FACTORS INFLUENCING IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT IN CONSTRUCTION COMPANIES IN KENYA: A CASE OF NAKURU COUNTY

BY

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DECLARATION

This study is my original work and has not been submitted to any other Institution of higher learning for the award of any degree.

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L50/73913/2012

This Research Report has been submitted with my approval as the University Supervisor.

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DEDICATION

I dedicate this project research report to my Wife,Wilkister Atieno and sons Emmanuel Wesonga and Arnold Mulaku for their unconditional moral support throughout my study.

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ABBREVIATIONS AND ACRONYMS

TQM - Total Quality Management

ISO - International Organization for Standardization

SQC - Statistical Quality Control

KORE - Coca-Cola Operating Requirements

TCCMS - Coca-Cola Management System

JICA - Japan International Cooperation Agency

5S - Sort, Systematize, Sweep, Standardize, Self-Discipline

ABSTRACT

The construction industry is one of the most important industries for the development of infrastructure and economy of a Nation. It is therefore important that adequate measures are put in place to ensure quality in the sector. Total Quality Management (TQM) is considered as one of the most important approaches to achieve quality in construction Industry not only in Kenya but the world over. This study sought to determine the factors influencing implementation of TQM in construction companies in Kenya. Nakuru County was used as a case for the study. 15 construction companies were involved in this study. The literature for this study was reviewed based on the following factors; Top management commitment, Employees' training, organization culture and communication. The study adopted a descriptive research design. The study used simple random sampling to determine the construction companies where data was collected while stratified random sampling was used to determine the sample size. Primary data for the study was collected using structured questionnaires that were administered to the respondents in the sampled organizations. A pilot test was conducted at Gibralter Property Developers in Kisumu to check on validity and reliability. Data collected was analyzed through SPSS program (Version 17). The findings of this study revealed that Top Management Commitment is a critical factor in implementation of TQM and that Top Management Commitment positively influences implementation of TQM. The study also established that Organizational Culture is a critical factor in implementation of TQM and that appropriate organizational culture positively influences implementation of TQM. The study revealed that Employee Training positively influences implementation of TQM. In addition, the study concluded that Communication is an important factor with positive influence in implementation of TQM. The study thus recommends that top managements commit themselves in providing leadership and key resources needed in quality management. Secondly, the study recommends that organizations train their employees on quality management initiatives. It is also recommended that these trainings are conducted frequently and at all levels in the organization. Thirdly, the study recommends that organizations develop group, hierarchical, developmental and rational culture so as to enhance total quality management. Lastly, the study recommends that quality managers and management develop appropriate, effective and flexible communication systems that allow free flow of quality information at all levels in the organization. The study suggested that: further studies may be done to explore other factors other than top management commitment, employee training, organizational culture and communication and their effects on TQM, further studies may be done to relate these factors to other variables like organizational performance and customer satisfaction, further studies may also be done on other quality management initiatives such as ISO standards and statistical quality control. In addition, similar studies may be done in other sectors, especially in the public sector.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

It is the aim of every organization to achieve and maintain a sustainable competitive edge. This is only possible if an organization engages in operations or produces products that are able to effectively compete in the market. Bearing in mind the nature of the current market; characterized by ever stiffening competition and ever changing customer expectations and demand, an organization must come up with unique competitive strategies and produce goods and services that continuously meet and exceed these demand and expectations. This calls for continuous quality improvement through participation of all stakeholders (internal and external customers of the organization) (Salaheldin, 2008). One of the management approaches that can be used to achieve continuous quality improvement is Total Quality Management (TQM).

The American Society of Quality Control considered quality a very subjective term as every person has his or her own definition of the term. Different authors have defined quality in Different ways. For instance, Juran defined quality as "Fitness for use" of a product, Crosby defined it as "Conformance to requirement" by a product while to Taguchi, it is the "Variation from target" (Kenya Institute of Management, 2009). Quality Management generally is the process of ensuring that a product (good or service) continuously meet and even exceed customer expectations and can be generally looked at as a business management approach that attempts to maximize organizational competitiveness through continuous improvement of its products, services, work force, processes, and environment. It is an approach aimed at continuously improving the competitiveness, effectiveness and flexibility of the entire organization through total involvement of everyone in the organization led by the management (Kasongo & Moono, 2010).

The concept of TQM came into existence in 1970s when evolution of quality took a strategic shift from Quality Control to a strategic approach of quality to take care of the growing attention concern on quality. From then, quality management has evolved through Quality Inspection, to Quality Control, to Quality Assurance then to the current Total Quality Management (Kenya Institute of Management, 2009).

Globally, a number of organizations have adopted quality initiatives. Toyota company for instance developed the philosophies of 'customer first' and 'quality first'. They set up quality assurance systems across various divisions and departments (Omware, 2013). They introduced statistical quality control (SQC) in 1949 followed by Total Quality Management (TQM) initiatives based on the unchanging principles of 'customer first' and 'total participation'. Through their quality initiatives, they won the Deming Application Prize in 1965 and the Japan Quality Medal Award in 1970 (union of Japanese Scientists and Engineers, 2006). Sony Company set out to respect their customers viewpoints and remain committed to deliver quality products and customer service that exceed their customers' expectations. To achieve this, Sony implemented continuous, decisive efforts in enhancing product quality and continuously improve its quality management system (Sony Company, 2012). The Coca-Cola Company focused on developing consistency and reliability in their products. They for instance developed a new management system, Coca-cola Operating Requirements (KORE) in place of the initial Coca-Cola Management System (TCCMS) in January 2010. The company created an integrated quality management program which is used in all operations of the organization to ensure they deliver quality to customers (Coca-Cola Company, 2012).

Zambian government had been experiencing difficulties in tax collection. With the help of JICA, they adopted fishbone and quality control cycles in finding the root cause of this problem. They found out that taxes could not collect themselves. They had to collect it themselves. They also had to improve on their customer services as well as the tax collection environment. In Ethiopia, still with the help of JICA, The Kaizen's principles of 5S were adopted to improve the flow of people in workplaces, to put balance in assembly lines and to improve workplace layouts and to maximize space utilization. In the same country, a milling company managed to cut flour waste by 50 percent, a shoe factory found the most efficient way to cut leather (Jica, 2012).

Most organizations in Kenya, especially the ones in service industry have in the recent past adopted quality programs. Most public companies have for instance adopted the ISO standards eg Agricultural Development Corporation, Coffee Research Foundation, University of Nairobi Enterprises and Services Ltd, Commission for Higher Education, Defense Forces Memorial Hospital, University of Nairobi and Egerton University just to mention a few.

The latest approach to quality in the construction industry has been the adoption of TQM and the ISO 9000 series with focus on quality characteristics, quality of design and quality of conformance (The Constructor, 2012). For instance, in Kenya, Zenith Steel Fabricators Company (that specializes in the Design, Fabrication and Erection of all types' of structural steelworks) through its commitment to quality by implementation of ISO 9001:2008 enabled it to capture a large market both within Kenya and the surrounding countries. Currently its operations stretch in Kenya, Uganda, Tanzania, Zambia, Malawi, Rwanda, Southern Sudan, Ethiopia, Democratic Republic of Congo and Ghana. Its designs that offer construction quality that meet and even surpass their customer expectations has managed it to get contracts both in Public and Private Sectors in the respective countries (Zenith, 2011). In the past quality measures were focused on satisfying the specification mentioned in the contract and completing the project on time, fulfilling the owner's requirement within the proposed budget, avoiding disputes claims and ensuring the contractors perform their intended purpose. However, currently, most contractors have resorted to quality assurance and quality control initiatives such as periodical training for their workers, putting in place good safety Program, using a sound procurement system to get best quality material and suppliers and use of a reward scheme for innovative work and competitive career progress scheme to ensure productivity.

Reliable Concrete Works Company for example has developed quality programs that enable them give value to their customers. They believe that through quality construction, superior design and an unparalleled commitment to customer service, they are able to create lasting customer value (Reliable Concrete Works, 2014)

The Kenyan construction sector is under the Ministry of Public Works and National Construction Authority and covers work done on buildings and infrastructures. According to Kenya Private Developers Association, the major challenges facing construction companies in Kenya are Capital and dealing with the strict quality standards and dynamic customer demand. Quality assurance in the sector has in the past been left to the Local Authorities. Most of these authorities lack the capacity to handle this issue and in most instances leave it to Public Health Officers. To deal with the challenge of quality, most contractors have resorted to conservative approach to the market and prefer working for clients with similar thinking patterns. The government on the other hand, through the Ministry of Public Works has been holding

workshops that bring together stakeholders in the sector to deliberate on the challenges. They envisaged that it is important that proper understanding to quality is achieved such that every construction company is able to achieve at organizational level.

1.2 Statement of Problem

The issue of quality has become of great importance especially with the ever growing concerns and demands from various players in the market. These demands arise due to the increased number of reported quality issues like the frequent collapse of structures leads to injuries and deaths. In Kenya for instance, a number of buildings have been reported to have collapsed due to quality issues: A building collapsed in the year 2006 a long Ronald Ngala road, Nairobi. , in the year 2007, another building collapsed in Kiambu. In 2013, a five storey building collapsed in Kisumu killing 9. According to Ministry of Public Works, most of the buildings collapse due to poor supervision, poor construction procedures and poor inspection(MOPW Report 2006). To respond to these failures, most organizations have resorted to adopt and implement operations management strategies that have been seen to work elsewhere in as much as quality management is concerned. However, this has not been successful (Salaheldin, 2008). A number of studies that have been done on TQM have identified two focus areas: the factors within TQM and the critical factors for implementation of TQM (Yusof & Aspinwall, 1999). While many studies have looked at these factors, it is important to note that most of these studies have been done in manufacturing and service industry. In Kenya, very limited research if any has been done in Construction industry with none having been conducted in Nakuru County. This study aimed to bridge this gap by looking at the factors that affect implementation of TQM in Construction Companies in Kenya using Nakuru County as a case study. Nakuru County was chosen because it has well established Construction Companies of which some are already implementing TQM.

1.3 Purpose of the Study

The purpose of this study was to identify the factors that influence implementation of Total Quality Management.

