exporters of horticulture. The result of the study showed that total quality principle of customer focus was found to correlate significantly and consistently with performance measurement at .490 and $p < .001$ indicating a strong positive impact on competitive advantage. The study results showed that it is not quality that has been posting different results, but lack of effective implementation of total quality. Other findings were poor evidence of leadership concept as shown in the scale of parameters with the poorest score of 76% registered on leadership variable. The findings also demonstrated that most of the certified companies 'do not understand the philosophy behind quality management and therefore cannot implement it effectively. The study recommended the appreciation and understanding of the total quality philosophy before embarking on implementation.

Ahire & O'Shaughnessy, (1998) investigated impacts of TQM practices on various performance measures as well as the reasons and the barriers of the TQM practices of firms in Turkey. Cross-sectional survey methodology was used and the unit of the sample was at the plant level. The sample was selected from the member firms to Turkish Quality Association and the firms located in the Kocaeli-Gebze organized Industrial zone. They conducted exploratory factor analysis and multiple regression analysis. The results of the study showed that different TQM practices significantly affect different performance outcomes and that TQM index is positively related to all performance measures which included customer satisfaction, inventory management performance and employee performance and that primary obstacles that the firms in Turkey face were lack of employee involvement, awareness and commitment of the employees, inappropriate firm structure, and lack of the resources. The study recommended that firms should continue implementing TQM with all variables to improve performance; firms should improve

employees' involvement/commitment/awareness to TQM; enhance firm structure, and provide resources to overcome the barriers that prevent effective implementation of TQM practices.

Terziovskia, *et al.* (2003) in their study develops and tests several hypotheses relating to ISO 9001 quality system certification process using data collected in a cross-sectional study undertaken in Australia. Multivariate analysis was used to analyze the quantitative data and test the hypotheses. The results established that there is significant and positive relationship between the manager's motives for adopting ISO 9001 certification and business performance. Those organizations that pursue certification willingly and positively across a broad spread of objectives are more likely to report improved organizational performance. The individual element found to contribute most to business performance was customer focus. The principal motivation to pursue ISO 9001 certification was found to come from customer pressure. Auditing style was found to have an insignificant (positive or negative) effect on business performance.

Aluvi & Kimutai (2011) opined that in order to achieve competitive advantage, an organization must ensure that they achieved the highest standards possible in order for them to attract and maintain their customers in the market. The means through which these organizations can achieve high quality standards is through the attainment of ISO 9001 certification.

Existing studies have generally been conducted relating to effects of ISO 9001 implementation principles on organization performance (Aluvi & kimutai 2011; Terziovskia, *et al.* 2003; Ahire & O'Shaughnessy, 1998; Awino *et al.* 2012) and are in agreement that ISO 9001 implementation principles are critical to organizations performance. However, specific studies relating to customer focus aspect of ISO 9001 implementation in relation to performance of TVET institutions in western region of Kenya do not exist hence not known. Significant research has been conducted on manufacturing firms and SMEs on total quality principle of customer focus (Awino *et al.* 2012; Ahire & O'Shaughnessy, 1998; Terziovskia, *et al.* 2003) and found to correlate significantly and consistently with performance. Minimal research relating to specific customer focus aspect of ISO 9001 implementation in relation to TVET institutions performance in western region of Kenya have been discovered hence not known.

CHAPTER THREE

METHODOLOGY

This chapter focuses on the research techniques adopted for this study aimed at achieving research objectives. It elaborates the research design and provides details regarding the population and sample, the study area, sampling frame, sampling techniques and the research instruments used in collecting data for the study. It also explains the data collection methods and data analysis plan.

3.1 Research Design

The study adopted correlation survey design. Stanovich (2007) notes that a correlation study is used when you want to take a look at variables and see if they have any relationship. The design was appropriate in establishing the effect of ISO 9001 implementation and performance of TVET institutions. Information was obtained from a sample rather than an entire population. Surveys are concerned with conditions or relationship that existed, opinions that were held, processes that were going on, effects that were evident or trends that were developing as harbored by the students and staff of TVET institutions.

