

**ISSUES IN EFFECTIVE IMPLEMENTATION OF ISO 9001:2008
QUALITY MANAGEMENT SYSTEM IN COLLEGES: A CASE
OF NAIROBI TECHNICAL TRAINING INSTITUTE, NAIROBI
CITY COUNTY, KENYA**

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E55/CE/25941/2011

**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR THE AWARD
OF THE DEGREE OF MASTER OF EDUCATION IN
EDUCATIONAL MANAGEMENT TO THE SCHOOL OF
EDUCATION, KENYATTA UNIVERSITY**

FEBRUARY, 2016

DECLARATION

I confirm that this research project/thesis is my original work and has not been presented in any other university/institution for certification. The thesis has been complemented by referenced works duly acknowledged. Where text, data, graphics, pictures or tables have been borrowed from other works- including the internet, the sources are specifically accredited through referencing in accordance with anti-plagiarism regulations.

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DEDICATION

I dedicate this work to my children Luka III, Jeremy Wabuti, Elsie Ashumah and my wife Mildred A. Wabuti. May they be scholars.

ACKNOWLEDGEMENT

I wish to sincerely thank my supervisors Dr. Florence Itegi and Dr. Joseph Mungai for their guidance, unreserved support and positive criticism that they provided during the writing of this research project. Special thanks must be accorded to the members of the Department of Educational Management, Policy and Curriculum Studies, Kenyatta University for their guidance and supervision.

I must also single out Gems Cambridge International School Principal Mr. David McLaughlin and the deputy Principal Mr. Phil Teacher who motivated me greatly during the process of writing this final project.

My wife, Mildred S. Wabuti read the draft project and provided valuable feedback that ensured a better project. I also wish to sincerely thank the students of Gems Cambridge International School for their immeasurable understanding when I was away collecting data. I cannot forget the help, suggestions and support from my fellow students and friends.

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LIST OF ABBREVIATIONS

ISO	International Organisation for Standards
KNQAP	Kenya National Quality Assurance Policy
KNEC	Kenya National Examination Council
KIE	Kenya Institute of Education
NTTI	Nairobi Technical Training Institute
OfQual	Office of Qualifications
QA	Quality Assurance
QAS	Quality Assurance System
QMS	Quality Management System
UNEP	United Nations Environmental Programme

ABSTRACT

As many organisations especially educational institutions seek to fight competition in the market place, many of them have had to adopt different competitive strategies in order to attract and retain customers as well as improve on their performance. Developing quality standards in education as a competition tool and sustaining the coveted quality continues to be a great test for many institutions. Quality in Education is when the education given is claimed to satisfy the students' educational needs, and enhances their lives (UNESCO, 2000). The purpose of the study was to investigate the process of implementation of ISO 9001-2008 in Nairobi Technical Training Institute which represents tertiary institutions in Kenya that offer the specialist courses and identify the successes and barriers. This study is guided by Kaizen theory of continuous improvement. The objectives of this study was to look at the perceptions of the college community to ISO, examine the steps followed in implementing the standard, determine the successes in the implementation as well as identify the challenges to ISO 90012008 implementation in the institute. This is a case study design of Nairobi Technical Training Institute which was arrived at through the interpretation of the ISO 9001:2008 QMS requirements and analysing the implementation process of the college. A sample of 140 out of a target population of 185 staff chosen by simple and purposive sampling and working in the college were involved. Data was collected using 5 point Likert scale questionnaires. A questionnaire has been used as a research tool. Questionnaires were distributed to and filled by the staff and management of the College, and collected for analysis and interpretation in line with the aims of the study. The responses to the questionnaire and interviews were analysed through case description, coding, pattern matching and diagramming to determine an outcome. The results of the study revealed that most respondents agreed that ISO 9001-2008 certification was beneficial to the college though there were few challenges in the implementation. It was recommended that there is need for the management to create continuous and consistent awareness campaign on the objectives of ISO standards to teachers, students and staff and the college should stress senior management commitment towards the implementation of ISO certification. It was also recommended that the implementation process becomes a continuous one since there is a staff in and out flows as well as further research in other institutions.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Institutions worldwide are constantly seeking for ways to streamline their management, improve their performance and satisfy their customers. They, therefore, have to develop products which increase value and are customer focused (Kimani, 2008). Educational institutions worldwide have turned to Total Quality Management (TQM) and have turned to the various quality systems like European Foundation Quality Model (EFQM), International Organization for Standardization quality management system standards (ISO 9001: 2008), Deming Prize and others. There has been a birth of programmes to accredit professional academic achievements at both the national and international levels. As a result of this, various accreditation companies and groups to ensure quality assurance have come up all over the world.

Initially, the quality management systems were designed for manufacturing companies, but they evolved and were now made appropriate for the service industries (Hazman, S. A. 2005). The QMSs are now more focused on changing the thinking about quality in the whole organization, and not just about removing flaws in the products. Indeed they are not made specifically for many industries but apply to any business. This includes education sector. The standard is now embraced all over the world since the ISO 9000 series was first issued in 1987 by ISO group. It has been revised severally and the ISO 9001:2008 version is focused on the eight quality management principles: Customer-focus; Leadership; whole group personnel involvement; procedure approach; structured management; constant enrichment;

objective decision-making; and reciprocally favourable relationships (Tricker, 2010).

Many countries have formed bodies that accredit the organisations and certify them on behalf of ISO. These bodies charge a fee for their services and collaborate to ensure their certificates are acceptable worldwide thus ensuring credibility (Fard & Abbasi, 2010).

According to Owino (2007) ISO implementation and certification in Kenya was adopted by institutions only a few years ago. There are three certification bodies which certify organizations on ISO 9001 in Kenya. Those bodies are Kenya bureau of standards, SGS Kenya limited and bureau Veristas Quality International. The Kenya Bureau of Standards (KEBS) which was established by an Act of Parliament - The Standards Act of 2012, Chapter 496 of the Laws of Kenya has been in operation for close to seventy years and they prepare standards relating to various products at both regional and international levels.

Studies have been conducted to look at how employees perceive different aspects of QMS. For instance Tigani (2011) carried out research in Qatar on the influence of implementing ISO QMS and how the workers perceive it in relation to their performance. He concluded that implementation of the ISO QMS did not impact in any way on the workers' performance. However, Bevans-Gonzles & Nair (2004) found that implementing the QMS in organizations gave rise to lean administrations, well recognized staff for their initiative, flow of ideas in relation to teaching and solving problems customer focused courses, more students and good performance all the way.

There have been studies conducted in Kenya on perception of employees on implementation of QMS. Mbarani (2009) looked at employees' perception of implementation of ISO 9001:2000 certification and process improvement initiatives at Kenya Institute of Administration. He found that 100% of the employees were aware of the process of implementation and that they perceived the introduction of the process a success in making the workplace conducive. Owino (2007) went a little further when he researched on employees' perception of the benefits of ISO 9001:2008 certifications at several Kenyan organizations. He used correlation analysis to see the relationship between expectations, perceptions and employee related characteristics i.e. length of service, level of education and job location. One of his findings was that the gap between expectations and perceived benefits of ISO 9001:2008 was statistically significant.

Oluoch (2010), in his research on the advantages and challenges of ISO 9001-2008 in colleges, came to the conclusions that the ISO certificate is proper and fitting to the organization since it makes it easy to achieve its objectives and enables the institution to compete favorably both locally and regionally. It also enables the institution to obtain advantages like streamlined document process, competitiveness and improved customer satisfaction. This research revealed that the positives were more than the negative aspects of the standard. This study found that the benefits outweigh the challenges as most challenges were minor. Challenges according to the respondents was uncomplementing work processes and biased internal audits. The benefits could be termed as improved internal work processes.

On the other hand, there is a rising unease on some aspects of higher education, for example are the qualifications society centered? Are the stakeholders getting value for money? Is there efficiency in the administration of the institutions? (Michalska-Cwiek 2009). There arises a great desire to have a good QMS to take care of those processes with the customers in focus. To arrive at this, the implementation of the system remains very important if it has to realize its objectives to the college.

Horsburgh (1998) came up with five loose explanations of what makes up educational quality as very high standards which he listed as obvious uniformity, happy consumers, value for money and student centeredness and showed that quality can be defined meaningfully only in terms of positive change and truly making the students engage in learning. He further stated that quality is related to all the areas of the students' transformative procedure i.e. learning, instructional methods, and assessment, institutional practices plus structures and even the prevailing climate and culture in the department or institution. This research aimed at finding out whether the implementation of ISO standard affected these factors as outlined by Horsburgh.

ISO 9001-2008 framework envisions a deliberate step by step implementation that will lead to identification of problems so that it can in turn, lead to adjustments and adaptability during implementation. (ISO 9001: 2008). According to Michalska-Ćwiek (2009), the following are the steps in the implementations of ISO 9001-2008 to an educational institution. Firstly is creating awareness to all the staff from top to down to sell the need for the QMS. This is followed by forming a steering committee and task force for documentation. The next step is to recognise and outline the processes followed by training of the personnel in the use of the

procedures and formats. After that, the internal auditors are trained. The next step is to apply the corrective actions for the non-conformities. The eighth step is to apply for certification followed by the second assessment of the system through an internal audit. This is followed by the pre-certification audit by the certified body. It then becomes imperative to take corrective actions again to improve the system as per audit report. The last stage is the final audit and certification. This whole process is quite a long one especially for an organization with different tiers in its workforce. The positive perception and reception of the teachers to innovation is very important to successful implementation of the new system in a college. This study used this in its approach to the implementation in the college. It examined this steps and how the college went about in establishing the standard in relation to this framework.

A decision to use ISO 9001-2008 means that there will evolve a new institutional structure with many changes for example in management, an altogether new organizational structure and whole lot new ways of doing business (Maguad, 2006). Also, it will result in problems that include poor quality of the system, take a long time to evolve and be useful, frustrated employees and customers and the high implementation costs. (Ravichandran & Rai, 2000). It also means the people have to change their work culture; it will create fear and uncertainty and make some workers unconcerned. (Maguad, 2006).