1.4 Objectives of the Study

The objectives of the study were:

i. To establish how Top Management Commitment influence implementation of TQM in Construction Companies in Kenya
ii. To investigate the extent to which Employee's Training influence implementation of TQM in Construction Companies in Kenya
iii. To assess the extent to which organizational culture influence implementation of TQM in Construction Companies in Kenya
iv. To determine the influence of Communication on implementation of TQM in Construction Companies in Kenya

1.5 Research Questions

This study was guided by the following research questions:

i. How does Top Management Commitment influence Implementation of Total Quality Management in Construction Companies in Kenya?
ii. To what extent does Employee's Training influence Implementation of Total Quality Management in Construction Companies in Kenya?
iii. To what extent does Organizational Culture influence Implementation of Total Quality Management in Construction Companies in Kenya?
iv. What is the influence of Communication on Implementation of Total Quality Management in Construction Companies in Kenya?

1.6 Significance of the Study

The research findings and recommendation of this study would be important in enriching literature and stimulating further research on TQM. They would contribute to implementation of Total Quality Management in Construction Companies and related companies such as suppliers and sub-contractors. In addition, the findings and recommendations would be useful to Quality management organizations such as SGS Kenya limited and Kenya Institute of Management in understanding the factors that affect implementation of TQM as well as students who may want to further their research on Total Quality Management in the Construction Industry.

1.7 Limitations of the Study

The study was limited to factors affecting implementation of Total Quality Management in Construction Companies in Kenya. The study may have been affected by communication

barriers like age differences and stereotype. Some respondents were found out to be unwilling to give accurate information for fear that the information may be sensitive or confidential bearing in mind the level of importance attached to quality. It was also noted that some respondents did not fully understand the concept of TQM and that some organizations did not have proper documentation on implementation of quality.

1.8 Delimitations of the Study

Necessary measures were taken to ensure that there was proper communication so as to collect all the relevant information for the purpose of the study. The respondents were assured that the information they gave was to be treated as confidential and was to be only used for academic purposes. To minimize the problems associated with collecting data from respondents who did not fully understand TQM, the questionnaire items were simplified to ensure all respondents comprehended and gave the relevant information.

1.9 Basic Assumptions of the Study

This study was based on the following assumptions: the researcher will get access to the sampled Construction Companies; the respondents will be corporative and will freely give the required information and that the sampled Construction Companies will be having an ongoing project at the time of the study.

1.10 Definitions of Significant Terms Used in the Study

Top management commitment: Senior Management's commitment in implementation of TQM through leadership and provision of critical resources and working environment.

Employees Training: Equipping employees with relevant skills and knowledge on implementation of TQM measured by the relevance and the frequency of trainings.

Organizational Culture: Organizational values, beliefs and practices that guide the operations of employees in an organization.

Communication: The processes, systems and structures used to share information in an organization

Implementation of TQM: Adoption of TQM in building and construction organizations

; Commitment to quality, total involvement of people in quality management, management taking a leading role in quality management among other practices.

Construction Companies: Companies engaged in building, repair and alteration of houses and other structure

1.11 Organization of the study

This study is organized in five chapters. Chapter one covers the background of the study, statement of the problem, purpose of the study, objectives and research questions. It also covers the significance of the study, assumptions of the study, limitations and delimitations of the study, definition of the significant terms as well as the organization of the study. Chapter two covers literature review explaining the factors that influence implementation of Total Quality Management, theoretical framework and conceptual framework, the relationship between the factors on the conceptual framework, gaps in the literature review as well as the summary of the literature review. Chapter three outlines the research methodology which includes research design, target population, sample size, sampling technique, research instruments reliability and validity and procedures for data collection and analysis techniques and chapter four discusses the data analysis, presentation, interpretation and discussion while chapter five presents the results and findings of the study, conclusion, recommendations and suggestion for future studies.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviewed literature that had been developed by authors and researchers in the themes outlined in the study objectives. It discusses the factors that affect implementation of Total Quality Management. It mainly focuses on four factors: Top Management Commitment and leadership, Employee's Competence and Training and Organizational Culture.Various researchers have discussed a number of critical factors for implementation of TQM. The commonly discussed include: top management commitment and support, availability of critical resources, development of organizational quality policy, well developed communication process and systems, and total involvement of everyone in the organization (Zakuan et al., 2012, Sharp et al., 2000, Arshida & Agil 2012 and Omware, 2012). In this study, the factors that affect implementation of TQM were looked at under the following sub topics: Top Management Commitment, Employees' Training, Organizational Culture and Communication.

2.2 Top Management Commitment and Implementation of TQM

Top Management plays a critical role in any key business decision. Consequently, the success of any critical decision made in an organization is highly dependent on top management support and commitment (Zakuan et al., 2012). Quality issue has become of great importance to every organization and no management can afford to let nature take its course when it comes to quality.The top management must play a leading role by making available the critical resources, establishing an organization wide quality policy that is well communicated to all stakeholders, establishing a quality management structure and managing the entire process through close monitoring and evaluation. This must be supported by an organization culture and climate of open cooperation and team work among stakeholders in quality management (Sharp et al., 2000).

As cited by Zakuan et al (2012), Deming (1986) urges that managers must institute leadership to usher the quality transformation process. Parameshwar and Srikantia (2000) discussed two types of leadership: transformational leadership and transactional leadership. Transformational leadership is leadership that is based on an ideologically anchored vision while transactional

leadership is based on reward control mechanisms and emphasizes on clarification of followers roles and goals and the way the desired outcome will follow after achievement of the set goals. Champions of innovation tend to exhibit transformational leadership behavior; they try to initiate influence through calculated tactics in their work environment.

Arshida & Agil (2012) points out top management commitment as an essential element for ensuring successful TQM implementation. The top management must be on the fore front of the quality management process starting from the initial stages. According to Omware (2012), adoption of TQM for the first time is associated with development of new organizational policy, new procedures and new tools that must be learned. TQM is an organizational change process that is often associated with instability, confusion, and employees' resistance and must be carefully initiated through consistent management involvement. This was consistent with Samir (2003) that top management must develop clear quality mission and goals and identify quality values and communicate them to all employees. They must put in place a proper quality planning process, and a good quality management structure to ensure successful implementation

2.3 Employee Training and Implementation of TQM

Zakuan et al. (2012) considered training as an important factor that boosts employees' efforts towards improvement. To him, quality training includes educating and training of employees at all levels in the organization with an intention of broadening their knowledge on quality issues and programs and providing them with information about the organization's quality mission, vision and general desired direction. According to Jamali et al. (2010), employee training is one of the most important requirements in a successful TQM implementation. Management personnel, supervisors and other employees require skills and knowledge on quality dimensions and management as well as their roles in TQM implementation. Owing to the fact that market quality needs are very dynamic, organization must ensure continuous employee development and training on quality management. As Boidoun (2003) cited, Mathews et al. (2001) points out that employee training that is focused on quality management determines how effective an organization's quality management initiatives will be. While to Zhang et al. (2000), investment in employee training and development is a critical component to successful TQM implementation. Omware (2012) identified two elements which must be considered

before training employees on quality. These are: Knowledge and understanding of the quality management process and an understanding on quality management tools. A TQM training program must equip employees with an understanding on the TQM program and their role in it.

2.4 Organizational Culture and Implementation of TQM

As cited by Nezhadet al, (2012), Erkutlu (2011) defined culture as a set of principles, values, beliefs, common understanding or thinking or norms for behavior that are shared by members of a society. Organizational culture is defined by Waliand Boujelbene (2011) as the set of organizational practices that are seen as characteristic for an organization. It gives the values, norms and principles that guide daily operations of an organization. Nezhadet al, (2012) discussed four dimensions of organizational culture: group culture that emphasizes on flexibility and cohesion among employees of an organization and advocates that top management should promote employees participation and empower them, developmental culture that advocates for flexibility and change based on the external environment, rational culture that which is oriented towards the external environment but focuses on control and stability and hierarchical culture that focuses on internal focus and control through internal efficiency and adherence to law.

Wali and Boujelbene (2011) on the other hand discussed organizational culture under orientations. They discussed four orientations: innovation orientation, stability orientation, results/outcome orientation, people orientation and communication orientation. An organization must come up with quality culture that must be integrated with other dimensions of culture if it has to succeed in TQM management. Organizational quality culture influences TQM implementation process as it communicates quality practices and norms that employees are expected to engage in. To Jamali et al. (2010), organization quality culture affects the employee's beliefs in implementation of TQM. An organization needs to create organization culture where employees understand and are encouraged to participate in quality management programs.

2.5 Communication and Implementationof TQM

According to Kasongo & Moono (2010), communication is the exchange of ideas, messages, or information between people through speech, signals, or writing. According to him, success of

an organization depends on communication such that when the process is hampered, the entire organization suffers. Every organization must therefore put into place proper communication systems that facilitate horizontal, vertical, upward and downward exchange of information. According to Murphey (2009), both internal and external communication is critical in implementation of quality programs. It enables stakeholders both within and outside the organization to have an in depth understanding of quality and its management. Top management must translate quality information in understandable form that all stakeholders can understand put in place feedback channel to allow a two way communication process (Murphey 2009).

2.6 Total Quality Management

The overall objective of TQM is to ensure continuous improvement in the organization's people, systems, processes and environment so as to achieve improved customer service and increased profits through efficiency and effectiveness in the entire organization (Bahri et al., 2012). Since implementation of TQM is associated with benefits to both the organization and its clients, it is regarded a double sided competitiveness tool. It is important to note that any organization can implement TQM irrespective of the size or operations. However, the success of the implementation process depends on how well the organization understands the process and the strategies adopted. One guiding principle in implementation of TQM is that the process must be organization wide; everyone and every function in the organization must be involved in the process with the management taking a leading role (Schuurman, 1997)

Implementation of TQM is an elaborate process that takes time and resources. It is a process that must be initiated and managed by the top management. The top management must make available all critical resources required as well as the organizational structure and culture required. The process must focus on finding out, meeting and exceeding customer needs and expectations through total involvement of everyone in the organization and through continuous improvement. This process requires exceptional skills and team work that call for continuous employees training and development (Oluwatoyin, 2008) Malcolm Baldrige National Quality Award (MBNQA) as discussed by Wali and Boujelbene (2011) developed six criteria practices that can be used to measure TQM. These are leadership, strategy and planning, customer focus, information and analysis, people management, and process management.