3.2 Study Area

Western region of Kenya consists of the former Western province and Nyanza province and borders North Rift to the east, the expansive Lake Victoria and Uganda to the west and borders Tanzania to the south. The administrative counties of Western and Nyanza Counties are provided in the map (Appendix V)

3.3 Target Population

According to (KEBS, 2014) statistics, only five TVET institutions are ISO 9001 certified in Western region. The target population was be 8061 which comprised of 595 staff and management representatives and 7,466 students shown in Table 3.1.

Table 3.1: Target Population and Sample Size

Section	Population No.	Proportion (%)	Sample Size No.
Lecturers			
Kisumu Polytechnic	162	2	7
Bumbe	54	1	3
Sangalo	117	1	5
Gusii	200	2	9
Kaimosi	62	1	3
Subtotal	595	7	27
Students			
Kisumu Polytechnic	3023	38	137
Bumbe	396	5	18
Sangalo	1645	20	75
Gusii	1567	19	71
Kaimosi	835	10	38
Subtotal	7644	93	339
Total	8061	100	366

Source: TVET Field Data (2014)

3.4 Sampling Frame

A sample is a finite number of an item (or individual) taken from a population having identical characteristics with those of the population from which it was taken. According to Mugenda and Mugenda (2003) a large sample size reduces the sampling error. According to Fraenkel and Wallen (2000), a simple random sample is one in which each member of the population has an equal and independent chance of being selected, while a proportional sample is where the sample size is a fraction of the whole sample size. (Directorate of Technical Education , 2014) indicates that there are 14 TVET institutions out of which five (5) are ISO 9001 9001 certified with a population of 7,466 students and 595 staff in Western region totaling 8061 respondents. The sample was determined according to Mugenda and Mugenda (2003).

$$n_1 = \frac{384}{1 + \frac{384}{N}} \dots\dots\dots (3.1)$$

N = Target Population

n₁ = Desired Sample Size

384 = Sample (for a large population for population less than 10,000) at 95% confidence level.

$$n_1 = \frac{384}{1 + \frac{384}{8061}} = 366$$

The researcher distributed 381 questionnaires to the various TVET institutions to obtain 100% response rate. Out of the distributed questionnaire 20 could not be accounted for from the institutions even after several attempts through phone calls. Nine (9) were discarded because they were wrongly completed while seven (7) were incomplete. Therefore only 345 respondents completed the questionnaires and their views captured.

According to Mugenda & Mugenda (2003) a 50% response rate is adequate, 60% good and above 70% rated very good. Based on this assertion, the response rate in the study was 90% which is rated as very good.

Table 3.2: Response rate by TVET institutions

Questionnaires issued	Returned	% return rate
381	345	90%

Source: TVET Field Data (2014)

3.5 Data Collection Methods

The researcher collected the primary data using a tool called the questionnaire from the respondents (see Appendix II). Since the study area was vast, the researcher distributed the questionnaire with the help of management representatives who assisted in data collection.

3.5.1 Data Sources

The study utilized primary data obtained from the selected respondents in TVET institutions. The secondary data sources were also obtained from previous Directorate of Technical Training survey reports. Other sources included the Internet. This was used because some information could not be easily obtained. Where some clarity was required, the researcher gave the necessary guidance. The secondary data sources also gave the researcher insights to people's opinions as a background for the study as well as other historical perspective of the study.

3.5.2 Data Collection Procedure

The researcher made a courtesy call to the County Director of Education (CDE) and obtained a letter of introduction to get information about the intended study. The researcher then visited the sampled institutions and sought permission from the Principals to allow staff, students and

management representatives to participate in the study. The questionnaire was used to source data from key informants (the management representatives), students and staff on ISO 9001 implementation on performance of TVET institutions. The questionnaires were collected after two weeks as agreed with the respondents. Thereafter the questionnaire was data cleaned then analysis conducted. A pretest was conducted and the instrument was found to be stable.