In case the intended implementation fails, the negative repercussions will be very dire for the organization. It will touch on the core of the survival of the business organisation (Ravichandran & Rai, 2000). Indeed the costs will touch on financial aspect of the company, decreased productivity, retraining the workforce, doubt and

bewilderment, lethargy and hate for the workers and key stakeholders; tainted trademark; confusion in work process; and loss of high value stakeholders like the workforce, allies, consumers, and others (Maguad, 2006).

With the above in mind, the study was organised to examine the effectiveness of the implementation of ISO 9001-2008 in tertiary institutions in Nairobi County, Kenya and subsequently recommendations will be made for an ISO 9001:2008 based QMS framework for implementation of QMS in Kenyan tertiary institutions. This investigation also aims to come up with an original ISO QMS implementation framework that can be used by colleges and other institutions of higher learning.

1.2 Statement of the Problem

Educational stakeholders expect quality education and quality service. Additionally, resources are few and there is high competition to attract high quality students. This is in addition to being able to get quality staff and faculty. As a result, colleges find themselves pressured to focus on the customer and the market as well as improve performance. Other than these issues emanating from the locale, there are other factors external in nature which are a result of globalization for example a networking of institutions, distance education, e-learning and the very diverse student types that increase competition.

This study used the ISO 9001-2008 framework to investigate the implementation of the ISO 9001-2008, especially the steps involved in the implementation, its successes and its failures. This is because ISO implies strict documentation, absolute commitment by the top managers and the employees and inculcating a culture of quality in the institution. The standards of ISO 9001-2008 helped the researcher to

investigate the implementation process of ISO 9001-2008 Quality Management System in the college. An analysis of the different aspects of implementing ISO 9001-2008 provided by the standard led to the anticipating of the challenges.

The study was done to look into the perceptions of the standard by the staff, the implementation process as well as the successes and challenges in the implementation of quality management system in the college. Additionally, this study tried to establish the magnitude of the success for the college to really put up ISO 9001-2008 as a system to guide its quality pursuance.

1.3 Purpose of the Study

This study investigated the process of implementation of ISO 9001-2008 in Nairobi Technical Training Institute which represents tertiary institutions in Kenya that offer the specialist courses and identify the successes and barriers.

1.4 Objectives of the Study

The research objectives were to:

1. Examine the perceptions of Nairobi Technical Training Institute personnel towards ISO 9001-2008 implementation.
2. Examine the steps followed in implementing ISO 9001-2008 in Nairobi Technical Training Institute.
3. To determine the successes when implementing ISO 9001-2008 in Nairobi Technical Training Institute.
4. To identify the challenges when implementing ISO 9001-2008 in Nairobi Technical Training Institute.

1.5 Research Questions

This research aimed to answer the following questions:

1. What are the perceptions of Nairobi Technical Training Institute personnel towards ISO 9001-2008 implementation?
2. What were the steps followed when implementing the ISO 9001-2008 QMS in Nairobi Technical Training Institute?
3. What are the successes in the implementation of the ISO 9001-2008 quality standard?
4. What challenges were encountered during implementation of ISO 9001-2008 in Nairobi Technical Training Institute?

1.6 Assumptions of the Research

There were various assumptions that the researcher made in the study.

- i) That the respondents would be sincere when responding to the questionnaire items.
- ii) That the study assumes that Nairobi Technical Training Institute had adhered to ISO 9001 standards and therefore has been awarded the certification.
- iii) That what was done during the implementation of ISO 9001-2008 is what was expected of the programme.

1.7 Significance of the Study

This study will contribute to the knowledge on the implementation of quality management systems in colleges. At institutional level, this study would lead to streamlined management practices, academic performance of the students and staff performance in terms of selection, placement and staff development. This study would also provide pertinent information for strategic management in the education

sector. Stakeholders and can utilize the findings for service delivery and will hence be able to make informed strategic decision in the implementation of ISO 9001:2008 in the increased competition, environmental pressures and awareness. The Kenyan Ministry of Education can use the result to enhance the working relationship and partnership with tertiary colleges to help them achieve their potential in the country and contribute to the national goals. It was also to close the knowledge gap regarding the effective implementation of ISO 9001:2008 in tertiary colleges in Kenya.

Additionally, managers of tertiary institutions would use the finding of this research to evaluate successes of the ISO as TQM and management strategy that would enable them gain market leadership and maintain competitive edge. This research was also to stimulate further research in the area. The public will be informed on the strategies employed by tertiary institutions in the provision of quality education service.

1.8 Limitation of the Study

When there is an aspect of a study that the researcher cannot control and has no influence that can negatively affect the study, it is a limitation. (Mugenda & Mugenda, 1999). The main limitation of the study is that the respondents were not comfortable to give out information about the college because of fear of their job safety. In order to overcome this, the researcher made sure that he/she informs the respondents that he/she is carrying out a study and the reason for carrying it out to make them at ease. The other limitation was that the respondent could give biased and false information that might affect the whole study. The researcher had to be friendly to the respondents to build their confidence in giving out information. The

other was financial constraints linked to frequent travel, calling the college, printing the questionnaires and reprinting for the spoilt ones. The researcher had to make sure he had adequate finance necessary for carrying out the research fully to avoid short coming in the process of writing the proposal.

1.9 Delimitation of the Study

This research was delimited to Nairobi Technical Training Institute which represented tertiary institutions offering the specialised courses in Nairobi. The study focused on the ISO 9001-2008 that is in place for the college, how it was implemented, how it affected the operations and competitive advantages as well as barriers. Additionally, the study was also delimited to the variables of the study due to financial limitations. Only management, staff and faculty were targeted in this study.

1.10 Theoretical Framework

The research was guided by the Japanese theory of continuous improvement called Kaizen. This theory advocates for an incremental improvement as employees perform their duties each day. It originated from Japan in the 1950 when the managers of the different firms and the government realised that there was a problem because of the ensuing confrontations in the management as well as a looming labour shortage. Kaizen is centred on the concept of starting new each day and improving upon the work incrementally (Imai, 1986). Kaizen means improvement in Japanese. This is the theory on which ISO 9001-2008 rests, since they both have to do with continuous and incremental improvement. Kaizen's chief proponent was Masaaki Imai, a Japanese scholar and he argued that it involved everybody from top management to the managers and the workers. It can be broadly

defined as a strategy that involves a change of culture in the organisation, complete with its own tools and concepts to drive it and it's all driven by the customer. Imai (1997) went on to explain that the enhancements can be divided into Kaizen and Innovation. According to him, Kaizen is about small improvements as a result unending efforts. On the other hand, innovation is about drastic improvements because of investments in cutting age technology and new equipment. The scholar shows that in Kaizen management has two core functions: Maintenance and improvement. For maintenance, it comes down to taking care those current technologies and making sure they are of high standards with well trained and disciplined operators. For this to happen, the focus is on teamwork and quality as well as commitment which is a result of every worker interacting with their boss directly and not through representatives. The Kaizen philosophy represents the daily workplace culture and finding ways to improve it continuously. It can be useful to any area requiring improvement. It leads to everybody working under standard operating procedures. Imai contents that improvement is about putting prominence to the existing standards (Imai, 1997).

The Kaizen theory seeks to have the management actively looking for ways to satisfy the customer in order to remain competitive through gradual improvement, just like ISO 9001-2008. Kaizen as a word comprises of two concepts (*kai*) change and to (*zen*) become good.

Kaizen highlights the following tenets which are also the hallmarks of the ISO 9001-2008 quality standard: It focuses on the process hence these must be continually enhanced to achieve better results; Consistent improvement of the institution's overall performance is a must; decision making must be based on facts, meaning

that there is a reliance on data. Involvement of the People: kaizen should involve everyone in the organisation, right from the top to the bottom; kaizen focuses exclusively on improving the ways of working as defined by the management. This continual improvement must be in all the departments of the college and all the activities it is involved in. ISO, just like Kaizen implies that all the people in the institutional hierarchy contribute to the improvement of the process and product.



Figure 1.1: The Kaizen Constituents

Source: Thesaloniki (2006) Kaizen Definitions and Principles in Brief:

A Concept and Tool for Employee Involvement.

The fundamental nature of Kaizen is that the people in the organisation do the work they know well and hence there is the possibility of improving on it for the better. As a result of this, they are confident and own the process and will maximise their productivity (Tricker 2010). It also results in team effort that will encourage innovativeness and desire for positive change. This leads to encouragement of

change and because it involves all employees, the walls brought about by roles disappear leaving room for improvement (Imai, 1997). Everyone contributes to this process leading to a positive corporate attitude. As presented by Imai, Kaizen is an umbrella concept that embraces different continuous improvement activities in an organization.

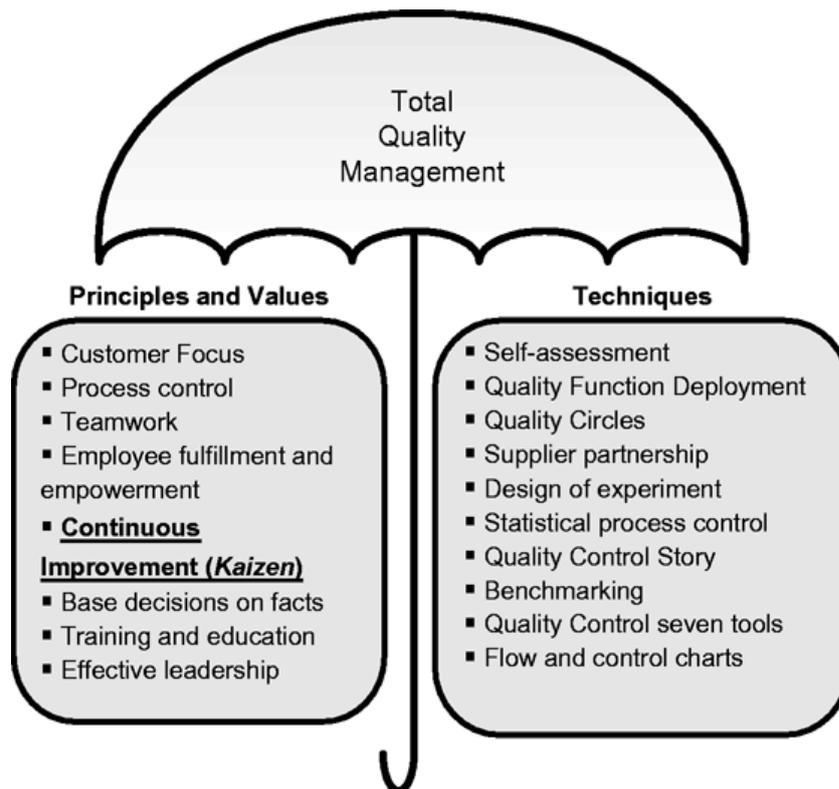


Figure 1.2: The Kaizen Umbrella.