It is important to note that there are factors that may inhibit successful implementation of TQM. Arshida & Agil (2012) refer to them as barriers of TQM implementation. These factors include; lack of top management commitment which is associated with lack of critical resources and poor leadership leading to poor employee empowerment and motivation, poor or weak organizational vision and plan statement that dilutes employee's efforts in quality programs. Another important factor is government influence that is associated with bureaucracy and slow systems. Lack of favorable quality policy or low government support of quality programs makes it a challenge to adopt and implement quality initiatives.

2.7 Empirical Literature

A review conducted by Zakuan et al. (2012) on critical success factors of TQM implementation in Higher Education Institutions shows that the success of an institution depends on its quality management strategy on how it identifies, classifies, analyzes, and reacts to the changes in quality requirements. This is consistent with the findings of Sharp et al. (2000) on their study on factors affecting successful implementation of ISO 9001: 2000 and Kasongo & Moono (2010)'s study on factors that lead to successful implementation of TQM that identified management strategy as one of the critical factors in implementing quality systems. Baidoun (2003) also conducted an empirical study on critical factors of TQM in Palestinian organizations and found out that top management commitment and involvement demonstrated by: development of clear organization mission, development of quality policy and values, setting of realistic quality goals, proper planning on quality management and creating quality management structure creates quality awareness and improve implementation of quality management systems. In addition, quality management philosophy makes it easy to implement quality programs (Murphey, 2009).

Findings of Jamali et al. (2010) in their study titled: TQM Implementation: An Investigation of Critical Success Factors identified training as one of the most critical factors in successful implementation of TQM. Implementation of TQM requires adequate relevant employee's skills and knowledge on quality which can only be achieved through continuous training. Training empowers employees to take part in continuous improvement initiatives that are essential in TQM implementation (Oluwatoyin & Oluseun, 2008). Employees at all levels must accept quality education and training as it helps employees at their levels to understand quality management initiatives and their roles in implementing TQM (Arshida & Agil 2012).

An empirical study conducted by Samir (2003) on critical factors of TQM in Palestinian organizations showed a positive relationship between employees training and education and successful implementation of TQM. It associated employee training and education with employee empowerment and improved performance of their roles in quality management. Another study by Yu Chu & Wang (2001) on critical factors affecting the implementation decisions and processes of ISO quality management systems in Taiwan's public sectors revealed that team leaders involvement, employees training and development, employee awareness among other factors are critical in implementation of quality initiatives. Employees feel involved in quality management initiatives when given timely training on quality programs and therefore give it a positive approach reducing employee resistance.

The finding of Wali and Boujelbene, (2011) in their study on cultural influences on TQM implementation in Tunisian firms revealed a positive relationship between a good organizational culture and implementation of TQM. They found out that, organizations with a culture that is open to change and that embraces to new ideas and ways of doing things are more likely to succeed in introducing and implementing TQM. This is because such an environment motivates employees and support innovation. This was consistent with the findings of Aljalahma (2011) that revealed that group culture helps in reducing employee's barriers, information barriers and customer related barriers that are frequently faced in the implementation of TQM while rational culture reduces top management barriers which in turn promote implementation of TQM.

A study conducted by Sharp et al (2000) on Factors Affecting Successful Implementation of ISO 9001:2000 found out that an organization with clear communication and quality awareness supported by active top management are likely to succeed in the implementation of ISO 9001:2000. Similarly, a study conducted by Baidoun (2003) on critical factors of TQM in Palestinian organizations revealed that clear and consistent communication at all levels and functions of the organization on quality programs, quality mission and quality objectives defining quality values is key in successful implementation of TQM.

From the discussions, it is quite evidence that Top Management Commitment, Organizational Culture, Employees' Training and Communication are critical factors in implementation of

TQM. There is therefore need for every organization that is implementing TQM to take these factors into account.

2.8 Theoretical framework

Deming's theory of profound knowledge is a management philosophy grounded in systems theory. It is based on the principle that each organization is composed of a system of interrelated processes and people which make up system's components. The success of all workers within the system is dependent on management's capability to orchestrate the delicate balance of each component for optimization of the entire system (Bowen, 2010).The system of profound knowledge is based on system appreciation to understand the company's processes and systems, variation knowledge to understand the occurrence of variation and their causes, knowledge theory to understand quality programs and psychology knowledge to understand human nature. In his fourteen points, he proposed that among other points, management commitment, positive corporate culture, employee's education and training and proper communication system is paramount in implementation of TQM. The Shewart Cycle which is about learning what works and what does not and ongoing improvement in a schematic way. He further noted that if a company focuses on costs, the costs rise while quality deteriorates. (Kenya Institute of Management, 2009). This is consistent with the theory of constraints discussed by Zadry and Yosuf (2006). Theory of Constraints (TOC) which is a set of concepts, principles and tools that can be used to improve management of systems and maximize performance by identifying the most restrictive limiting factor that constraints the system's performance and managing it. It focuses on improving performance rather than reducing costs.

This study is anchored on these two theories in that: it takes all the organizations' systems to have a successful implementation of TQM and the organization performance is highly dependent on its ability to continuously improve on management of its systems.

2.9 Conceptual Framework

In this study, the dependent variable is TQM practices while the independent variables are the factors influencing implementation of TQM which are: Top management Commitment, Employees' Training, Organizational Culture and Communication. The relationship between independent and dependent variables is moderated by Government Policy while the intervening

variable will be Organizational structure and policies. The variables and their relationship are as shown in Figure 1.

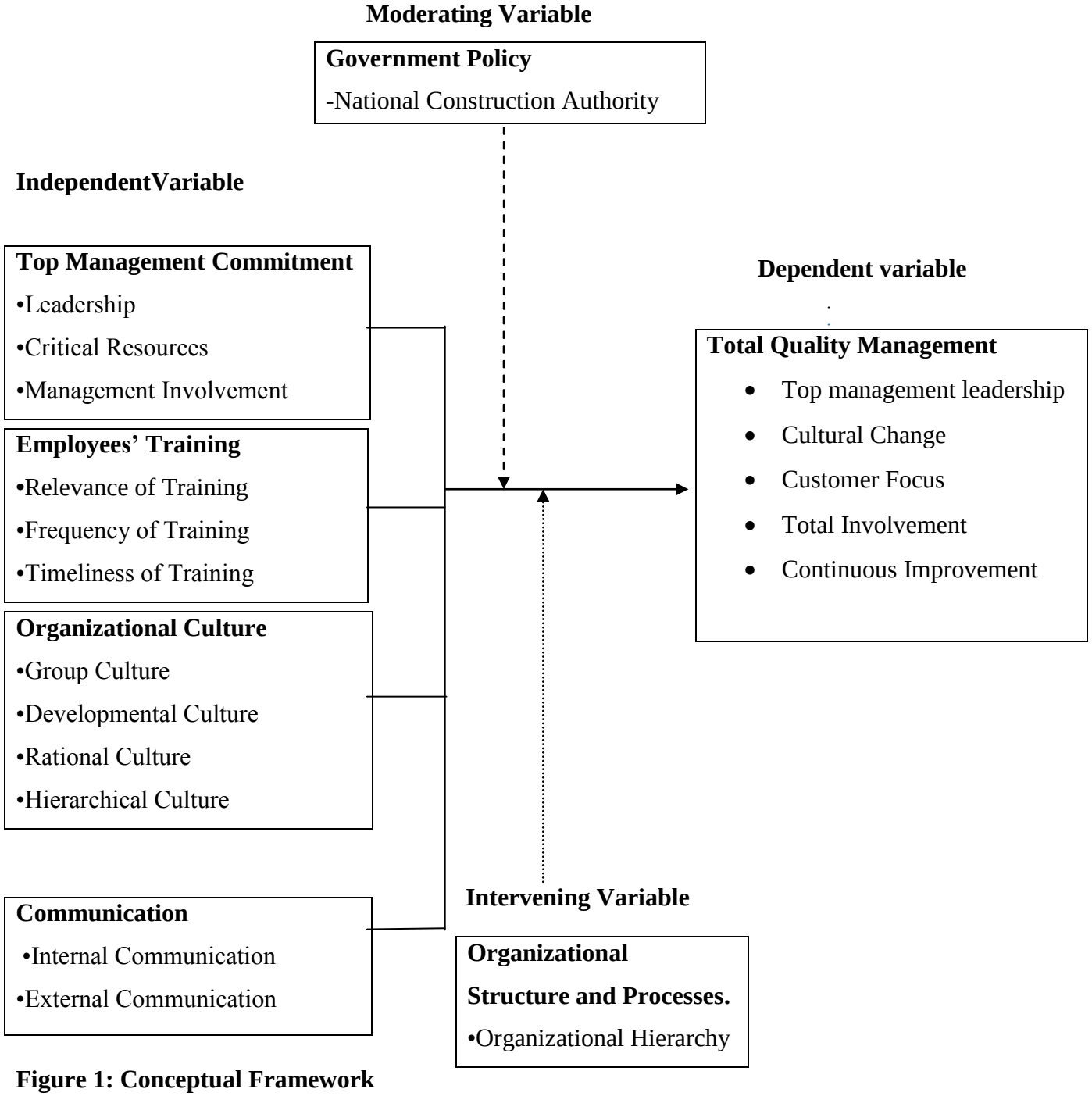

Figure 1: Conceptual Framework

The table below shows similar studies done by other people and their recommendations for future studies

Table 2.1 Gaps in literature reviewed.