3.5.3 Instrument for Data Collection

The study used questionnaire as instrument to collect data. The instrument was divided into three parts which evaluated the respondents' opinions. Part A was covered background information, B on ISO 9001 implementation dimensions (customer focus and leadership) and D on performance variables. Part A was closed ended questions while B, C, and D, on a Likert scale of 1-5 was used. The lowest score was 1 and progressed to 5 as the highest score and coded for leadership as: Very Dissatisfied (1), Dissatisfied (2), A little bit Satisfied (3), Satisfied (4) and Very Satisfied (5). While on customer focus coded as: Not at All (1), Less Extent (2), Moderate Extent (3), Large Extent (4) and Very Great Extent (5) and on Performance indicators coded as: Very High (1), High (2), Average (3), Low (4) and Very Low (5). The questionnaire is appended as Appendix II.

3.5.4 Reliability Test

Reliability is the degree to which a tool produces the same results on repeated trials. In short, it is the stability or consistency of scores over time or across raters. Pilot was conducted to test reliability and questionnaires' administered to 6 staff members and 10 students of Kisumu Polytechnic. The same test was re-administered to other 5 staff members and 8 students with the purpose of improving the instrument week (Phelan & Wren, 2005). The scores from both tests were correlated to test the consistency of the results. Cronbach alpha using SPSS was used to perform the reliability test. These staff members and students involved in the tests were excluded from the main study to avoid the possibility of contamination of data. Nunnally (1978) observed that 0.7 was an acceptable reliability coefficient. Table 3.3 shows that (α) alpha was at 0.729 before administering the questionnaire to the final list of respondents for the research study. This score confirmed reliability of the data collection tool.

Table 3.3: Reliability Statistics after administration of questionnaires

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.729	.760	10

Source: TVET Field Data (2014)

3.5.5. Validity Test

A research instrument is valid if it actually measures what it is supposed to measure and when the data collected through it accurately represents the respondents' opinions (Amin, 2005). Face validity test was used to ensure that the tool will actually measure what it is intended to measure (i.e. the construct), and not other variables. The researcher used a panel of "experts" (individuals with experience in ISO 9001 implementation in service organizations) to assess validity. The experts examined the items and decide on specific items to be measured (Phelan & Wren, 2005).

3.6 Data Analysis

Inferential statistics was employed to determine the effect of ISO 9001 9001 implementation on performance of TVET institutions in Western Region, Kenya. Specifically, regression analysis was used to analyze the effect of the independent variable (ISO 9001 implementation aspects of leadership and customer focus) and performance (dependent variable).The model used has been adopted from Nguyen *et al.*, (2011) and modified by the researcher.

The model for data presentation was;

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon \dots\dots\dots (3.2)$$

Where

- β_0 = Constant
- β_1, \dots, β_2 = parameter associated with $x_1 \dots x_2$
- X_1 = Mean score of leadership measured on a summated scale
- X_2 = Mean Score of customer focus measured on a summated scale
- ε = error term ($\varepsilon \sim N(0, \sigma^2)$)

Y_i = Mean score of performance measured using a summated scale.

3.7 Data Presentation

The analyzed data presented used frequency tables, percentages and mean to bring the relationship between independent variables and dependent variable.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This chapter presents results of statistical analysis. It begins with the response analysis of the questionnaires distributed. The means scores, percentages and frequencies and the correlations among the variables in the study are then presented. The research questions are analyzed using SPSS and deductions made. Finally, discussions are made that covers the consequences of the data analyzed.