Source: <http://afr.kaizen.com>; Imai (1986).

1.11 Conceptual Framework

The conceptual framework on which this inquiry rests was aimed at integrating the different inputs for implementing ISO 9001-2008 certification, the process of implementation, and ISO 9001-2008 outputs. The installation and implementation of ISO 9001-2008 standards is expected to have a positive impact on the services provided. Formalization and documentation of the college's quality management system shows that it has achieved a basic level of quality assurance through

independent auditing hence certification. The services provided need to respond to the use of ISO standards as the needs of the stakeholders are understood and incorporated, will ensure the consistent quality in the services provided as interactions with the customers are improved and services are delivered in a standardized manner. Consistent application of the principles of the standard in day to day operations should lead to other improvement initiatives due to an enhanced awareness. The perceptions that the staff have about ISO start right at the inception or decision to adopt the standard and continue throughout the implementation process even when the successes and challenges are evident. Because of the systematic implementation procedure, the successes, the challenges, the process and the perception are interlinked. The results of the implementation are the dependent variable. This will be a measure of whether the implementation was successful or not.

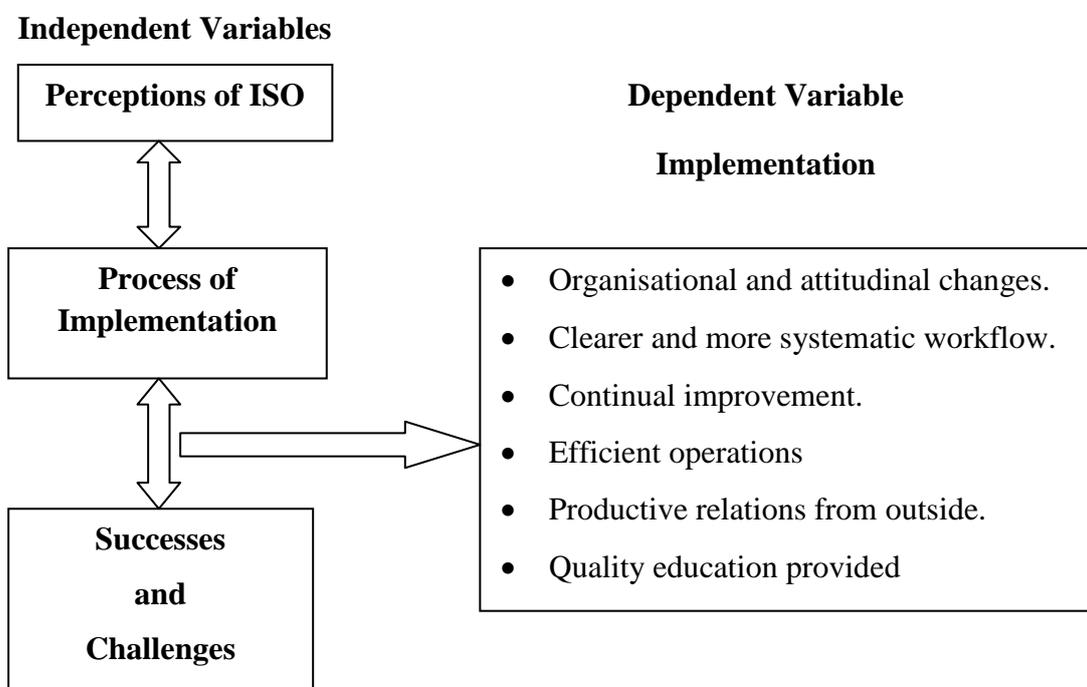


Figure 1.3: The model of ISO 9001-2008 in education

1.12 Definitions of Operational Terms

There are a number of terms in the research that need definition:

Audit: Methodical and recorded way for obtaining audit evidence and checking to see if it is objective and audit criteria is being satisfied.

Audit evidence: Recordable evidence that arose from the audit and is easy to verify and it can be qualitative or quantitative).

Challenges: These are the problems and hindrances encountered during the Implementation of the standard.

Effectiveness: The degree when the ISO objectives are achieved in order to solve the problems.

ISO 9001-2008 Quality Management System: these are the ISO guidelines that make sure **quality** is adhered to in the organisations.

Perceptions: Refers to the attitudes of the staff towards ISO 9001-2008 implementation in the college in terms of its utility, ease of use and efficiency.

Process: These are the steps and procedures that require resources to change inputs into outputs. They are interwoven.

Success: The degree to which the standard meets the needs of customers and other stakeholders while meeting statutory and regulatory requirements related to it.

Quality: Quality means the ISO 9001-2008 meets the customer Requirements.

Total Quality Management: A comprehensive approach to improving quality (Mitra,1998).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The purpose of the literature review is to help show how the researcher generated and refined the research ideas. It also looks at the other researches done on the area of ISO implementation. It generates a crucial aspect of the perceptions of ISO 9001-2008, successes and disadvantages of ISO implementation in other backgrounds. The literature review also has aided the identification of gaps in the previous literature and research and these gaps were then used to facilitate generation of the research questions for this study on implementation of ISO 9001-2008 at NTTI.

2.2 Background to ISO in Education

Quality has many definitions. Crosby (1979) saw quality as when the product conforms to customer needs, whereas Juran and Gryna (1980) define quality as the case of a product being fit for purpose. This is a direct reference to the whole purpose of an organization. According to them quality means the product is fit for use and the end user judges it on whether it can be used since they don't know what was involved in its production. On the same scale, it's not easy to define quality in higher education. Cheng and Tam (1997) suggest that it has to do with satisfying the customers and other stakeholders.

Harman (1998) notes that Total Quality Management has existed in education for a long time, only that the terminology was different. This means there is no set criteria to determine quality assurance in the sector. He noted that community concerns always lead to an increased focus on quality assurance and the possibility that

quality can be discarded in the process on implementing the systems. The Kenyan context is not different and secluded when it comes to this. According to Harman (ibid), the chief function of quality in education is to assuage public concerns, improve and product or renew it. Harman also avers that after sales service activities are important elements of quality management in any institution. He notes that the stakeholders and community are important for this to succeed.

The continual improvement period after certification is key especially when an organisation needs to consistently improve and benefit in the long run as a result of the quality management system (Nanda, 2005). The researcher also notes that there is sufficient evidence in literature that the obvious positives of ISO 9001 tend to decrease with time (Nanda, ibid). The researcher noted that there doesn't exist evidence to prove that organisations running ISO experienced progressively expanding benefits and outcomes arising from the ISO 9001 implementation. Their study showed that the institutions with ISO appeared to lose the benefits and declining fortunes with time. However, they show that maintenance of the standard is important after certification for example activities like reviews by management, CARPARS, audits, data analysis and performance measuring are of key importance.

Ab Wahid and Corner (2009) looked at the key success factors and disadvantages of ISO 9000 in the service industries. The conclusions indicated that the commitment of the top management, what the employees perceive, how they are rewarded, team work and continuous improvement as well as the people in the organisation understanding the standard itself were all important in the implementation and they affected the successes of the quality management system. Continuous improvement

of the processes, employees involved and the systems are also key factors in sustaining the quality management system.

In the research conducted in India, Bhat and Rajashekhar (2009) found that the potential barriers that were highlighted are the lack of well oriented customers, the management was not fully involved, and the resources allocated were not sufficient. The challenges, according to the researchers, were: inadequate financial and human resources, lack of technical know-how of quality management, inability to understand the systems, and a lack of experience in internal auditing. Fard and Abbasi (2010) found that the foes of ISO 9001-2008 say that it's not easy to adopt in public institutions because the standards are already designed for the private sector and so they can't apply to the public sector. They said although there's evidence that it is profitable, it's debatable whether the standards improve business towards profits or not. They note that most of the past studies have focused on self-evaluation outcomes like satisfied customers, increased productivity and the quality of the product. As a result the researchers tried to assess practically the effect of ISO 9000 on the financial implications of a sample of companies in Mauritius and Singapore. It revealed little correspondence between the two. It could be concluded from the review of literature that there are a lot of negative issues with perception, handicaps, misunderstanding, and opinions of defenders and adversaries of ISO 9001.

2.3 Quality in Higher Education

As Ab Wahid and Corner (ibid) states, a key characteristic of the recent education reform is "the creation of standards". ISO 9000-2008 provides standards for students and teachers, synergy between curricula and those standards, expert instruction, proper measurement of results and accountability within the institutions.

The reason for the adoption is that quality management can involve both the external and internal attitudes of stakeholders and thus come up with a combined approach to management to drive innovations and creativity. But there are a number of negating factors identified. Roffe (1998) found that there are other complex indicators in higher education which are harder to assess and that it leads to managerialism at the expense of quality education practices leading to a lack of a unified vision within institutions (Srikanthan and Dalrymple, 2003). Because of this debate, the researchers showed that a new model in education quality needs to emerge (Oluoch, 2010).