Researcher(s)	**Focus**	**Findings**	**Comments and Gaps**
Wali & Boujelbene (2011)	Relationship between Organizational culture and TQM Implementation	Positive Relationship	Recommended further study on Organizational culture and TQM performance
Zakuan et al. (2012)	Critical success factors of TQM implementation	Positive relationship between top management commitment and TQM implementation	Recommended further studies on how TQM approach impacts on institutions performance.
Kasongo & Moono (2010)	Factors that lead to successful implementation of TQM	Positive relationship between top management commitment and TQM implementation	Recommended further studies on how Marketing efforts affect quality standards on the organizational level.
Sharp et al. (2000)	Critical factors affecting successful implementation of ISO 9001:2000	Positive relationship between top management commitment and TQM implementation	Recommended in-depth research to be conducted on the critical factors that affect successful implementation of ISO 9001:2000.
Baidoun (2003)	Critical success factors of TQM	Positive relationship	Future research can be suggested that Critical

	implementation	between top management commitment and TQM implementation	Success Factors' should be combined to develop a framework which can be empirically tested through a questionnaire survey to get more accurate results.
Jamali et al. (2010)	Success factors of TQM implementation	Positive relationship between employees Training and TQM implementation	Recommended further studies on how top management commitment influences successful implementation of TQM.
Oluwatoyin&Oluseun (2008)	Total Quality Management	Positive relationship between employees Training and TQM implementation	Recommended a study on effectiveness of implementation of TQM
Samir (2003)	Critical factors of TQM	Positive relationship between employees Training and TQM implementation	Further studies to gather information from stakeholders.
Nezhadet al, (2012)	Dimensions of Organizational culture	Group, development, rational and stability culture	More research to be on how to balance and maintain the organizational culture

			established in the long term.
Omware (2012)	Determinants of TQM implementation	Positve relationship between organizational culture and TQM implementation	Further research to be done on the effects of hiring new employees on the organisation culture.-

2.10Summary of Literature Review

Chapter two covered literature reviewed on the factors affecting the implementation of TQM and how they influence implementation of TQM. It synthesizes the literature on the following themes:- Top management and TQM implementation, Employees training and TQM implementation, Organizational Culture and TQM implementation, Communication and TQM implementation as well as TQM implementation.

From the literature, most of the study had focused on the critical success factor on implementation of TQM. They identified critical factors that need attention for a successful implementation of TQM. The factors include top management commitment, strategic quality planning, process management, corporate culture, communication and employee training. It's quite clear that in order to cut cost of rework and correction of errors everybody must be involved in the implementation of TQM and it must be done in every department and stages in construction. It is also noted that implementation of TQM has much benefits to the organizations such as improved business quality, increase customer satisfaction, reduce cost and save time. Most construction companies had not embraced TQM because of the unawareness of its professionals on the principles and techniques therefore more efforts must be made to incorporate TQM courses in the engineering programs

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology that was used in the study. It contains the research design, target population, sample size and sampling procedure, data collection instruments and procedure, validity and reliability analysis as well as the data analysis methods.

3.2 Research design

This study adopted descriptive research design. A descriptive study is a study concerned with describing the characteristics of a particular individual, or of a group (Kothari, 2004). The study sought to establish the factors that influence Implementation of TQM. It will adopt a case study survey. A case study involves careful and complete observation and analysis of a unit in its relationship to any other unit in the group (Kothari, 2004).A survey design is associated with a guided and quick collection, analysis and interpretation of observation (Mugenda and Mugenda, 1999).

3.3 Target population

The target population of this study comprised of the construction companies in Nakuru County while the respondents were the employees of the Construction Companies in Nakuru County. There are 54 construction companies in Nakuru(County National Construction Authority Nakuru, 2014). A list of the companies is shown in appendix 1

3.4 Sample size and sampling procedure

Simple random sampling was used to select 15 of the construction companies. Simple random sampling is a sampling technique in which all possible samples of n objects have equal likelihood of being selected (Frerichs, 2008). Due to financial and time constraints, 15 construction companies were selected. On the other hand, respondents sample was determined using stratified random sampling technique to ensure that different groups of a population are adequately represented in the sample. Stratified sampling divides the population into homogenous groups such that the elements within each group are more alike than the elements in the population as a whole (Nachmias and Nachmias, 2008). Yamane (1967) provided a simplified formula to calculate sample sizes.The sample for this study comprised selected

employees from all levels and departments of the selected organizations. This is because implementation of TQM is everyone's business in the organization. To obtain the sample size, the study used the Yamane's formula as shown below;

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

Where; n = the desired sample size

e = probability of error (i.e., the desired precision, e.g., 0.05 for 95% confidence level).

N=the estimate of the population size.

The distribution of respondents is as shown in table 3.1

Table 3.1: Proportionate distribution of employees in their departments

No	Company	Population (N)	Sample (n)
1.	Reliable Concrete Works	45	40
2.	Anduru Construction Co Ltd	14	10
3.	Kalalu Building Contractors	20	19
4.	Mawe Construction Co.	21	19
5.	Jagir Singh Contractors Ltd	19	14
6.	Libix Construction Ltd	16	14
7.	Recco Builders Ltd	15	14
8.	Spion Construction Company	19	14
9	Pimka Construction Company	13	10
10.	Lawane Contractors LTD	14	10
11.	KolKol Construction Company	16	14
12.	Real Mark Construction LTD	17	14
13.	Emuwan Construction Ltd	18	14
14.	Jimwa Construction & Services LTD	16	14
15.	Multi - Span Builders (K) LTD	13	10

3.5 Data collection instrument

Primary data was collected regarding factors affecting implementation of TQM. The respondents for this study were selected employees from various functional areas in the organizations. Data was collected using structured questionnaires which were self-administered. Questionnaires (Appendix 4) were preferred because of the simplicity in their administration and low cost associated.

3.5.1 Pilot testing of the instrument

A preliminary test was done on the data collection tools and procedures to identify likely problems. The researcher took necessary actions in time before the actual data collection. This test was conducted at Gibralter Property Developers in Kisumu, whereby twenty questionnaires were administered to the employees in the respective departments. The filled questionnaires were later checked for comprehensiveness and consistency.

3.5.2 Validity of the instrument

Validity determines whether the research items truly measure what they are intended to measure or how factual the research results are (Golafshani, 2003). To test content validity (extent to which the sample is a representative of the population), experts opinion were sought. The research items or questions in the questionnaire were developed to represent dimensions of each variable in the research. The data collected from the pilot study were subjected to factor analysis to test construct validity.

3.5.3 Reliability of instrument

Reliability is the extent to which results of a study are consistent over time and there is an accurate representation of the total population under study (Golafshani, 2003). Reliability analysis aims at finding out the extent to which a measurement procedure will produce the same result if the process is repeated over and over again under the same conditions (Toke et al., 2012). Cronbach alpha coefficient was computed using SPSS and produced a value of 0.806 as shown in table 3.2. This value was compared with the threshold of 0.7 to ensure there is reliability. The Cronbach alpha coefficient value above 0.6 shows that the measurement procedure is reliable (Toke et al., 2012).

Table 3.2: Reliability Statistics

Cronbach's Alpha	N of Items
.806	49

3.6 Data collection procedures

Primary data was collected using structured questionnaires. The questionnaire was self-administered by the researcher to all levels of staff. The researcher then picked the questionnaires after the respondents have filled them. According to Nachmias and Nachmias (2008), Questionnaires are simpler in administration, scoring of items and analysis.

3.9 Data Analysis Technique

The data collected was coded, and analyzed through SPSS (statistical package for social sciences) version 17. Descriptive statistics such as percentages, means and standard deviation were used to describe the factors influencing implementation of TQM.

3.8 Ethical considerations

The researcher sought authorization from the management of the Construction Companies in Nakuru County before carrying out the research. A letter from the University of Nairobi and a permit from the National commission for science, technology and innovation were also sought before data was collected. All information obtained in this research was strictly used for academic purposes and respondents were assured of the confidentially of information given where necessary.

3.9 Operational definition of variables

An operational definition is a demonstration of a variable or a concept in terms of the specific process or set of validation tests used to determine its presence and quantity (Omware 2012). In this study, the variables and their measurable indicators, data collection and analysis instruments were operationalized as shown in table 3.2.

Table 3.3: Operational definition of variables

Research Objective	**Independent Variable**	**Indicators**	**Measuring Scale**	**Questionnaire Items**
To establish how Top Management Commitment influence implementation of TQM.	Top management commitment	Leadership Support Resource availability	Five point Likert scale where '1= Strongly Disagree' to 5= 'Strongly Agree'	Part I
To investigate the extent to which Employee's Training and Education influence implementation of TQM.	Employees Training and Education	Any Training Frequency of training Timing of training	Five point Likert scale where '1= Strongly Disagree' to 5= 'Strongly Agree'	Part II
To assess the extent to which organizational culture influence implementation of TQM.	Organizational culture	Group culture Developmental culture Hierarchical culture Rational culture	Five point Likert scale where '1= Strongly Disagree' to 5= 'Strongly Agree'	Part III
To establish the effect of communication on implementation of TQM.	Communication	Internal Communication External Communication	Five point Likert scale where '1= Strongly Disagree' to 5= 'Strongly Agree'	Part IV

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTEPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the findings, analysis, interpretations and discussions of the study from the data collected. The study established the extent to which top management commitment, Employees' training, Organisation culture and communication influenced the implementation of TQM in construction companies. Data was collected through self-administered questionnaires. The questionnaires were given out to the targeted 230 respondents. Only 172 questionnaires were collected from the respondents. This was a response rate of 74.8 per cent. This response level is considered efficient and therefore analyzable (Kothari, 2008).

4.2 Demographic Information

Demographic information of the respondents was based on gender, position held by the respondents and the department where they work.

4.2.1 Gender of the Respondents

The study sought to establish gender distribution of the 172 respondents; the researcher asked the respondents to specify their gender and the response was summarized as shown in Table 4.1.

Table 4.1: Gender of respondents

Gender	Frequency	Percent
Male	122	70.9
Female	50	29.1
Total	**172**	**100**

From the Table 4.1, it can be seen that 122 (70.9 %) of the respondents were males while 50 (29.1%) were females. This gives an assumption that majority of the employees in the construction companies are males.

4.2.2 Position Held by Respondents

The researcher sought to establish the position held by the respondents. Table 4.2 shows responses given by the respondents.

Table 4.2: Position Held by Respondent

Position	Frequency	Percent
Top Management	13	7.6
Middle Management	32	18.6
Non-Management	127	73.8
Total	**172**	**100**

According the findings given in Table 4.2, 13 (7.6%) of the respondents were in top management, 32 (18.6%) were in middle management while the remaining 127 (73.8%) comprised of non-management staff. This table shows that the majority of the respondents hold non-management positions.