4.1 Background Information

Table 4.1 Summary of Demographic Factors of Respondents

		Frequency	Percentage (%)
Age	Below 18	43	12.6
	18 – 30 years	272	79.5
	31 – 40 years	14	4.1
	41 – 50 years	10	2.9
	51 - above	3	0.9
Level of Education	Certificate	114	33
	Diploma	187	55
	Higher Diploma	18	6
	Bachelors	13	3
	Masters	9	3
Gender	Male	171	51
	Female	170	49
Position	Management Representative	5	1
	Staff	22	6
	Students	318	93

Source: TVET Field Data (2014)

In Table 4.1, the majority of the population were of ages between 18 – 30 years (80%) which comprised of students taking diploma and certificate courses in the sampled TVET institutions. While the staff with experience comprised of only (1%) at ages above 51 years. In terms of

gender there was an even split between male and female with male a slightly dominant percentage. In terms of educational level in Table 4.1 diploma and certificate dominated at (88%). This is because TVET institutions offer diploma and certificates courses majorly and selected programmes at higher diploma level accounting for (6%) of the population sample. Bachelors and masters holders comprised of (7%) of the population sample which mainly constitute of lecturers and management representatives offering services at the institutions sampled. Table 4.1 indicates in terms of the level of respondents of the sampled population, (93%) comprised of students, (7%) constituted the entire staff including management representatives.

4.2 Descriptive Statistics of Constructs

The descriptive aspects of ISO 9001 implementation are leadership and customer focus and are explained per variable and after which performance variable discussed.

Table 4.2: Leadership aspect of ISO 9001 Implementation

Scale	1	2	3	4	5	N	M	SD
i Provision of quality service to its stakeholders	20 (5.8)	24 (7.0)	107 (31.3)	168 (49.1)	24 (6.7)	345 (100)	3.44	0.935
ii Creating and sustaining, clear visions, goals, targets and shared values	16 (4.7)	25 (7.3)	94 (27.2)	154 (44.4)	57 (16.4)	345 (100)	3.61	0.998
iii Providing staff with required resource, training and development	18 (5.2)	57 (16.3)	84 (24.4)	146 (42.2)	40 (11.6)	345 (100)	3.39	1.055
iv Inspiring, empowerment and recognizing staff contribution	17 (4.7)	36 (10.3)	98 (28.5)	136 (39.7)	57 (16.8)	345 (100)	3.51	1.037
v Encourage team work and performance appraisal	18 (5.0)	43 (12.4)	81 (23.8)	127 (37.1)	75 (21.8)	345 (100)	3.58	1.109
Average	18.8 (4.94)	39.6 (10.8)	82.8 (26.62)	152 (42.4)	54.6 (15.22)	345 (100)	3.52	1.0294

Scale: 1 = Very dissatisfied, 2 = Dissatisfied, 3 = A little bit satisfied, 4 = Satisfied, 5 = Very satisfied. The values indicate percentages in parentheses. M = Mean SD = Standard Deviation

Source: TVET Field Data (2014)

Table 4.2 indicates that average mean of 3.52 on a scale of 1-5 indicating that the respondents were a little bit satisfied with the management in providing quality services to its stakeholders and creating and sustaining clear vision, goals, targets and shared values. This implies that top management is not so much committed to ISO 9001 implementation in providing staff with the

required resources, training and development. Top management should put more emphasis on inspiring, empowerment and recognizing staff contribution and encouraging teamwork and performance appraisal since respondents were a little bit satisfied.

Ahire & O'Shaughnessy (1998) in their study on critical quality factors and their relationship with quality outcomes established that top management commitment was one of the major determinants of successful quality implementation. This study results suggests that provision of resources, being able to set clear goals and standards of performance and encouraging teamwork was critical to quality leadership. The results, implies that TVET institutions in western region are a little bit satisfied with the leadership aspect of ISO 9001 implementation.