Srikanthan and Dalrymple (2003) showed that a new perspective is important for quality in higher education and suggested that the starting point should be a thorough reassessment of the current methods to find the extent to which quality means different things to different people. Engelkemeyer (1993) put into categories the shortcomings of the present higher education systems as thus; poor methods of teaching, badly designed programs, high costs, and bureaucratic rigmaroles in administration. Quality management can be used to improve the relationships between the teacher and the students, boost worker morale, and improve the quality of the service to both the external and internal stakeholders (Oluoch, 2010).

2.4 Implementation of ISO 9001-2008 in Education

The ISO strategic plan 2011-2015 provides that brings about partnerships with international institutions, the organizations which develop the standards, the civil society and the academic world to add value to the development of the international standards. The ISO Strategic Plan also states that the standard is a product of global consensus. The ISO 9001: 2008 concept of quality, in which quality is assessed in

relation to customer satisfaction has been adopted by numerous educational institutions because it's felt that it is more related to institutions that offer service-orientated training, as opposed to subject-orientated teaching. Cullen, Joyce, Hassall and Broadbent (2003) confirmed that the move from dealing with service like in schools and colleges to manage quality needs the standard to be adopted.

The implementation of the ISO 9001-2008 system is the same as the introduction of processes management which key in any management environment in all organisations (Owino, A. O. 2007). This can be applied by both for profit and non-profit organisations. The whole idea about the quality management systems in relation to ISO 9001-2008 is the following of the due process. This means everything is organised into a process consisting of its main activity. According to Michalska-Ćwiek (2009), a processes approach needs to the following tenets; analysing the basic processes in an organisation, analysing the relations in the processes with an eye on the customers, repeating the process and focusing on the quality, making sure of measurable ratios, enabling continuous improvement, and resulting in culture change in the organisation. Quality in educational process is seen as the bond with decided requirements or the extent to which there is fulfilment of the needs of the customer.

Presently the education process focuses on the needs of the students, the potential employers and the community they serve. It also should take to account the fact that the knowledge the student's possess can become obsolete with time. It therefore becomes imperative to shake self-learning in the students. Important to this is coming up with activities that help the students gain motivation to manage their own learning (Oluoch, 2010). Teachers must strive to fulfil this function and this means

that the learning activities should have an influence to this quality process and needs to be well planned, to be very systematic and closely monitored based on the ISO 9001:2008 standard and with stakeholders' requirements.

The following below shows the expected activities in implementing the ISO Quality Standards in educational institutions (ISO 9001-2008, 2008): Translation of the standards to educational language; Definition of mission, objectives, and best practice in consultation with staff; Documentation of the new work procedures and quality manual; Training of professional teachers and educational administrators to institutionalize the quality system; Regular internal and external audits to verify the improvement of performance; Continuous assessment and corrective action for continual improvement.

It should be noted that, in practice, establishing the new quality system has considerable costs and is a time-consuming (Zuckerman & Rhodes, 2000). Moreover, given its business and industry orientation, special efforts must be made in order to successfully transplant business practices into the educational setting. With regard to obstacles in developing the new quality system, some studies indicate that the one concern was translating the language of ISO 9000 into useable educational terms. The other concern is related to the resistance of staff to organizational changes (Oluoch, 2010). As schools adapt the business management practice, educators usually doubt that the creative and empathic aspects of their work can be standardized (Zuckerman & Rhodes, 2000). Therefore, building behavioural consent among staff is regarded as a key area that will lead to the success of the newly-adopted system. In this context, this research was designed to unearth the empirical evidence on the relationship between schools' implementing

the ISO 9000 quality management system and how the school is performing in terms of student performance and their attitude toward schools. It also seeks to show the impact of ISO on management of the school in all its aspects.

The implementation and certification is supposed to provide the synergy between the QMS and the requirements as assessed by an independent outside institution. The certificate will be awarded if the synergy is very evident and this is for a specific period of time like one year. After this, re-certification will be done for the next agreed period. The reason for use of a third party is purely to attain objectivity and enlarging of the credibility in the process for the product to attain a competitive edge. (ISO 9001-2008, 2008).

According to ISO 9001-2008 (2008) Quality Management Systems – Requirements, the stages of certification include: Deciding on the certification body and contacting them based on their credibility, how long the certification will take place, the cost and their way of working. Then the documentation is carried out to define it with the audit criteria. The preparations of the audit activities take place, and then they are executed at the organisation. This is followed by preparing the audit report, the audit is then closed and lastly obtaining the certificate.

When the certificate is received, the supervisory visits begin within six months and established to the six month periods. This is to verify if the QMS is being maintained, application is on track and improvement established. The QMS must be assuring efficient management of the institution and improving all the processes and elements. This certification forces the institution to adhere to the quality. During the implementation, the organizational leadership must come up with the vision,

objectives and intended end state of the organization (Bevans-Gonzles, T. L. & Nair, A. T. (2004). This emphasis on the process aims to reduce variations in the production process.

Cheng and Tummala (1998) looked at the level of perception and how much participation the employees put in the whole exercise of implementation. They revealed that positive perception extensive perception gave rise to positivity in looking at the value of the implementation. Hazman (2005) declared that if the employees are fully involved, then they will be committed to the certification. Also their input made sure that the documents are practical and very useful. They then understood the reasons for the implementation and hence reaped the benefits.

In service industry like education, the morale and feelings of the employees is crucial to the customer experiences. If they are negative, then the full effects of the implementation will not be reaped. Moreland (1998), in researching three universities in the United Kingdom realized that academics were not widely involved and so they were reluctant in accepting the implementation. The academic managers thought that limited participation was good to avoid conflict. This had negative effects in the implementation of the standards.

2.5 Successes and Challenges of ISO 9001-2008 in Education

After a number of studies on educational institutions having the ISO 9001-2008 management quality system, researchers have come to determine its various benefits. Here, the term “successes” is interchangeable with “benefits”, “effects” and “impact.” Margaret (2003) studied the obstacles to the successful implementation of total quality practices in Kenya and she found out in her study that the major

obstacles were lack of commitment by the management and less involvement of the employees and resisting change by the employees. Her study findings showed clearly that another major reason for poor implementation was poor understanding of the total quality management concept especially in the service industry.

Beattle (2003) examined ISO 9000 implementation and certification as well as its evident successes companies based in Singapore. He sought to determine if the certificate actually had an impact on the performance of the companies. The results from a group of 146 companies revealed that although the implementation led to good financial implications, it also led to better communications, efficient documentation, high quality products and better management procedures.

Chow-Chua, Goh and Wan (2000) looked at the effect of ISO on the business performance but they found that there was not clear link between the QMS and the improved performance of the business in question.

An investigation of 65 firms was conducted by Fokker et al (1996) on the positives gained from the TQM and they reported that it was efficiency and increased sales. This was followed by customer satisfaction, then teamwork and lastly improved communication. They also singled out the key challenges to (ISO) implementation as being top management behavior, employee perception, lack of enough time, and singling out the benefits. Management behavior and lack of management commitment appear to be the main cause of collapse of TQM implementation in organizations.

Heras, Dick and Casadesus (2000) found that in as much as the performance of the certified organizations is superior to the non-certified ones, there was very little

evidence of improved performance in those that were certified. They concluded that the improved performance of the certified companies was due to the institutions' desire to improve.

Najmi and Kehoe (2000) looked at the role of QMS in sustaining the quality beyond ISO and recorded that numerous organizations that had implemented the ISO standard had a diminishing business advantage in business and hence required a stimulus to sustain their efforts. This means there is a need for a more rigorous tool to sustain the advantage to ensure compliance to the rules and processes. The research identified the lack of a measurement tool as a barrier to the post ISO quality sustenance. While the benefits of ISO 9001 seem to be clear, there are issues which hold that compliance to the requirements of the standard is not the panacea to all the problems linked to quality in the organization and it does not fully guarantee the product.

According to Smith (2005), in the paper looking at the problems and how they are solved in organizations, it is possible that the very safeguards against problems can turn round and be the pre-cursor in taking the organization into a problem. When looking at the effectiveness of ISO, it was emphasized that the standard had simply been unable to make a difference in the organizations or lead to high profitability (Heffner, Larson, Lowder & Stites, 2008).

To add on that, many organizations think the standard is costly especially for small enterprises (Taylor, 1994). This research added that some organizations don't see the standard as having much value. This was supported by Bryde and Slocock (1998) who show that the complaint is that it is expensive to small organizations. And because the organizations feel they are bound to seek ISO and are unable, then

they develop a negative perception to it brought about by the costs as compared to the benefits (Bryde & Slocock, *ibid*). Magd and Curry (2003) looked at ISO 9001 in Egypt and concluded that the recurrent reasons for adopting the standard in Egypt were to improve the efficiency of the quality system as well as the pressures from competitors and foreign partner companies. It can be concluded that the overall ISO's effects on efficiency are positive showing that the implementation of ISO cracks down on managerial inefficiency (Malechwanz, J.M. 2013).

Lewis et al. (2005) also conceded that although there are improvements to the ISO, the standard is not a guarantee of excellence and that the confidence the customer had in the standard is falling. He adds that in evaluating the implementation, it was found that many organizations are simply taking the system for the sake of getting a license. That they want to use the standard to get business.

In this review of the relevant literature, it is clear that there is a need for a clear paradigm for implementation of ISO 9001-2008 to service industries and especially in education. Therefore this study focuses on the service industry to assess the adoption of total quality management practices.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The chapter presents an overview of the methods used in the study. Sections and areas covered include the Research design; The Study Population, Sampling and Sampling techniques, data collection and collection instruments, analysis, and presentation.

3.2 Research Design

The study involved the descriptive survey design in establishing the influence of ISO 9001-2008 QMS certification on the competitive advantage of Kenya's ISO 9001-2008 QMS certified colleges in Nairobi. The study design was selected because it explores the influence of the independent variable on the dependent variables besides collecting and describing the relevant data for the study. It also allows in-depth details to be secured and evidence to be verified through in-depth probing.