4.3.2 Employees Distribution per Department

The study sought to investigate the employee's distribution per department, Table4.3 shows the result

Table 4.3: Employees Distribution per Department

Distribution per Department	Frequency	Percent
Projects	98	57.0
Finance and Administration	31	18.1
Marketing	4	2.3
Training and welfare	25	14.5
Quality assurance	14	8.2
Total	**172**	**100**

According to Table 4.3, out of the 172 respondents who took part in the study, 31 (18.1%) were from finance and administration, 98 (57.0%) were from projects, 4 (2.3%) were from marketing and corporate services, 25 (14.5%) were from training and welfare while 14 (8.2%) were from quality assurance department. This implies that the majority of the respondents are in the project department.

4.3 Factors Affecting Implementation of TQM

Factors affecting implementation of TQM were studied in four aspects; top management commitment, employee' training, organizational culture and communication.

4.3.1 Top Management Commitment

Respondents were requested to express their opinion on top management commitment based on the research statements. They were asked to express their feelings on the following statements Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree). The statements and the respondents' opinions were as shown in Table 4.4.

Table 4.4: Analysis on Top Management Commitment

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly Agree	Mean	Std. Deviation
	Statement							
1.	**Top Management Commitment**							
a.	Top management is committed to quality in the organization			21.7 %	60.0 %	16.6 %	3.95	.624
b.	Top management provides a leadership in quality management.		0.6 %	24. %	62.3 %	11.6 %	3.86	.605
c.	Critical resources required in implementing quality initiatives are always made available.			23.4 %	67.4 %	7.4 %	3.84	.538
d.	Employee's ideas on quality management are welcomed			22.9 %	69.1 %	6.3 %	3.79	.554
e.	Top management participates in all quality management programs			27.4 %	64.0 %	6.9 %	3.80	.551
f.	Top management takes part at all levels of quality management programs			26.9 %	64.6 %	6.9 %	3.79	.554
g.	Organization has quality mission and policies			29.1 %	62.3 %	7.0 %	3.77	.563
h.	Organization has a formal quality management structure			25.7 %	65.7 %	6.9 %	3.81	5.44
i.	Organization practices a proper quality planning process.			56.0 %	44.0 %		1.43	.497

According to Table 4.4, 21.7% were indifferent that management was committed to quality, 60.0 % agreed while 16.6 % strongly agreed that management was committed to quality management. As to whether management provides leadership in quality management, 0.6 % of

the respondents disagreed, 24.0 % were indifferent, 62.3 % agreed while 11.6 % strongly agreed. The respondents were also asked whether management availed critical resources required in quality management. 24.4 % were indifferent, 67.4 % agreed while 7.4 % strongly agreed. 22.9 % of the respondents were indifferent that employee's ideas on quality management are welcomed, 69.1 % agreed while 6.3 % strongly agreed. 26.9 % of the respondents were indifferent that top management takes part at all levels of quality management programs, 64.6 % agreed while 6.9 % strongly agreed. 29.1% were indifferent that their organizations had quality mission and policies, 62.3 % agreed while 7.0 % strongly agreed. 25.7 % were indifferent that the organizations had a formal quality structure, 25.7% were indifferent 65.7 % agreed while 6.9 % strongly agreed. On the question of whether the organizations had proper quality planning process, 56.0 % were indifferent while 44.4 % agreed. The means of between 3.5 and 4.0 show that the organizations had top management commitment.

From Table 4.4 above, majority of the respondents agreed that top management provides a leadership in quality management, critical resources required in implementing quality initiatives are always made available, employees' ideas on quality management are welcomed, top management participates in all quality management programs, top management takes part at all levels of quality management programs, organization has quality mission and policies, organization has a formal quality management structure. However, majority of the respondents were indifferent about the organization practicing a proper quality planning process. Generally the table showed there is top management commitment to quality in Construction companies.

4.3.2 Employees Training

The researcher sought to investigate if respondents had prior training on quality management programs and if they had acquired them from the current organization or elsewhere. The responses were as presented in Table 4.5 and 4.6

Table 4.5: Employee's training

Trained on Quality Management Program	Frequency	Percent
Yes	55	31.9
No	117	68.1
Total	**172**	**100**

From Table 4.5, out of the 172 respondents who took part in the study, 55(31.9%) had been trained on quality management programs. 117(68.1%) had not received such trainings. This implies that most respondents did not have any training in any quality management program.

Response on whether the respondents got the trainings in the organization or elsewhere is as presented in Table 4.6

Table 4.6: Where respondents obtained training on quality management programs

Where Trained on Quality Management Program	Frequency	Percent
In the current company	36	65.5
Elsewhere	19	34.5
Total	**55**	**100**

From Table 4.6, 36(65.5 %) of the respondents who had prior trainings in quality management programs had been trained in the current organization while 19(34.5%) had been trained elsewhere. This implies that the respondents who got training in quality management programs had the training in their current place of work.

The respondents' response on whether they had training on ISO certification was as shown in Table 4.7.

Table 4.7: Training on ISO quality standards

Trained on ISO Quality Standards	Frequency	Percent
Yes	18	10.5
No	154	89.5
Total	**172**	**100**

From Table 4.7, only 18 (10.5 %) of the respondents had been trained on ISO certification while 154 (89.5 %) had not been trained on such programs. This implies that majority of the respondents had no training on ISO standards.

The responses of the respondents on whether they had been trained on TQM are as presented in table 4.8.

Table 4.8: Training on TQM

Trained on Total Quality Management	Frequency	Percent
Yes	25	14.0
No	147	86.0
Total	**172**	**100**

From Table 4.8, only 25 (14.0 %) of the respondents who had been trained on quality management had been trained on TQM whereas 147 (86.0%) had not been trained on TQM. This implies that majority of the respondents had not been trained on TQM.

Respondents were asked to express their opinions on frequency, timeliness, relevance and involvement in quality training programs. They were asked to express their feelings on the following statements Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree).The analysis of their responses is as shown in Table 4.9

Table 4.9: Responses on Employee Training

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly Agree	Mean	Std. Deviation
1.	**Employees Training**							
a.	All employees get training on TQM programs		2.3 %	34.3 %	45.7 %	16.0 %	1.68	.468
b.	Employees in are frequently trained on TQM		1.1 %	37.7 %	44.6 %	14.9 %	1.35	.480
c.	Employees get timely training on T Q M		0.6 %	23.4 %	57.1 %	17.1 %	1.90	.307
d.	Training equip employees with understanding on TQM		1.1 %	26.9 %	60.6 %	9.7%	1.86	.348
e.	Employees are involved in TQM training programs.		0.6 %	29.1 %	61.1 %	7.4%	3.73	.756

Table 4.9 indicates that 2.3 % of the respondents disagreed that all employees get training on TQM, 34.3 % were indifferent, 45.7 % agreed while 16.0 % strongly agreed. 1.1 % 0f the

respondents disagreed that employees were frequently trained on TQM, 37.7 % was indifferent, 44.6% agreed while 14.9% strongly agreed. 0.6 % of the respondents disagreed that training on TQM was timely, 23.4 % were indifferent, 57.1 % agreed while 17.1 % strongly agreed. 1.1 % of the respondents disagreed the training they received on TQM equipped them with an understanding of TQM and their roles in it, 26.9 % were indifferent, 60.6 % agreed while 9.7 % strongly agreed.

From the Table 4.9, majority of the respondents agreed that all employees get training on TQM programs, employees are frequently trained on TQM, employees get timely training on TQM, training equip employees with understanding on TQM and employees are involved in TQM training programs. The means of between 1.0 and 2.0 shows that in as much as the employees who had training on quality thought the organizations had appropriate and adequate training, these trainings were generally inadequate.

4.3.3 Organizational Culture

The study sought to study organizational culture as one of the factors affecting implementation of TQM. The respondents were asked to express their feelings on the following statements Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree). The responses of the respondents were as shown in Table 4.10.

Table 4.10: Responses on organizational culture

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly Agree	Mean	Std Deviation
1.	**Group Culture**							
a.	Your organization has a flexible organizational culture.		0.6 %	30.9 %	60.0 %	6.9 %	3.95	.624
b.	There is cohesion among employees in your organizations			38.9 %	48.0 %	11.4 %	3.86	.605
c.	Employees are empowered in your organization			32.6 %	54.9 %	10.9 %	3.84	.538

d.	Employees are encouraged to participate in decision making in			26.3 %	58.3 %	14.0 %	3.79	.554
2.	**Developmental Culture**							
a.	Organizational culture that is flexible to internal changes			18.9 %	66.3 %	13.1 %	3.94	.635
b.	Organizational culture accommodates external changes.			22.3 %	58.3 %	17.1 %	3.95	.635
3.	**Rational Culture**							
a.	Your organization has an organizational culture that focuses on control.			22.3 %	57.7 %	18.3 %	3.96	.643
b.	Your organization has an organizational culture that focuses on stability in the organization.			23.4 %	56.6 %	18.3 %	3.95	.751
4.	**Hierarchical culture**							
a.	Your organization has an organizational culture that encourages internal efficiency		1.1 %	26.3 %	50.3 %	20.0 %	3.90	.731
b.	Your organization has an organizational culture that encourages adherence to company policy and the law.		0.6 %	36.6 %	57.7 %	3.4 %	3.65	.557

According to Table 4.10, 0.6 % disagreed that organization has a flexible organizational culture, 30.9 % were indifferent, 60 % agreed while 6.9% strongly agreed. 38.9 % were indifferent that there is cohesion among employees, 48.0 % agreed while 11.4 % strongly agreed. 32.6 % were indifferent that employees are empowered, 54.9% agreed while 10.9 % strongly agreed. 18.9 were indifferent that the organizational culture was flexible to changes, 66.3 % agreed while 13.1strongly agreed. 22.3 % were indifferent that the organizational culture focused on control, 57.7% agreed while 18.3 strongly agreed. 22.3 % were indifferent that the organizational culture focused on stability, 58.3 % agreed while 18.3 % strongly agreed. 1.1% disagreed that the organizational culture encourages internal efficiency, 26.3

were indifferent, 50.3 agreed while 20.0 % strongly agreed. Similarly 0.6 % of the respondents disagreed that the organizations had organizational culture that encourages adherence to policy and law, 36.3 % were indifferent, 57.7 % agreed while 3.4% strongly agreed. Majority of the means were between 3.5 and 4.0 showing that the organizations have appropriate organizational culture.