Table 4.3: Customer Focus aspect of ISO 9001 implementation

	Scale	1	2	3	4	5	N	M	SD
i	Organization establishes and understand current and future customer needs	24 (6.7)	39 (11.1)	165 (48.2)	86 (25.1)	30 (8.8)	345 (100)	3.18	.976
ii	Organization ensures that it communicates and balances the needs and expectations of all interested parties	22 (6.2)	56 (16.2)	136 (39.0)	89 (25.3)	44 (12.6)	345 (100)	3.22	1.059
iii	Management measure customer satisfaction and rectifies where necessary	30 (8.3)	49 (13.9)	122 (35.8)	93 (27.2)	51 (14.8)	345 (100)	3.26	1.126
iv	Management responses to customers' complaints	29 (8.4)	57 (16.3)	129 (36.7)	72 (21.6)	60 (16.6)	345 (100)	3.30	1.957
v	Management ensures that service delivery to customers is always high	37 (11.0)	49 (14.2)	125 (36.5)	81 (23.7)	50 (14.5)	345 (100)	3.17	1.173
	Average	31.4 (8.68)	52.6 (14.6)	139.2 (38.54)	88 (24.36)	49.8 (13.82)	345 (100)	3.234	1.259

Scale: 1 = Not at all, 2 = less extent, 3 = Moderate extent 4 = Large extent, 5 = Very great extent

The values indicate percentage in parentheses. M- Mean SD- Standard Deviation

Source: TVET Field Data (2014)

The results in Table 4.3 indicate that TVET institutions in Western region of Kenya organizes and understand current and future needs of customers to a moderate extent, this is seen through a representation of 48.2% of the respondents and also ensures to a moderate extent that they communicate and balances the needs and expectations of all interested parties represented by 39% of the respondents. Also a greater percentage of respondents agreed that they are a little bit satisfied with the level of service delivery provided by these institutions at 36.5%. However the institutions management should improve on response to customer complaints, represented by 36.7% to a moderate extent. The study findings revealed that customer focus in TVET institutions in Western region has an average mean of 3.23 indicating that customer related practices are catered for to a moderate extent.

Massnick (1996) established that strong emphasis on customer satisfaction is due to ample evidence that market share and profitability will rise for companies that achieve high customer rating. This study was conducted in a production firm which is in contrast to service organizations. The results, shows that customer focus is practised to a moderate extent in TVET institutions in western region.

Table 4.4 Performance indicators of TVET institutions

		Very high	High	Average	Low	Very low	N	M	SD
i	Quality Outcomes	47 (13.7)	117 (34.2)	141 (41.2)	20 (5.8)	17 (5)	345 (100)	2.54	0.970
ii	Employee Satisfaction	28 (8.3)	86 (25.4)	150 (44.2)	45 (12.7)	35 (9.4)	345 (100)	2.90	1.040
iii	Customer Satisfaction	17 (5)	121 (35.4)	153 (44.2)	33 (9.4)	21 (6.1)	345 (100)	2.76	0.916
	Average	31 (9)	108 (31.7)	148 (43.2)	33 (9.3)	24 (6.8)	345 (100)	3	1

Scale: 1 = Very high, 2 = High, 3 = Average, 4 = Low, 5 = Very low

M – Mean

SD – Standard Deviation

Table 4.4 presents the performance indicator of TVET institutions. The table shows that majority of the respondents accepts that performance of TVET institutions moderate at 43.2% and 33% as low while a paltry at (9%) accepted that performance is very high. The average means was 3 showing that the performance of TVET institutions in Western region is average.

4.3 Relationship between ISO 9001 implementation and TVET performance

Table 4.5 Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.633 ^a	.401	.398	.61971	1.895

a. Predictors: (Constant), Customer Focus, Leadership

b. Dependent Variable: Performance Indicator

Table 4.5 the model summary R-square showed the “goodness of fit” of the model. The R-square for this model is .401, which means that the leadership and customer focus variable can explain about 4.01% of the change in performance indicator. The adjusted R Square value, which is adjusted for the number of variables included in the regression equation is used to estimate the expected shrinkage in R Square that would not generalize to the population because our solution is over-fitted to the data set by including too many independent variables. In this case R Square is .401 and the Adjusted R Square is .398. These values are very close, anticipating minimal shrinkage based on this indicator (University of Texas, 2015).