Descriptive research investigates subjective data, and focuses on the experiential state of the participants and their perceptions of a situation (Yin, 2003). The objective of qualitative methods is to collect data and information and gain a better understanding of the research topic.

3.3 Study Area

The study area was Nairobi Technical Training Institute situated in Nairobi County of the Republic of Kenya. The researcher chose the institution because of its having decided to implement the ISO management system in Nairobi Kenya as a

competitive tool. Additionally, no other research had been done at the college on the ISO QMS since it was adopted. Also the researcher chose this institution because of access to all the facets of the college, whose teachers and other staff took part in the research.

The tertiary training institutions are both private and government owned; have both local and expatriate staff and mixed ability students. They also have local and International Examination and Curriculum and have a fee charge for tuition and examinations. Additionally, they offer a variety of extra-curriculum activities and a selection of resources and focus on skill acquisition for the job market. The colleges draw their clientele mainly from the large local Kenyan community.

3.4 Population

The population of the college workforce is 185 staff. These are spread out in the eleven (11) departments as well as the administrative staff. The sample size comprised one hundred and forty (140) staff of the college. This is because the researcher desired to collect data from the whole institution right from the board, the managers, teachers and support staff.

3.5 Sampling

A purposive sampling technique was applied to identify the areas. This made the whole institution to be represented. The research had a sample population of 140 respondents from the target population which was used to collect data in relation to the implementation process of the standard in the college, including their experiences during implementation. Bhat & Rajashekhar (2009) provides an

overview of random sampling in which they state that a sample is drawn from a wider population in a way that seeks to be representative of such a population.

All the five members of the board took take part. Out of the one hundred and fifty three teachers; one hundred and fourteen took part of the research. Both the two member of the finance department took take part. Four members of the senior administration took part out of the seven, while fifteen support staff was sampled out of the twenty, to bring the total to one hundred and forty people.

Table 3.1: Sampling According to Departments

Department	Population	Sample	Percentage
College Board	7	5	71.4
Teachers / Lecturers	153	114	75.1
Senior Administration	7	4	57.1
Finance department	2	2	100
Administration and Support Staff	20	15	75
Total	185	140	

3.6 Data Collection Instrument

3.6.1 Questionnaire

A Questionnaire was administered in this study. The questionnaire had structured questions, made up of four sections namely: 'A', 'B', 'C' and 'D'. The sections represent the variables that were tested. The sequence of the questions was designed to be random in nature to stop any guessing of the underlying factors sought. The Questionnaire used in this study is attached on this research project report. The questions were close-ended and respondents were asked to mark the appropriate

numeral matching the correct answer. The questions were rated on a scale of 1-5 and 1-4 for section C to help establish the extent to which respondents were aware of the aspects being studied, that is, implementation process and the extent of influence that ISO 9001 Quality Management System certification has to their college's management advantage.

3.7 Validity and Reliability

Mugenda and Mugenda (2003) provided that validity is the situation when precision and relevance of deductions are supported by the study outcome. It is when the results that are obtained are representative of the issue under study. According to Orodho (2009), the validity is concerned with how much the findings precisely represent the situation on the ground. It shows whether the data represents a true picture of what is under study.

Face, content, construct, and external validity are applied in this study; therefore, the researcher equally pilot tested 20 members of both the teaching staff and non-teaching staff from the college other than those selected for face, content and construct validity and reliability. The purpose of the pilot test was to ensure that all the questions are clear, understandable and relevant to the study. External validity was based on the literature covered on ISO 9001-2008 QMS implementation and its influence on management in colleges. The data collected was analyzed so as to test and refine the effectiveness of the data analysis techniques.

In their writing, Mugenda and Mugenda (2003, pg 95), also say that reliability is a situation where the study instrument will give the same result repeatedly and after

more trials. It is, as Yin (2003) outlined the degree to which a research produces the same results under constant conditions always. Yin (ibid), showed that reliability is focused on the data collection process to ensure compatibility of the results. This helped minimize errors and bias in the research.

3.8 Data Collection

Before the actual data collection, the researcher collected an introductory letter from the Office of the Vice-Chancellor to the college. The letters and questionnaires were dropped at the college and later picked after they were filled. The decision to self-administer questionnaires during this study was largely influenced by the views expressed by Yin (2003) that if the dichotomous questions are not appropriate, additional alternatives can be added. One of the disadvantages applicable to the study, that is, the respondent's motivation for answering the questionnaire, was overcome by the researcher making personal follow-up telephone calls to all the respondents after they have received the questionnaire.

Likert scale was mainly be used in structuring the expected responses in the questionnaire. According to Mugenda and Mugenda (2003) the Likert scale is commonly found in many types of attitude-measuring research. This scale is easy to complete but does have a considerable disadvantage when bold statements are used to bias respondents' answers. The researcher alleviated this by not using leading questions. The data was collected after getting permission from Kenyatta University to do the research in the selected area. Additionally, the researcher got an official government permit from the National Council for Science and Technology – Ministry of Education.

3.9 Data Analysis

The researcher analyzed data using descriptive statistics including measures of central tendencies such as mean, mode and percentages. This was then presented in terms of charts, tables and graphs. The information collected using the questionnaires were coded and organized into themes. This was followed by pattern matching and diagramming which led to a display of the data, and this was the final preparation and organisation before writing the report. Analysis was done using appropriate models and cross tabulations. The results were interpreted in comparison with past studies then the researcher made conclusions and recommendations.

3.10 Ethical Considerations

The researcher sought for and received permission from the institute and the participants to carry out the research. The research was explained to the respondents. The rights of the individuals to safe keep their integrity was explained to them by the researcher. In the course of collecting the data, the respondents were aware they could withdraw from the research and from the study if they wanted to and they were assured of their responses being kept anonymous and confidential. The researcher took care to explain to them that no names were reflected on the questionnaires except the numbering which was done for the purpose of identifying and recording the data.

CHAPTER FOUR

PRESENTATION OF FINDINGS, INTRPRETATION AND DISCUSSION

4.1 Introduction

The chapter presents an analysis and findings of the study. The results focus on the implementation of ISO 9001-2008 standard in Kenyan tertiary colleges, with Nairobi Technical Training Institute acting as the case study. The objectives were to evaluate the perceptions of the college personnel towards ISO implementation, the steps followed in implementing the standard, the successes and challenges in its implementation.

4.2 Response Rate

The research had a sample population of 140 respondents from the target population which was used to collect data in relation to the implementation process of the standard in the college, including their experiences during implementation.

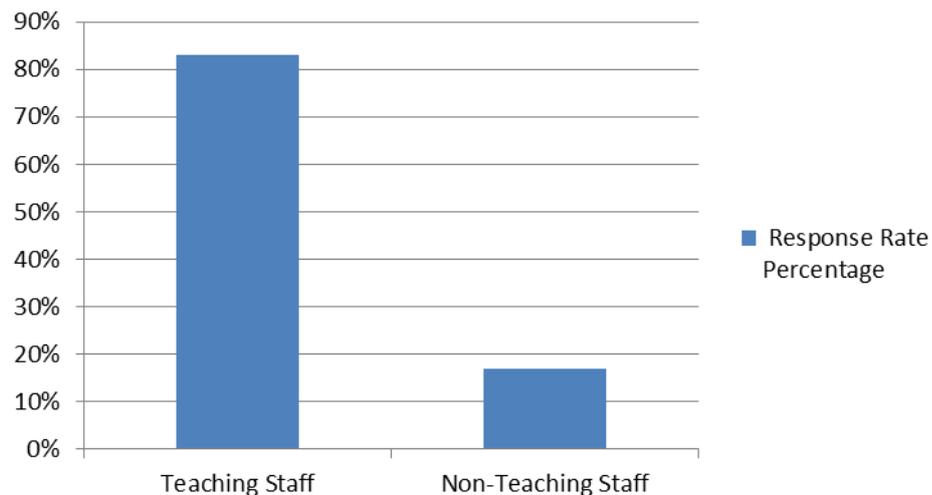


Figure 4.1: Response Rate for Teaching and Non-Teaching Staff

Out of the 140 respondents targeted, 135 of them took time to fill in the questionnaires and return them which amounted to 96.4%. This rate of response was commendable and it was as a result of the researcher making personal calls and regularly visiting the college to urge the respondents to fill in the questionnaires.

Table 4.1: Distribution of respondents by Department

Department	Frequency	Percentage
College Board	2	1.3%
Teaching Staff	112	83%
Senior Administration	4	3%
Finance department	2	1.3%
Administration and Support Staff	15	11%
Total	135	100

The teaching staff made up 83% of the respondents, 11% of them were administration and Support Staff, 1.3% of them were from the College Board and Finance department respectively, while 3% were from among the senior administration.

4.3 Staff Perception of ISO 9001-2008

The study further had to establish if the respondents knew whether their college was ISO 9001-2008 certified or not.

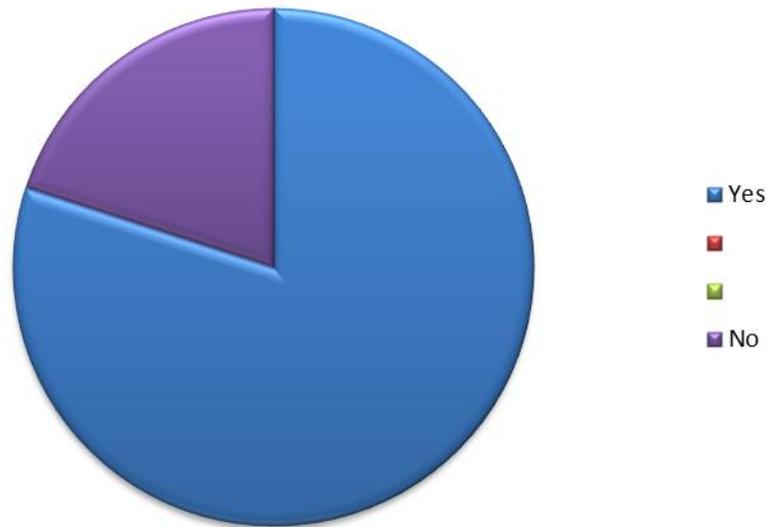


Figure 4.2: Staff Perceptions of ISO 9001-2008 in the College

The study results reveal that, 80% of the respondents were aware that the college is ISO certified as opposed to 20% who were not aware of the certification of the college. This results imply that majority of the respondents at least knew that the college was ISO 9001-2008 certified. This is in line with studies done by Mbarani (2009) that the majority of the workforce should be aware of ISO 9001-2008 at implementation by virtue of their work at the institution and this is a key demand in the implementation effort.