From the analysis, majority of the respondents agreed that the organization has a flexible organizational culture, there is cohesion among employees in the organization, employees are empowered in the organization and employees are encouraged to participate in decision making. The majority of the respondents also concurred that, the organizational has a culture that is flexible to internal changes, the organizational culture accommodates external changes, the organization has an organizational culture that focuses on control, the organization has an organizational culture that focuses on stability in the organization, the organization has an organizational culture that encourages internal efficiency and that the organization has an organizational culture that encourages adherence to company policy and the law. These results show that the construction companies have appropriate company culture.

4.3.4 Communication

In the study, respondents' opinions were also sought on communication. They were asked to express their feelings on the following statements Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree). Their responses were as shown in Table 4.11

Table 4.11: Responses on Communication

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly Agree	Mean	Std. Deviation
1.	**Internal Communication**							
a.	There are well developed internal Communication system in your organization		0.6 %	36.0 %	54.9 %	6.9 %	3.69	.605

b.	There is free flow of quality management information between departments in yours organization			29.1 %	59.4 %	9.7 %	3.80	.599
c.	There is free flow of quality management information from management to employees in your organization			17.7 %	60.6 %	20.0 %	4.02	.621
d.	There is free flow of quality management information from employees to management in your organization			12.8 %	71.5 %	15.7%	3.77	.643
e.	There is free flow of quality management information between employees		0.6 %	32.6 %	54.3 %	10.9%	3.77	.622
f.	There if a well-developed feedback mechanism in your organization		1.1 %	29.1 %	58.9 %	9.3 %	3.88	.604
2.	**External Communication**							
a.	Your organization has well developed external communication system.			24.6 %	61.1 %	12.6%	3.88	.604
b.	Your organization gets timely information about customer quality needs			17.1 %	61.7 %	19.4%	4.02	.611
c.	Your organization gets customer complaints in time.			18.3 %	58.3 %	21.1%	4.03	.639
d.	Your organization gives timely response to customer quality complaints.			12.0 %	60.6 %	25.7%	4.14	.605

According to Table 4.11, 0.6 % of the respondents disagreed that there was a well developed internal communication system in the organization, 36.0% were indifferent, 54.9% agreed while 6.9 % strongly agreed. 29.1% of the respondents were indifferent that there is free flow of quality management information between departments, 59.4 % agreed while 9.7 % strongly agreed. 1.1 % disagreed that there was in place a well developed feedback mechanism, 29.1 were indifferent, 58.9 % agreed while 9.3 % strongly agreed. 24.6 % were indifferent that the

organization had a well developed external communication system, 61.1 % agreed while 12.6 % strongly agreed. 17.1 % were indifferent that organizations get timely information about customer quality needs, 61.7 % agreed while 19.4% strongly agreed. 18.3 % of the respondents were indifferent that get customer complaints in time, 58.3 % agreed while 21.1 % strongly agreed. 12.0 % of the respondents were indifferent that the organizations give timely customer response, 60.6 % agreed while 25.7 % strongly agreed. Means of between 3.6 and 4.1 shows that construction companies had in place proper and appropriate communication systems

Majority of the respondents agreed that there is well developed internal Communication system in the organization, there is free flow of quality management information between departments in the organization, there is free flow of quality management information from management to employees in the organization, there is free flow of quality management information from employees to management in the organization, there is free flow of quality management information between employees and that there if a well-developed feedback mechanism in your organization. On external communication, majority of the respondents agreed that the organization has well developed external communication system, organization gets timely information about customer quality needs, organization gets customer complaints in time and organization gives timely response to customer quality complaints. These results show that construction companies have in place adequate and appropriate communication systems and structures.

4.4 Total Quality Management

The study sought to establish TQM practices in the organizations. The practices were studied in terms of top management commitment, cultural change, customer focus, total involvement and continuous improvement. The responses were as shown in table 4.12

Table 4.12: Response on Total Quality Management

In the study, respondents' opinions were also sought on communication. They were asked to express their feelings on the following statements Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree). Their responses were as shown in Table 4.12.

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly Agree	Mean	Std. Deviation
1	**Top management commitment and leadership**							
a.	Top management takes a leading role in management of quality in your organization			21.5 %	58.9 %	14.3 %	3.89	.625
b.	There is long term relationship with satisfied customers			24.6 %	62.3 %	11.4 %	3.87	.592
2.	**Cultural Change**							
a.	Your organization has a Total Quality Management culture that is shared in the entire organization			29.1 %	61.1 %	8.0 %	3.78	.578
b.	The quality culture in your organization encourages innovation.			32.0 %	57.7 %	8.6 %	3.76	.657
3.	**Customer Focus**							
a.	Your organization strives to meet and exceed customer needs and expectations.			0.6 %	34.3 %	52.0 %	3.63	.666
b.	Your organization maintains close link			2.3 %	39.4 %	48.6 %	3.72	.557

	with its customers.							
c.	Your organization incorporate customer needs in developing and offering their services.			33.1 %	60.0 %	5.1 %	4.14	.605
4.	**Total Involvement**							
a.	All employees in your organization are involved in quality management programs			26.9 %	61.7 %	9.7 %	3.83	.640
b.	All functions of your organization are involved in quality management programs		1.1 %	26.3 %	58.9 %	12.0 %	3.83	.586
5.	**Continuous Improvement**							
a.	Organization continuously assesses & improves administrative programs		0.6 %	20.0 %	59.4 %	18.3 %	3.83	.640
b.	Your organization continuously improves its processes to give quality services			23.4 %	59.4 %	15.4 %	3.92	.625
c.	Organization continuously monitor their processes identify			25.7 %	55.4 %	17.1 %	3.91	.656

According to the Table 4.12, 21.5% of the respondents were indifferent that top management takes a leading role in quality management, 58.9 % agreed while 14.3 % strongly agreed. 24.6 % were indifferent that there is long term relationship with satisfied customers, 62.3 % agreed while 11.4 % strongly agreed. From the analysis, majority of the respondents were indifferent, agreed or strongly agreed with the statements. On organizational culture, 29.1 % were indifferent that TQM culture was shared across the organization, 61.1% agreed while 8.0% strongly agreed. Similarly, 32.0% of the respondents were indifferent that quality culture encourages innovation, 57.7 % agreed while 8.6 strongly agreed. Majority of the respondents were indifferent, agreed or strongly agreed with the statements. On customer focus, 0.6% of the respondents were indifferent that the organization strives to meet and exceed customer needs and expectations, 34.3 % agreed while 52.0 % strongly agreed. 33.1 % were indifferent that the organizations incorporate customer needs in their services, 60.0 % agreed while 5.1 % strongly

agreed. From the analysis, majority of the respondents were indifferent, agreed or strongly agreed with the statements. On total involvement, 26.9 % of the respondents were indifferent that the organization involves all employees in quality management, 61.7 % agreed while 9.7 % strongly agreed. 1.1 5 % disagreed that all functions in the organization is involved in quality management, 26.3 % were indifferent, 58.9 % agreed while 12.0 % strongly agreed. Lastly, on continuous improvement, 0.6 % of the respondents disagreed that the organization continuously asses and improves its technical and administrative programs, 20.0 % were indifferent, 59.4 % agreed while 12.0% strongly agreed. Lastly, 25.7 % of the respondents were indifferent that the organizations continuously monitor their processes to identify and correct faults, 55.4 % agreed while 17.1 % strongly agreed.

These results showed the following: On top management commitment and leadership, majority of the respondents agreed that top management takes a leading role in management of quality in the organization and that there is long term relationship with satisfied customers. On cultural change, majority of respondents agreed the organization has a Total Quality Management culture that is shared in the entire organization and that quality culture in your organization encourages innovation. On customer focus, majority of the respondents strongly agreed that the organization strives to meet and exceed customer needs and expectations, the organization maintains close link with its customers however the majority of the respondents agreed that the organization incorporate customer needs in developing and offering their services. The responses on total involvement showed that majority of the respondents agreed that employees in the organization are involved in quality management programs and that all functions of the organization are involved in quality management programs. Finally, on continuous improvement, majority of the respondents agreed that the organization continuously assesses and improves its technical and administrative programs, the organization continuously improves its processes to give quality services to their customer and the organization continuously monitors their processes, identify faults and ensures such faults do not occur again. These results show that the construction companies implement TQM.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter presented the summary of findings, conclusions and recommendations obtained from the findings of the study as well as the suggestions for future studies.

5.2 Summary of the Results

This study was aimed at studying the factors influencing implementation of TQM. A questionnaire was developed and issued to respondents who filled them. The questionnaires were then collected for analysis. 230 questionnaires were given out. Out of these, only 172 were successfully filled and collected for analysis. This showed a response rate of 74.8 %. Out of the 172 respondents who took part in the study, 122(70.9%) were males while the remaining 50 (29.1%) were females. This showed that majority of the respondents were males. The study sought to establish the position held by the respondents. 13(7.6%) percent of the respondents were in top management, 32(18.6 %) were in middle management while the remaining 127(73.8 %) comprised of non-management staff. This table shows that the majority of the respondents are non-management positions. Out of the 172 respondents who took part in the study, 31(18.1%) were from finance and administration, 98(57%) were from projects, 4 (2.3%) were from marketing and corporate services, 25(14.5%) were from training and welfare while 14(8.2%) were from quality assurance department. This implies that the majority of the respondents are in the project department.

The study sought respondents' opinion on factors affecting implementation of TQM. The first factor was top management commitment. On statements on top management commitment, 21.7% of the respondents were indifferent that management was committed to quality, 60.0 % agreed while 16.6 % strongly agreed that management was committed to quality management. As to whether management provides leadership in quality management, 0.6 % of the respondents disagreed, 24.0 % were indifferent, 62.3 % agreed while 11.6 % strongly agreed. The respondents were also asked whether management availed critical resources required in quality management. 24.4 % were indifferent, 67.4 % agreed while 7.4 % strongly agreed. 22.9 % of the respondents were indifferent that employee's ideas on quality management are welcomed, 69.1 % agreed while 6.3 % strongly agreed. 26.9 % of the respondents were

indifferent that top management takes part at all levels of quality management programs, 64.6 % agreed while 6.9 % strongly agreed. 29.1% were indifferent that their organizations had quality mission and policies, 62.3 % agreed while 7.0 % strongly agreed. 25.7 % were indifferent that the organizations had a formal quality structure, 65.7 % agreed while 6.9 % strongly agreed. On the question of whether the organizations had proper quality planning process, 56.0 % were indifferent while 44.4 % agreed.