However there results show multi-colinearity among the variables which necessitated further tests to run regression and determine the Durbin-Watson values in Colinearity statistics to determine the tolerance level and the VIF values. As multi colinearity increases, the regression model estimates of the coefficients become unstable and the standard errors for the coefficients can get wildly inflated.

Table 4.5 shows that the Durbin-Watson Statistic is used to test for the presence of serial correlation among the residuals. The value of the Durbin-Watson statistic ranges from 0 to 4. As a general rule of thumb, the residuals are uncorrelated if the Durbin-Watson statistic is approximately 2. A value close to 0 indicates strong positive correlation, while a value of 4 indicates strong negative correlation. In this case the value of Durbin-Watson is 1.895, approximately equal to 2, indicating no serial correlation (University of Texas, 2015).

The "tolerance" is an indication of the percent of variance in the predictor that cannot be accounted for by the other predictors, hence very small values indicate that a predictor is redundant, and values that are less than .10 may merit further investigation. Variance inflation factor (VIF), is (1 / tolerance) and as a rule of thumb, a variable whose VIF values is greater than 10 may merit further investigation. The regression model predicting the variables show that the "tolerance" and "VIF" values are all quite acceptable (UCLA, 2014).

Table 4.6 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.686	2	43.843	114.162	.000 ^a
	Residual	130.959	341	.384		
	Total	218.645	343			

a. Predictors: (Constant), Customer Focus, Leadership

b. Dependent Variable: Performance Indicator

The ANOVA table indicates that the model can predict performance indicators since the significance is .000 using leadership and customer focus.

4.3. Leadership and Customer Focus on Performance of TVET Institutions

Table 4.7: Model Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.846	.150		32.278	.000		
	Leadership	-.244	.047	-.260	-5.146	.000	.686	1.457
	Customer Focus	-.387	.044	-.450	-8.887	.000	.686	1.457

a. Dependent Variable: Performance Indicator.

Table 4.7 presents the regression results for each specific objective. The results of the first specific objective shows that leadership aspect of ISO 9001 implementation ($\beta_1 = -.244$, $p = .000$) has a negative significance relation with performance. This means that each 1- unit increase in performance is achieved by reducing leadership by .244 units (Reifman, 2007). Examination of the regression results reveals that leadership is a significant predictor of the

model. The findings is comparable to other studies of (Capistrano 2008), Marti'nez-Costa & Marti'nez-Lorente (2007). These studies are in contrast to studies by (Sun, 2000) where the studies show quality leadership, human resource development and quality information contribute to the improvement of customer satisfaction and business performance. This study was based in a business set up in a different country with different cultures and did not focus on educational organizations. This study finding has shown a significant negative relationship between leadership and performance in educational organizations (TVET Institutions).

The results of the second specific objective shows that customer focus aspect of ISO 9001 implementation ($\beta_2 = -.386, p = .000$) has a negative significance relation with performance. This means that each 1- unit increase in performance is achieved by reducing customer focus by .386 units (Reifman, 2007). Examination of the regression results reveals that customer focus is a significant predictor of the model. The findings is comparable to other studies of (Capistrano 2008), Marti'nez-Costa & Marti'nez-Lorente (2007). These studies are in contrast to studies by (Nderitu & Nyaoga, 2013), (Terziovski 2003) where the studies show that customer focus was found to contribute most to business performance. The study by (Terziovski 2003) was based in a business set up and did not focus on educational organizations while the study by (Nderitu & Nyaoga, 2013) was based on primary schools in Nakuru Municipality. TVET institutions have embraced performance contracting while primary schools have not. Since ISO 9001 certification is a target in performance contracting TVET institutions to be ISO 9001 certified while the primary schools do not strive to be ISO 9001 certified but their study show a positive correlation between performance and customer focus. This study finding has shown a significant negative relationship between customer focus and performance.