The study posed a question that required the respondents to describe what effects ISO had on the college. This is part of the staff perceptions of the ISO 9001-2008 standard. A scale of 1 to 5 in which 1= not at all, 2= small extent, 3= moderate extent, 4= large extent and 5 is to a very large extent was provided.

Table 4.2: Staff Perceptions of ISO 9001-2008 on the College

	Not at All	Small Extent	Moderate Extent	Large extent	Very large Extent
	%	%	%	%	%
College environment is friendly to ISO	10	42	6	15	27
College environment is not friendly to ISO	13	49	12	15	10
Easy procedures used in implementation of ISO	24	37	10	20	9
ISO has improved academic performance	15	10	48	20	9
ISO has led to faster evaluation and feedback	5	7	53	22	13
ISO has led to staff involvement in decision making	16	38	23	15	8
ISO has improved communication with stakeholders	9	20	16	45	10
Use of ISO requirements is too demanding	13	15	11	29	7
ISO has improved contact with parents	18	15	33	24	10

On the respondents' degree of concurrence with various research statements which relate to the effects of ISO for the college, majority of them concurred that to a small extent, the college environment is conducive to implementation of ISO as shown by forty two percentage points. It's instructive to note that 15% responded that to a large extent, the college environment is friendly to ISO. This is in addition to 27% of the respondents who agreed it is to a very large extent. Ten per cent said that it is not at all friendly to ISO. It is therefore evident that ISO implementation was a not an isolated affair in the college and at least everybody was involved. This agrees with Tigani (2011) that building agreement among staff is a key element for success

of the ISO system implementation. Closely linked to this, forty nine per cent responded that the college environment is not friendly to ISO to a small extent.

Regarding the ease of the procedures used in implementation, 37% agreed that they were easy to a small extent while 20% said to a large extent and 24% said they were not easy at all. Therefore a large segment of the respondents agree that implementation procedures were not impossible to follow. Also, 48% of the respondents said that ISO has improved academic performance to a moderate extent, while 20% agreed it is to a large extent and 15% said it has not improved academic performance at all. This concurs with Kimani (2008) that the ISO system greatly improved quality awareness among staff, and that staff became a lot concerned and sensitive to issues to do with quality in their work areas and processes. A large proportion of respondents amounting to fifty three per cent said that ISO has led to faster feedback and evaluations to a moderate extent and 22% agreed that it is to a large extent. 13% responded that it is to a very large extent that evaluation and feedback have improved. Evidently, ISO is having a positive impact on the college and its core business. Another question asked if ISO has led to staff involvement in decision making. 38% said it is to small extent and 23% recorded to a moderate extent while 16% said not at all and 15% said it is to a large extent true. It confirms a study by Pounder (2009) that the teachers and staff showed more positive attitudes, were more active in monitoring their own job performance to prevent mistakes, and worked actively at all times to be ready for quality verification.

Additionally, 45% of the respondents said that ISO has improved communications with stakeholders to a large extent, 20% agreed it is to a small extent while 16% said it is to a moderate extent. 29% of the respondents also thought that ISO

requirements to a large extent are too demanding while 15% agreed they are demanding but only to a small extent while 13% said they are not at all demanding. This ties up with a study by Zuckerman & Rhodes (2000) that in most cases, external experts were hired to help educators understand ISO terminology in the educational context because ISO was very cumbersome, required a tremendous amount of time and technical terms had to be translated to educational terms. One of the roles of ISO is to improve contact with parents and 33% of the respondents indicated that it is so to a moderate extent while twenty four per cent said it is to a large extent. Eighteen percent contended that it has not improved contact with parents and if it has, it is to a small extent by 15%. The findings agree with the study by Oluoch (2010) that ISO certification gave advantage to the educational organization through continual improvement and motivation of the workers as well as enabling it to achieve the institution's strategic plan. Also that the benefits of ISO were evident to all in the organization and to its stakeholders.

4.4 Steps in ISO 9001-2008 Implementation in the College

The respondents were requested to describe the steps in ISO implementation process for the college. A scale was given of 1 to 5 where 1= not at all, 2= small extent, 3= moderate extent, 4= large extent and 5 is to a very large extent was provided.

Table 4.3: Steps of ISO 9001-2008 implementation in the college

	Not at All	Small Extent	Moderate Extent	Large extent	Very large Extent
	%	%	%	%	%
Everyone was sensitised on ISO 9001-2008	13	10	17	52	7
The whole college is committed to ISO	16	10	20	29	9
A pre assessment audit was conducted	20	26	40	35	14
A quality system manual and policy were created	11	9	20	50	10
The documentation system had everybody's input	19	12	13	42	14
Everybody was trained on the ISO system	12	8	40	26	14
Friendly procedures and processes were put in place	14	35	27	17	7
All the sections of the college were considered.	15	16	25	36	9

Majority of the respondents indicated everyone in the college was sensitised on ISO to a large extent as shown by a percentage of fifty two. This is consistent with the research by Ab Wahid and Corner (2009) that showed that it was important to have everybody on board during the implementation process. Also, it's evident that by a majority of 29%, the college is committed to ISO. This confirms what Bhat and Rajashekhar (2009) found in their investigation that if the whole staff is involved then there is a personal commitment and motivation that will lead to the workers being innovative and creative hence they will participate in continual improvement

of the standards. A significant number represented by 20% said it was to a moderate extent that the college is committed to ISO while 16% said it is not at all committed to ISO. 50% of the respondents agreed that a quality manual and policy were created and 42% said that the documentation system had everybody's input. Bhat and Rajashekhar (ibid) came to the same conclusion that this is a critical aspect of when implementing ISO 9001-2008. However, 19% of the respondents did not take part in the preparation of this documentation system and 12% said it was to a small extent. Additionally, a significant number of respondents indicated that everybody was trained on the ISO system to a moderate extent as shown by 40% of the respondents. It means that the college went out of its way to include everybody. A significant 26% said that it is to a large extent while 12% said not at all.

Evidently, 35% of the respondents indicated that friendly procedures and processes were put in place for the implementation, 27% thought it was to a moderate extent and 17% agreed it amounted to a large extent. The percentages are indicative of the high level of work that has to be done before and during implementation of the standard. These findings affirm the observation by Fard and Abbasi (2010) that the rigors of implementation can be quite demanding to the employees. Also they support previous research by Mbarani (2009) which shows that organizations that have successfully implemented ISO 9001-2008 engage in putting the focus on the customer, having honest appraisals of self, making use of the workplace mistakes for improvement, changing work culture and perceptions, setting clear goals and processes and working with well-defined deadlines as well as implementing gradual, and incremental changes.

4.5 Success of ISO 9001-2008 Implementation in the College

The respondents were requested to describe the successes of ISO implementation in the college. A scale of 1 to 4 was provided where 4 – Fully implemented, 3 – Not fully implemented, 2 – Implemented to a less extent, 1 – Not at all implemented.

Table 4.4: Success of ISO 9001-2008 Implementation

	Fully Implemented	Not Fully Implemented	Implemented to a Less Extent	Not at all Implemented
	%	%	%	%
The focus is more on teaching and learning	57	23	11	9
It is easy to evaluate the grades of learners	16	49	22	13
Staff were fully involved and recognized	27	46	15	12
Completion rate of students has improved	26	42	20	12
Staff report to college regularly and on time	30	43	17	11
The institution is continuously improving	17	46	25	12
Planning and execution of lessons is easy	30	36	23	11
Service delivery for has improved	20	35	30	15
Standards of performance are clear	24	42	21	13
Students report regularly and on time	21	39	23	16

A big number of the respondents indicated that the college focuses more on teaching and learning which is attributed to ISO being implemented by 57%. A percentage of twenty three said it is not fully implemented and 11% averred that it is implemented to a less extent. This is the core function of the college and hence it can be seen that the standard is advantageous to the college in terms of administration. Only 9% thought it has no impact and 23% thought it is not fully implemented. From the response, 49% of the respondents agreed that it is easy to evaluate the grades of learners although it is not fully implemented, and 46% of the staff said they are fully involved and recognised. This agrees with a survey of quality practices carried out by Sik Sumaedi and Gede Mahatma Yuda Bakti (2011) focusing on the perception of quality comparison between schools that were certified and those that were not that identified a number of advantages found in implementation of ISO. They found that both staff and students benefitted from ISO implementation. Additionally in this survey, 46% of staff said they were fully involved and recognised during the implementation against 12% who said they were not. In fact forty nine per cent of the respondents said that evaluating learners is not fully implemented, while 22% said it is implemented to a less extend and 16% agreed that it is fully implemented.

By a percentage of forty two, respondents said that completion rate of students has not been fully complemented by the ISO standard against 26% who said it is fully implemented and twenty per cent who said it is to a less extend. Against the question on whether staff report to college on time because of ISO implementation, 30% agreed that it is fully implemented, 43% said it is not fully implemented while 11% said it has no impact at all. On continuous improvement, 17% agreed it is improving continuously, forty three per cent thought it is not yet fully implemented while 25% responded with a less extend and twelve per cent did not see any improvement at all.