From the above result, majority of the respondents agreed that top management provides a leadership in quality management, critical resources required in implementing quality initiatives are always made available, employees' ideas on quality management are welcomed, top management participates in all quality management programs, top management takes part at all levels of quality management programs, organization has quality mission and policies, organization has a formal quality management structure. However, majority of the respondents were indifferent about the organization practicing a proper quality planning process. These results show that there is top management to quality in construction companies.

The second factor used in the study was employee training out of the 172 respondents who took part in the study, 55(31.9%) had been trained on quality management programs. 117(68.1%) had no received such trainings. This implies that most respondents did not have any training in any quality management program. 36(65.5 %) of the respondents who had prior trainings in quality management programs had been trained in the current organization while 19(34.5 %) had been trained elsewhere. This implies that the respondents who got training in quality management programs had the training in their current place of work.25(14.0 %) of the respondents who had been trained on quality management had been trained on TQM whereas147(86.0%) had not been trained on TQM. This implies that majority of the respondents had not been trained on TQM. 2.3 % of the respondents disagreed that all employees get training on TQM, 34.3 % were indifferent, 45.7 % agreed while 16.0 % strongly agreed. 1.1 % 0f the respondents disagreed that employees were frequently trained on TQM, 37.7 % was indifferent, 44.6% agreed while 14.9% strongly agreed. 0.6 % of the respondents disagreed that training on TQM was timely, 23.4 % were indifferent, 57.1 % agreed while 17.1 % strongly agreed. 1.1 % of the respondents disagreed the training they received on TQM equipped them with an understanding of TQM and their roles in it, 26.9 % were indifferent, 60.6 % agreed while 9.7 % strongly agreed.

From this analysis majority of the respondents agreed that all employees get training on TQM programs, employees are frequently trained on TQM, employees get timely training on TQM, training equip employees with understanding on TQM and employees are involved in TQM training programs. These results show that construction companies are not doing enough as far as training on quality is concerned.

The third factor looked at in the study was organizational culture. 0.6 % disagreed that organization has a flexible organizational culture, 30.9 % were indifferent, 60 % agreed while 6.9% strongly agreed. 38.9 % were indifferent that there is cohesion among employees, 48.0 % agreed while 11.4 % strongly agreed. 32.6 % were indifferent that employees are empowered, 54.9% agreed while 10.9 % strongly agreed. 18.9 were indifferent that the organizational culture was flexible to changes, 66.3 % agreed while 13.1strongly agreed. 22.3 % were indifferent that the organizational culture focused on control, 57.7% agreed while 18.3 strongly agreed. 22.3 % were indifferent that the organizational culture focused on stability, 58.3 % agreed while 18.3 % strongly agreed. 1.1% disagreed that the organizational culture encourages internal efficiency, 26.3 were indifferent, 50.3 agreed while 20.0 % strongly agreed. Similarly 0.6 % of the respondents disagreed that the organizations had organizational culture that encourages adherence to policy and law, 36.3 % were indifferent, 57.7 % agreed while 3.4% strongly agreed. These results show

From the analysis, majority of the respondents agreed that the organization has a flexible organizational culture, there is cohesion among employees in the organization, employees are empowered in the organization and employees are encouraged to participate in decision making.The majority of the respondents also concurred that, the organizational has a culture that is flexible to internal changes, the organizational culture accommodates external changes, the organization has an organizational culture that focuses on control, the organization has an organizational culture that focuses on stability in the organization, the organization has an organizational culture that encourages internal efficiency and that the organization has an organizational culture that encourages adherence to company policy and the law. These results show that construction companies have appropriate organizational culture.

The last factor used in the study was communication. 0.6 % of the respondents disagreed that there was a well developed internal communication system in the organization, 36.0% were indifferent, 54.9% agreed while 6.9 % strongly agreed. 29.1% of the respondents were

indifferent that there is free flow of quality management information between departments, 59.4 % agreed while 9.7 % strongly agreed. 1.1 % disagreed that there was in place a well developed feedback mechanism, 29.1 % were indifferent, 58.9 % agreed while 9.3 % strongly agreed. 24.6 % were indifferent that the organization had a well developed external communication system, 61.1 % agreed while 12.6 % strongly agreed. 17.1 % were indifferent that organizations get timely information about customer quality needs, 61.7 % agreed while 19.4% strongly agreed. 18.3 % of the respondents were indifferent that get customer complaints in time, 58.3 % agreed while 21.1 % strongly agreed. 12.0 % of the respondents were indifferent that the organizations give timely customer response, 60.6 % agreed while 25.7 % strongly agreed.

This analysis showed that majority of the respondents agreed that there is well developed internal Communication system in the organization, there is free flow of quality management information between departments in the organization, there is free flow of quality management information from management to employees in the organization, there is free flow of quality management information from employees to management in the organization, there is free flow of quality management information between employees and that there if a well-developed feedback mechanism in your organization. On external communication, majority of the respondents agreed that the organization has well developed external communication system, organization gets timely information about customer quality needs, organization gets customer complaints in time and organization gives timely response to customer quality complaints.

The study also sought the respondents' opinion on TQM. 21.5% of the respondents were indifferent that top management takes a leading role in quality management, 58.9 % agreed while 14.3 % strongly agreed. 24.6 % were indifferent that there is long term relationship with satisfied customers, 62.3 % agreed while 11.4 % strongly agreed. From the analysis, majority of the respondents were indifferent, agreed or strongly agreed with the statements. On organizational culture, 29.1 % were indifferent that TQM culture was shared across the organization, 61.1% agreed while 8.0% strongly agreed. Similarly, 32.0% of the respondents were indifferent that quality culture encourages innovation, 57.7 % agreed while 8.6 strongly agreed. Majority of the respondents were indifferent, agreed or strongly agreed with the statements. On customer focus, 0.6% of the respondents were indifferent that the organization strives to meet and exceed customer needs and expectations, 34.3 % agreed while 52.0 %

strongly agreed. 33.1 % were indifferent that the organizations incorporate customer needs in their services, 60.0 % agreed while 5.1 % strongly agreed. From the analysis, majority of the respondents were indifferent, agreed or strongly agreed with the statements. On total involvement, 26.9 % of the respondents were indifferent that the organization involves all employees in quality management, 61.7 % agreed while 9.7 % strongly agreed. 1.1 5 % disagreed that all functions in the organization is involved in quality management, 26.3 % were indifferent, 58.9 % agreed while 12.0 % strongly agreed. Lastly, on continuous improvement, 0.6 % of the respondents disagreed that the organization continuously asses and improves its technical and administrative programs, 20.0 % were indifferent, 59.4 % agreed while 12.0% strongly agreed. Lastly, 25.7 % of the respondents were indifferent that the organizations continuously monitor their processes to identify and correct faults, 55.4 % agreed while 17.1 % strongly agreed.

On top management commitment and leadership, majority of the respondents agreed that top management takes a leading role in management of quality in your organization and that there is long term relationship with satisfied customers. On cultural change, majority of respondents agreed the organization has a Total Quality Management culture that is shared in the entire organization and that quality culture in the organization encourages innovation. On customer focus, majority of the respondents strongly agreed that the organization strives to meet and exceed customer needs and expectations, the organization maintains close link with its customers however the majority of the respondents agreed that the organization incorporate customer needs in developing and offering their services. The responses on total involvement showed that majority of the respondents agreed that employees in the organization are involved in quality management programs and that all functions of the organization are involved in quality management programs. Finally, on continuous improvement, majority of the respondents agreed that the organization continuously assesses and improves its technical and administrative programs, the organization continuously improves its processes to give quality services to their customer and the organization continuously monitors their processes, identify faults and ensures such faults do not occur again. These results show that construction companies implement TQM.

5.3 Conclusions

The aim of this study was to determine the factors influencing implementation of TQM and their influence in implementation of TQM. The study was based on four objectives:

The first objective was to establish how Top Management Commitment influences implementation of TQM in Construction Companies in Kenya. The study concluded that top management commitment is a critical factor in implementation of TQM. It was further concluded that top management commitment has a positive influence on implementation of TQM. This means that with increased top management commitment, the implementation of TQM is likely to be more successful.

The second objective of the study was to investigate the extent to which Employee's Training influence implementation of TQM in Construction Companies in Kenya. The study concluded that an employee training is a critical factor in implementation of TQM. The study further concluded that employee training has positive influence on implementation of TQM. This means that employee training can be used to enhance implementation process of TQM.

The third objective of the study was to assess the extent to which organizational culture influence implementation of TQM in Construction Companies in Kenya. The study concluded that organizational culture is a critical factor in implementation of TQM. In addition, the study concluded that organizational culture positively influences implementation of TQM. This means that successful implementation of TQM is directly affected by organizational culture.

The last objective of the study was to investigate the influence of Communication on implementation of TQM in Construction Companies in Kenya. The study concluded that communication is a critical factor in implementation of TQM. The study further concluded that communication positively influence implementation of TQM. This means that implementation of TQM is directly affected by communication.

5.4 Recommendations

From the study, it was evident that top management commitment is a critical factor in implementation of TQM. This study therefore recommends that construction companies as well as other organizations who are implementing TQM take strategic measures in ensuring top management participation and commitment to quality initiatives. This study further

recommends that top managements commit themselves in providing leadership and key resources needed in quality management.

The study revealed that employees' training is a critical factor in implementation of TQM and that employees' training positively influences implementation of TQM. The study therefore recommends that organizations train their employees on quality management initiatives. It is also recommended that these trainings are conducted frequently and at all levels in the organization.

The findings of the study also revealed that organizational culture is a critical factor in implementation of TQM. The study further revealed that organizational culture positively influence implementation of TQM. It is therefore recommended that organizations develop group, hierarchical, developmental and rational culture so as to enhance total quality management.

Lastly, the study concluded that communication is a critical factor in implementation of TQM. The study in addition showed a positive influence of communication on implementation of TQM. The study therefore recommends that quality managers and management develop appropriate, effective and flexible communication systems that allow free flow of quality information at all levels in the organization.