The aim of the study was to establish ISO 9001 implementation on performance of TVET institutions. Examination of the quantitative results revealed that leadership principle as ($\beta_1 = -.244, p = .000$) which is a significant predictor in the model.

Such a finding is not consistent with a number of past studies that have found positive relationship between leadership and performance. These results do not support the general view that top management leadership is critically important to the success of the quality effort (Ahire and O'Shaughnessy, 1998). The failure to measure all possible factors influencing performance

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suggests that it is very difficult to quantify the value of top management leadership. Perhaps the underlying message is that rather than top management focussing specifically on performance (the 'end'), attention should be directed towards how best to design a structure and establish a culture that will maximize the effective participation of all employees (the 'means to an end'). If management fulfils that 'facilitative' role properly then the organization should be rewarded with superior performance. This is also confirmed by the respondents who indicated that they were a little bit satisfied with the role of leadership in TVET institutions.

The quantitative results of customer focus revealed that ($\beta_2 = - .387, \rho = 0.000$) indicating a significant predictors in the model. This shows that when management in TVET institutions should focus more on customer needs performance declines. The reason for such a direction may be attributed to the fact that the sample size in many studies is low compared to this study where the population was large and included the responses from the customers served.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section summarizes the findings of the study and describes them by objectives, provides conclusions and recommendation arising from the study. This study finding has shown a significant negative relationship between leadership aspect of ISO 9001 implementation and performance in educational organizations (TVET Institutions). It has also shown a significant negative relationship between customer focus and performance.

5.2 Summary of Findings

On leadership aspect of ISO 9001 implementation, the findings of this study results revealed that the role of leadership has a negative influence on ISO 9001 implementation meaning that leadership reduced performance.

On customer focus aspect of ISO 9001 implementation, the study revealed that it has a significant negative relationship with performance of TVET institutions in western region of Kenya meaning that customer focus reduced performance.

5.3 Conclusions

The study conclude that leadership as an aspect of ISO 9001 implementation had significantly negative effect on performance of TVET institutions in western region of Kenya; similarly, customer focus aspect of ISO 9001 implementation had a significantly negative effect on performance of TVET Institutions in western region of Kenya.

To remain competitive, TVET institutions must be capable of delivering high quality products and services on-time and at a reasonable cost. In response to these competitive pressures and customer demand, many TVET institutions have developed ISO 9001 quality management systems (QMS) which is an international standard that specifies the basic requirements for a QMS. The standard has two primary objectives of helping an organization demonstrate its ability to meet customer and regulatory requirements and to enhance customer satisfaction.

5.4 Recommendations

The study recommends that TVET institutions should improve leadership aspect on ISO 9001 implementation in order to achieve improved performance.

The study also recommends that TVET institutions should improve customer focus aspect of ISO 9001 implementation so as to achieve improved performance and hence customer satisfaction.

5.5 Limitations of the study

The first limitation of the study was distribution and collection of data was done at a time when the institutions were doing exams and closing the term hence problems of accessing targeted samples, however the researcher had to use research assistants to help in distribution and data collection. Also about 90 percent of the respondents were students, who might have not understood and answered the questions accurately; however the questionnaire was made simpler for the respondents to understand. There were also limited local studies in the areas of ISO 9001 which made the researcher to rely on studies in other countries internationally; however the few local studies available were used by the researcher. Finally availability and willingness of the respondents was a big challenge though efforts were made to assure respondents of confidentiality.

5.6 Suggestions for further research.

The challenges for ISO 9001 implementation and reasons for having ISO 9001 certification may be different in other countries and industries so a comparative study can be conducted to investigate these parameters. Secondly other ISO 9001 QM principles and other performance measures can be investigated in other industries and countries.

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