The finding is in agreement with the study by Najmi and Kehoe (2000) that ISO certification allowed an organisation to compete globally, but contradicts Chow-Chua, Goh and Wan (2000) whose study showed that there was no established association between QMS implementation (ISO 9001-2008) and enhanced organisational performance. The respondents also said that planning and execution of lessons is easy by 30% and 36% thought it is a work in progress. It is clear that many of respondents therefore saw the advantages of ISO 9001-2008 standard. The importance of ISO certification in improving the processes is paramount as seen by these scores. According to the respondents 20% think that service delivery has improved against 35% who said it is not fully implemented. This still contradicts Najmi and Kehoe (2000) in their study looking at the importance of the QMSs in advancing quality development over and after ISO which showed that a good number of organizations which had implemented ISO 9001 ultimately saw a reducing advantage to the business and needed a more incentives to manage quality.

The college is still yet to make clear the standards of performance because only 24% think it's fully implemented while 42% of the respondents think it's not fully implemented and 16% said it is not at all implemented. This is consistent with Oluoch (2010) who found that the benefits of ISO are not instant but continuous and diagnosed the main obstacles to ISO implementation as employee perceptions and behavior, change in workplace culture, creating time, improving service and getting clear advantages and rewards. Also by a margin of 39%, respondents said reporting to college on time for students is not yet fully implemented yet a significant 21% said it was fully implemented and 16% averred that it was not implemented at all. Owino (2007) revealed that focusing on customers means identifying the customers, their expectations, and their level of satisfaction. ISO systems are designed with the

customer's needs in mind. Therefore, it is evident that there has been an impact on the customers, in this case the students.

4.6 Challenges of ISO 9001-2008 Implementation in the College

The respondents were requested to describe the challenges of ISO implementation for the college. To address this objective, the participants were presented with five items measuring the challenges of ISO implementation. They responded to items on a 5-point Likert scale. A scale of 1 to 5 was provided where 1 – Strongly agree, 4 – Agree, 3 – neutral, 2 – Disagree and 5-Strongly disagree.

Table 4.5: Challenges of ISO Implementation for the College

	Strongly agree	Agree	Disagree	Strongly Disagree
	%	%	%	%
ISO involves a lot of paperwork and bureaucracy	46	32	9	13
ISO certification is expensive for the college	21	50	16	13
Management does not support ISO	14	23	43	20
No communication about reasons for ISO	13	27	43	17
Students were not involved in the implementation	19	32	11	38
Lack of regular review and follow-up of implementation	7	48	27	17
ISO is not relevant in daily teaching and learning.	42	26	22	10
The registrar, KEBS, does not understand the business of KTTC	13	25	37	25
Internal evaluations are biased.	16	28	38	18
The students do not understand ISO processes and procedures.	12	51	26	11
The staff does not understand ISO processes and procedures	17	15	36	32

From Table 4.5 above, 46% of respondents indicated that ISO has led to a large amount of paperwork which clearly shows that there was resistance to the implementation because of the amount of work it involves. Those who saw it a

problem obviously outweigh those who didn't. This is in agreement with the study that ISO certification involves a huge amount of paper work that slows down the processes of the college (Kimani, 2008). Only nine per cent disagreed and 13% strongly contested the statement.

50% of the respondents were in agreement that certification is expensive for the college while 21% strongly agreed and thirteen per cent strongly disagreed. Also it is notable that 43% of the respondents disputed the assertion that management does not support ISO implementation. This is their perception of the role of the management in the implementation. The findings are in agreement with Mbarani (2009) who found that there is a need for participation by all the stakeholders in the institution so as to bring out proactive evaluation of benefit of certification. He argues that management are solely responsible for implementing ISO within the rank and file, and teaching employees the philosophies of ISO. There is extensive training of the employees in the course of ISO implementation so that they own the process and they become effective to the organization.

A significant 43% disagreed that there was no communication about the reasons for ISO against 13% who strongly agreed with the statement. However, 38% of the respondents disagreed with the assertion that students were not involved in the implementation against 19% who thought it was true. Malechwani (2013) noted that top management should make an effort to establish sound policy on the standard and publicize the policy in all levels, there is need to include other employees in decision-making, as well as inform the employees and other stakeholders on important ISO activities. He avers that the management should consider incorporating all the stakeholders in the formulation process, and this would reduce

rejection and promote acceptance of the change and aid the administration in the execution of ISO 9001-2008 standard.

48% of the respondents said that there is lack of regular review and follow-up of implementation of the standard. They think the implementation process ran out of steam, while 42% strongly said that ISO is not relevant in daily teaching and learning against 10% who disagree strongly. It is in contrast with a study by Bevans-Gonzales & Nair (2004) who conducted a study on an ISO certified high school in Virginia and nine vocational schools in Pennsylvania, respectively and concluded that ISO provides standards for students and teachers, alignment between curricula and those standards, expert instruction, proper measurement of results and accountability within schools. It is also clear that thirty seven per cent disagree with the statement that the ISO registrar who in this case is KEBS (Kenya Bureau of Standards) does not understand the business of the college while a significant 25% agree and 13% strongly agree with the statement.

Also, thirty eight per cent of the respondents disagreed that internal evaluations are biased. These evaluations are meant to gauge whether the processes are working or not including the documentation processes and evaluation of the staff. A percentage of sixteen strongly agreed they are biased and 28% agreed with the statement. Also 51% said that students do not understand the ISO procedures and processes and 36% agreed that the staff does not understand the same. This is in agreement with the study by Bhat and Rajashekhar (2009)) that staff and other stakeholder involvement is essential in realizing objectives of ISO certification. However, this does not agree with Nanda (2005) evidence did not exist to show that certified organisations had everybody on board for the ISO 9001-2008 implementation and that it changed the way they perceive the processes.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter outlines the summary of study findings, conclusions and recommendations based on the objectives of the study. The stated objectives of this study included; to examine the perceptions of Nairobi Technical Training Institute personnel towards ISO 9001-2008 implementation, examine the steps followed in implementing ISO 9001-2008 in Nairobi Technical Training Institute, to determine the successes in the implementation of ISO 9001-2008 Quality Management System in Nairobi Technical Training Institute and to identify the challenges to ISO 9001-2008 QMS at Nairobi Technical Training Institute. This is a college that is located in Nairobi and offers Diploma and Certificate courses on a part time, full time and on evening classes basis.

5.2 Summary of the Findings

The objectives of the research was to examine the implementation of ISO 9001-2008 standard in tertiary colleges, represented by Nairobi Technical Training College Nairobi. The study found that the college was certified on 28th February 2013 and therefore the respondents participated in the implementation of the standard. Also 80% of the respondents were aware that the college is certified as opposed to twenty per cent who were not aware. A majority of the respondents rated their participation in the implementation at between 25% and 50%, and a combined percentage of nearly 75% of the respondents put in between 25% and one hundred per cent. Additionally, 27% think that the college environment is friendly to implementation of ISO 9001-2008. However, a significant number of respondents represented by

49% agreed that the college environment is not friendly to implementation of ISO because the top management is not committed to ISO and the staff views it suspiciously since they don't fully understand it. Although the percentages are close when describing the effects of ISO on the college, a large extend rate the effects as positive. 45% said that implementation of ISO has improved communication outside and inside the college and helped to improve academic performance for the college but following ISO requirements is too demanding and too time consuming. Regarding the steps in ISO implementation process for the college, majority of the respondents took an active role in the documentation and therefore followed and understood the process. Also, it can be seen that most of the respondents were made aware of the coming change brought by ISO 9001-2008. Evidently, the whole college is committed to ISO and before the implementation, a pre assessment audit was conducted in the college, all the employees and administration were trained on ISO, and that a functional quality manual and quality policy was created as required by ISO implementation instructions. Additionally, a significant number of respondents indicated that all level system reviews were conducted and a big number of respondents indicate that all the sections of the college were considered.

Two thirds of the respondents indicated that the college focuses more on teaching and learning as a result of the implementation; the respondents were fully involved and their work recognized and planning and execution of lessons is based on student needs, therefore its fully implemented. The mean scores for the successes were rather high thereby showing that the respondents agree that ISO 9001-2008 is useful to the college and has brought with it successes. However, challenges remain and the majority thought that there was no clear communication about objectives and reasons behind implementation efforts leading to the respondents just going through

the motions since the management had decided to implement it. A significant number of respondents say the registrar, KEBS, does not understand the core educational function business of Nairobi Technical Training Institute as a service organisation to award the certificate and that the students do not understand existing ISO processes and procedures.

In terms of the challenges of implementing ISO 9001-2008, a big number of respondents said ISO is not relevant in daily teaching and learning process in the college and the same number agreed that the staff does not understand existing ISO processes and procedures. There was a consensus that internal evaluations are done in a biased atmosphere and that ISO has led to a large amount of paperwork and bureaucracy whereby every process has to be documented and pass through several stages. In fact 43% contend that the top management does not support ISO implementation and there is lack of regular review and follow-up of implementation.

5.3 Conclusions of the Study

Based on the research questions and objectives of the study, a number of conclusions can be made.

1. It is clear from the research that the personnel of Nairobi Technical Training Institute view the ISO 9001-2008 standard favourably and can identify with its benefits.
2. Also from the finding of the study, it can be concluded that ISO implementation assists in achievement of the college's objectives since the personnel view it as successful despite the challenges.
3. The implementation of the standard also enables the college to derive benefits like the college focuses more on teaching and learning, completion rate of

students within specified period has improved, planning and execution of lessons is based on student needs, service delivery for students and other clients has improved. The research also revealed that the advantages supersede the drawbacks as most drawbacks were insignificant.

4. The major challenges according to the respondents was lack of clear communication about objectives and reasons behind implementation efforts of ISO; the registrar, KEBS does not understand the core educational function business of Nairobi Technical Training Institute as a service organisation and students do not understand existing ISO processes and procedures.

5.4 Recommendations of the Study

The recommendations herein are based on the findings of the study and should be considered.