5.5 Suggestions for Future studies

This study suggests the following: further studies may be done to explore other factors other than top management commitment, employee training, organizational culture and communication and their influence on TQM, further studies may be done to relate these factors to other variables like organizational performance and customer satisfaction, further studies may also be done on other quality management initiatives such as ISO standards and statistical quality control. In addition, similar studies may be done in other sectors, especially in the public sector.

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APPENDICES

Appendix 1: List of Construction Companies in within Nakuru County

No	Company
1.	Reliable Concrete Works
2.	Anduru Construction Co Ltd
3.	Bubwa Agencies Ltd.
4.	KalaluBuiling Contractors
5.	Mawe Construction Co.
6.	Gajipara Builders Ltd
7.	Amogracia Contactors
8.	Jagir Singh Contractors Ltd
9.	Libix Construction Ltd
10	Recco Builders Ltd
11.	Spion Construction Company
12	Pimka Construction Company
13	Real Mark Construction LTD
14	Emuwan Construction Ltd
15	Sincere Building Contractors
16	Convoy General Contractors
17	Go-Blue Contractors Ltd
18	Lare Construction Limited
19	McWilly Construction Services Ltd
20	Lawane Contractors LTD
21	Mukan Construction & Engineering Services LTD
22	Gillian & Sons Contractors & Supplies
23	Jimwa Construction & Services LTD
24	Multi - Span Builders (K) LTD
25	Darko Works Construction Co. Ltd
26	Kolkol Construction Company LTD

27	Jasmin Construction Ltd
28	Ubex Construction Company LTD
29	Golden Construction Company LTD
30	Tyckom Construction & Supplies LTD
31	Ginel Contractors Company LTD
32	KingakariBidgo Construction
33	Magka General Construction LTD
34	Metro Contractors East Africa LTD
35	Primebuild General Contractors
36	Syndwa Construction Co. Ltd
37	Pillars General Contractors Ltd
38	Joghol Supplies & Civil Contractors LTD
39	Royal Keystone Construction & Engineering Co. Ltd
40	Edmen Contractors Ltd
41	Safebuild Contractors LTD
42	Assa Contractors LTD
43	Firm Rise Building & Construction Co. Ltd
44	Murira Construction Company Ltd
45	Discrete Construction Company LTD
46	Jomikoka Construction Africa LTD
45	Jospeh Building Construction
48	Timewise General Contractors LTD
48	Jondowa Construction
50	Messis Construction Co. Ltd
51	Jia Contractors Company Ltd
52	Jabiyac Contractors Ltd
53	Chamika Contractors & Suppliers
54	Chrisbon Construction KA Ltd

Source: National Construction Authority, Nakuru, 2014

Appendix 2: Letter of Transmittal

Bonventure Wesonga Oruma

University of Nairobi

P.O Box 30197

Nairobi

10th March 2014

The Human Resource Manager

Dear Sir/Madam

RE: REQUEST FOR ACADEMIC SURVEY RESEARCH.

I am a student at the University of Nairobi undertaking a Master of Arts degree in Project Planning and Management. I have completed my coursework and currently conducting a project research as part of fulfilment of the course.

I am conducting a research on Factors affecting Implementation of Total Quality Management in Construction Industry in Kenya: A case study of Construction Companies in Nakuru County. I am kindly seeking an opportunity to conduct the research in your organization as one of my case company. All the data collected for this study will be treated with utmost confidentiality and will solely be used for the academic purposes.

Any assistant you will offer is highly appreciated.

Thank you

Yours Sincerely

Bonventure Wesonga Oruma.

Appendix 3: Table of sample determination

N	N	*N*	n	*N*	n
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.-N - is population size.

n - is sample size.

Appendix 4: Research Questionnaire

Dear respondent,

This questionnaire is meant to collect data for a research paper on **Factors affecting Implementation of Total Quality Management**. You have been identified as one of the respondents for this research. You are kindly requested to be honest and exhaustive in filling the questionnaire. Please note that the information given is purely for research purposes.

Instruction: Please fill in the spaces provided or tick inside the boxes as appropriate

SECTION A: BACKGROUND INFORMATION

1. Gender
    a) Male ☐
    b) Female ☐
2. Position held
    a) Top Management ☐
    b) Middle management ☐
    c) Support staff ☐
3. Department
    a) Finance and Administration ☐
    b) Projects ☐
    c) Marketing and corporate services ☐
    d) Training and welfare ☐
    e) Quality assurance ☐

SECTION B: FACTORS AFFECTING IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT

PART I: TOP MANAGEMENT COMMITMENT

The following statements relate to Factors Affecting Implementation of Total Quality Management. Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree) Tick appropriately according to the extent which you agree or disagree with the statements.

No.	**Statements**	**Rating**				
		1	2	3	4	5
2.	**Top Management Commitment**					
a	Top management of your organization is committed to quality in the organization					
b	Top management of your organization provides a leadership role in quality management initiatives.					
c	Critical resources required in implementing quality initiatives are made always made available.					
d	Employee's ideas on ways to improve quality in the organization are welcomed by the top management.					
e	Top management of your organization participates in all quality management programs in the organization.					
f	Top management of your organization takes part at all stages and levels in the quality management programs					
g	Your organization has an organizational quality mission and policies					
h	Your organization has a formal quality management structure					
i	Your organization practices a proper quality planning					

	process.					

PART II: EMPLOYEES TRAINING AND DEVELOPMENT

The following questions and statements relates to Employees Training and Development. Kindly fill in the blank spaces or tick as appropriate.

1. Have you been trained of any Quality Management Programs?
   a) Yes ☐
   b) No ☐
2. If yes, where were you trained on the quality programs?
   a) In the current company ☐
   b) Elsewhere ☐
3. Have you been trained on ISO quality standards?
   a) Yes ☐
   b) No ☐
4. Have you been trained on Total Quality management?
   a) Yes ☐
   b) No ☐
5. Have you been trained on any other quality management program a part from the ones above?
   a) Yes ☐
   b) No ☐
6. If yes, Kindly specify

   ……

   ……

   ……
7. Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree) Tick appropriately according to the extent which you agree or disagree with the statements on Employees Training and Development.

No.	Statements	Rating				
		1	2	3	4	5
a	All employees in your organization get training on Total Quality Management programs					
b	Employees in your organization are frequently trained on Total Quality Management programs					
c	Employees in your organization get timely training on Total Quality Management.					
d	Training received by employees of your organization equips them with understanding on TQM and their role in it.					
e	Employees are involved in the Total Quality Management training programs.					

PART III: ORGANIZATIONAL CULTURE

The following statements relate to organizational culture. Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree) Tick appropriately according to the extent which you agree or disagree with the statements.

No.	Statements	Rating				
		1	2	3	4	5
1.	**Group Culture**					
a	Your organization has a flexible organizational culture.					
b	There is cohesion among employees in your organizations					
c	Employees are empowered in your organization					
d	Employees are encouraged to participate in decision making in your organization					

2.	**Developmental Culture**					
a	There is in place an organizational culture that is flexible to internal changes in your organization.					
b	Your organization has an organizational culture that accommodates external changes.					
3.	**Rational Culture**					
a	Your organization has an organizational culture that focuses on control.					
b	Your organization has an organizational culture that focuses on stability in the organization.					
4.	**Hierarchical culture**					
a	Your organization has an organizational culture that encourages internal efficiency					
b	Your organization has an organizational culture that encourages adherence to company policy and the law.					

PART IV: COMMUNICATION

The following statements relate to Communication. Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree) Tick appropriately according to the extent which you agree or disagree with the statements.

No.	**Statements**	**Rating**				
		1	2	3	4	5
3.	**Internal Communication**					
a	There are well developed internal Communication system in your organization					
b	There is free flow of quality management information					

	between departments in yours organization					
c	There is free flow of quality management information from management to employees in your organization					
d	There is free flow of quality management information from employees to management in your organization					
e	There is free flow of quality management information between employees in your organization					
f	There if a well-developed feedback mechanism in your organization					
4.	**External Communication**					
a	Your organization has well developed external communication system.					
b	Your organization gets timely information about customer quality needs					
c	Your organization gets customer complaints in time.					
d	Your organization gives timely response to customer quality complaints.					

PART V: TOTAL QUALITY MANAGEMENT

The following statements relate to Total Quality Management. Using the key (Where: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 – Strongly agree) Tick appropriately according to the extent which you agree or disagree with the statements.

No.	**Statements**	**Rating**				
		1	2	3	4	5
2.	**Top management commitment and leadership**					
a	Top management takes a leading role in management of quality in your organization					
b	There is long term relationship with satisfied customers in your organization.					
2	**Cultural Change**					
a	Your organization has a Total Quality Management culture that is shared in the entire organization					
b	The quality culture in your organization encourages innovation.					
3	**Customer Focus**					
a	Your organization strives to meet and exceed customer needs and expectations.					
b	Your organization maintains close link with its customers.					
c	Your organization incorporate customer needs in developing and offering their services.					
4	**Total Involvement**					
a	All employees in your organization are involved in quality					

	management programs					
b	All functions of your organization are involved in quality management programs					
5	**Continuous Improvement**					
a	Your organization continuously assesses and improves its technical and administrative programs					
b	Your organization continuously improves its processes to give quality services to their customers.					
c	Your organization continuously monitor their processes identify faults ensures such faults do not occur in the future so that customers can get improved quality					

Appendix 5: Work Plan

Period	**Task**
December 2013	Identification of research problem and research topic.
January – March 2014	Writing research proposal and presentation of the research proposal
April 2014	Pilot study and data collection
May - June 2014	Data entry and analysis Compilation of first draft of the report for review Final writing of the project.
July 2014	Project defense

Appendix 6: Budget

Item	Cost per item	No of items	Total Cost
Printing of draft proposal	10	50 pages	500
Binding of draft proposal	70	1 copy	70
Printing proposal for defense	10	50 pages	500
Photocopying proposal	4	200 pages	800
Binding final proposal	70	5 copies	350
Internet / Library	-	-	3,000
Stationary	-	-	1,000
Printing questionnaire	10	5 pages	50
Photocopying questionnaires	2	1,820 pages	3,640
Printing draft report	10	80 pages	800
Binding of draft report	70	1 copy	70
Printing final project report	10	80 pages	800
Photocopying report	2	320 pages	640
Binding of final report	70	5 copies	350
Travelling expenses	-	-	10,000
Total			**22,570**