- i. There is need for the management to create continuous and consistent awareness campaign on the objectives of ISO standards to teachers, students and staff. This will help in maximization in the realization of the benefits in line with ISO standards. Management should also ensure that certification enhances professional practices that are evident.
- ii. The college should stress senior management commitment towards the implementation of ISO certification since this has been noted to be the most important element if a reasonable impact is to be felt in relation to the college's performance.
- iii. For the staff, the researcher recommends that the implementation process becomes a continuous one since there is a staff in and out flows always. The management will do this through an orientation process on the standard for the new staff.

- iv. On the part of the students, the researcher further recommends that they have to be made part and parcel of the process and undergo training in order to play a bigger role in the process. Since new students keep coming in, an orientation course should be implemented so that the new students understand ISO 9001-2008.

5.5 Suggestions for Further Research

The study was only looking at the implementation of ISO 9001: 2008 standards in Nairobi Technical Training Institute Nairobi.

- i. There is a need to replicate this research in different colleges that are ISO certified and with different stakeholders.
- ii. Preferably, new research should be done in the non-service provision industry to see if the results can be extended to them. Future studies, could complement the used measurement in this study with others such as focus group discussion for more insight into the implementation of the standard.
- iii. As clearly revealed in this research there are other factors in play such as productivity of the personnel, learner behavior on admission, and stakeholder perceptions and analyze their impact on the implementation of the ISO 9001-2008 standard.

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APPENDICE

APPENDIX I

LETTER TO THE RESPONDENTS

Kenyatta University,
Department of Education Management,
Policy and Curriculum Studies,
School of Education,
P.O. Box 43844-00100,
Nairobi, Kenya.
Tel: +254 20 8710901, +254 20 8711622,

Dear Valued Participant,

**REF: RESEARCH ON IMPLEMENTATION OF ISO 9001:2008 QUALITY
MANAGEMENT SYSTEM IN COLLEGES: A STUDY OF NAIROBI
TECHNICAL TRAINING INSTITUTE, NAIROBI COUNTY, KENYA.**

I am a master of education (MED) student at Kenyatta University. Currently, I am conducting the above research with the objective of trying to identify how colleges implement their ISO 9001-2008 quality management system as well as the successes and challenges associated with ISO 9001-2008 implementation. The outcomes of this research would help other educational institutions to implement their ISO 9001-2008 quality management system on a long-term basis.

Your help and cooperation in answering this questionnaire is very important in order for me to be able to collect relevant data and carry out this research. The results of the report will be used solely for purpose of academic research and in no way will your organisation be implicated in the research findings. A copy of the report would be availed to the interviewed organisation(s) on request. Should you require further information, please do not hesitate to email me at edufal96@yahoo.co.uk or call me at 0728 333 645.

Thank you for your time and cooperation.

Peter Luka W. Chuma

APPENDIX II
QUESTIONNAIRE

This questionnaire is divided into sections. Kindly answer the questions in each section. The data shall be used for academic purpose only, and will be strictly confidential. Your participation and facilitation of the study is highly appreciated.

GENERAL INFORMATION

Please fill or tick (√) as appropriate.

1. Teaching Staff
2. Non-teaching Staff
3. For how long have you worked at Nairobi Technical Training Institute?
Less than three years []
4 – 10 years []
11 – 15 years []
16 - 20 Years []
Over 20 years []

SECTION A

Staff Perception of ISO 9001-2008

1. Is your organisation the ISO 9001-2008 certified?
Yes []
No []
2. What was the level you played in the establishment of ISO in your college?
Less than 25% []
25-50% []
51-75% []
76-100% []

3. Place a check (√) in column that best describes the effect of ISO in your college.
KEY: 5 – Very large extent, 4 – Large extent, 3 – Moderate extent, 2 – Small extent, 1 – Not at all.

NO		1	2	3	4	5
1	The college environment is friendly to implementation of ISO					
2	The college environment is not friendly to implementation of ISO					
3	The procedures used in implementation of ISO were easy					
4	Implementation of ISO has helped to improve academic performance					
5	Implementation of ISO has led to faster evaluation and feedback					
6	ISO has helped improve involvement of staff in decision making					
7	Implementation of ISO has improved communication outside and inside the college					
8	Following the ISO requirements in teaching and learning is too demanding					
9	Implementation of ISO has helped the college improve contact with parents					

SECTION B

Steps in ISO 9001-2008 implementation in the college

4. Place a check (√) in column that best describes your implementation experience.
KEY: 5 – Very large extent, 4 – Large extent, 3 – Moderate extent, 2 – Small extent, 1 – No extent

		1	2	3	4	5
1	Everyone in the college was made aware of the coming change brought by ISO 9001 - 2008					
2	The whole college is committed to ISO					
3	A pre-assessment audit was conducted in the college					
4	A functional quality system manual and quality policy was created					
5	A workable documentation system was established with everybody's input					
6	Everybody in the college was trained on the ISO quality management system					
7	Friendly procedures and processes were put in place					
8	All the sections of the college were considered.					

SECTION C

Success of ISO 9001-2008 implementation

Please indicate on a scale of **one** to **five** the extent to which each of the following is used by your institution. Place a check (√) in column that best describes your implementation.

KEY: 4 – Fully implemented, 3 – Not fully implemented, 2 – Less extent, 1 – Not at all

		4	3	2	1
1.	The college focuses more on teaching and learning				
2.	It is now easy to evaluate and process the grades of learners				
3.	Staff were fully involved and their work recognized				
4.	Completion rate of students within specified period has improved				
5.	The staff report to college regularly and on time				
6.	The institution is continuously improving				
7.	Planning and execution of lessons is based on student needs				
8.	Service delivery for students and other clients has improved				
9.	Standards of performance for staff are clearly stipulated				
10.	The students report to college regularly and on time				

Others (*Please specify*).....

SECTION D

Challenges of ISO 9001-2008 implementation

1. What were the challenges the institution faced in the implementation of ISO 9001-2008? (Please place a check (√) in column rank them)

KEY: 1-Strongly agree, 2-Agree, 3-Neutral, 4-Disagree, 5-Strongly disagree

		1	2	3	4	5
1.	ISO has led to large amount of paper work and bureaucracy					
2.	ISO certification is very expensive for the college					
3.	The top management does not support ISO implementation					
4.	There is no clear communication about objectives and reasons behind ISO 9001 implementation efforts.					
5.	Students were not involved in the implementation efforts.					
6.	There is lack of regular review and follow-up of implementation					
7.	ISO is not relevant in daily teaching and learning processes in the college					
8.	The registrar, KEBS, does not understand the business of KTTC.					
9.	Internal evaluations are done in a biased atmosphere.					
10.	The students do not understand existing ISO processes and procedures.					
11.	The staff does not understand existing ISO processes and procedures.					

Thank you for your time and cooperation

Please return the questionnaire in the envelope provided

APPENDIX III

BUDGET FOR RESEARCH

Item	Activity	Quantity	Unit cost	Total cost	Remarks
1	Tuition fees	1 person	120,000	240,000	2 years
3	Supervisory visits	1 person	2,000	16000	2 years
4	Local travel(Nairobi)	1 person	1,000	5,000	5 days
5	Pre-testing of the research instruments	1 person	1500	7500	5 days
6	Stationary	2 reams, stapler pencil, pens, folders	1000		
7	Typing and printing	180 pages	20	3600	
8	photocopying	160 pages	3	540	
9	Binding	160 pages	1000	5000	
10	Contingency		5000		
	Grand total			277,640	

APPENDIX IV

RESEARCH AUTHORIZATION LETTER FROM KENYATTA UNIVERSITY



KENYATTA UNIVERSITY GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke

Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: E55/CE/25941/2011

DATE: 19th April, 2015

The Principal Secretary,
Higher Education, Science & Technology,
P.O. Box 30040,
NAIROBI

Dear Sir/Madam,

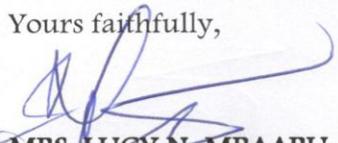
RE: RESEARCH AUTHORIZATION CHUMA W. LUKA PETER— REG. NO. E55/CE/25941/2011

I write to introduce Mr. Chuma W. Luka Peter who is a Postgraduate Student of this University. He is registered for M.ED degree programme in the **Department of Education Management, Policy and Curriculum Studies**.

Mr. Chuma intends to conduct research for an M.ED. Proposal entitled, **“Implementation of ISO 9001:2008 Quality Management System in Colleges: A Study of Nairobi Technical Training Institute, Nairobi County, Kenya”**.

Any assistance given will be highly appreciated.

Yours faithfully,


MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

RM/nn

APPENDIX V

RESEARCH AUTHORIZATION LETTER FROM NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

NACOSTI/P/15/4625/6302

10th July, 2015

Peter Luka Wandanje Chumah
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Implementation of ISO 9001:2008 Quality Management System in colleges: a study of Nairobi Technical Training Institute, Nairobi County, Kenya.”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for a period ending **6th November, 2015**.

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.


SAID HUSSEIN
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.



National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

APPENDIX VI

RESEARCH AUTHORISATION

THIS IS TO CERTIFY THAT:
MR. PETER LUKA WANDANJE CHUMAH
of KENYATTA UNIVERSITY, 10593-509
Nairobi, has been permitted to conduct
research in *Nairobi County*

Permit No : NACOSTI/P/15/4625/6302
Date Of Issue : 10th July, 2015
Fee Received : Ksh 1,000

on the topic: **IMPLEMENTATION OF ISO
9001:2008 QUALITY MANAGEMENT
SYSTEM IN COLLEGES: A STUDY OF
NAIROBI TECHNICAL TRAINING
INSTITUTE, NAIROBI COUNTY, KENYA**

for the period ending:
6th November, 2015



Applicant's
Signature



John Mwangi
Director General
National Commission for Science,
Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.



REPUBLIC OF KENYA



National Commission for Science,
Technology and Innovation

RESEARCH CLEARANCE
PERMIT

Serial No. A

5730

CONDITIONS: see back page