

**EFFECTS OF TOTAL QUALITY MANAGEMENT PRACTICES ON
PERFORMANCE OF PUBLIC SECONDARY SCHOOLS IN MAKUENI
COUNTY**

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DECLARATION

I understand that plagiarism is an offence and I therefore declare that this project report is my original work and has not been presented to any other institution for any other award.

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DEDICATION

I dedicate this research project to my family who has been a great inspiration and role model in my life through their hard work and achievements.

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LIST OF ABBREVIATIONS AND ACRONYMS

BOM Board of Management
KCSE Kenya Certificate of Secondary Education
KESI Kenya Education Staff Institute
MIT Massachusset Institute of Technology
MoE Ministry off Education
TQM Total Quality Management
TSC Teachers Service Commission

DEFINITION OF TERMS

Total Quality Management	A type of management that involves continuous improvement of all systems, processes, goods and services in public secondary schools (Murray, 2009).
Participative Management	In the context of public secondary schools, this will refers to how decisions are reached not by an individual at the top but through consultations with HODs and teachers (MoE,2016)
Judgmental Decisions	These are decisions which are situation oriented (Wiio, 1993).

ABSTRACT

The concept of total quality management provides guiding principles and practices to improve the education quality. This study intended to investigate the effects of total quality management (TQM) practices on performance of public secondary schools in Makueni County. The research was conducted in public secondary schools in Makueni County. Fifty two (52) schools out of the three hundred and forty nine (349) public secondary schools in the county were randomly selected for the study. Data was collected by means of a questionnaire administered through drop and pick later method and analyzed quantitatively using descriptive and inferential statistics and presented by use of frequency tables, means and percentages. The study revealed in terms of communication that; Communication has been an important means of realizing quality goals of the school, Communication between all levels in the organization is vital, Total quality management has depended on communication that flows in all directions up, down and laterally and Communication is the centre of success in your school. Top management commitment indicated that; The school embraces top management commitment as a total quality management practice in the school, The schools leadership develops a mission statement and strategies that are translated into action plans within the institution, TQM initiatives in the school start at the top with the senior managers of the school and all senior managers demonstrating their seriousness and commitment to quality implementation in the school. In terms of employee empowerment and involvement the study found out that; the school leadership give more discretion and autonomy to employees, there exists employees involvement that allows the school to benefit from knowledge and skills individuals bring to the workplace, Employees at all levels are charged to review and change their work processes in an effort to improve the overall quality of service and Critical empowerment programs are designed to enable those with little or no power to overcome whatever form of challenge that comes on their way. It was noted that; Training and development has been absolutely vital to the success of total quality management in schools, Training has provided an opportunity to empower and motivate employees in the school and training and development has provided an opportunity to inform employees about the schools goals of total quality management. The study also found out that communication, employee empowerment and involvement, top management commitment and training and development influenced performance of public schools in Makueni county ($r^2 = 75.9\%$). In conclusion, the study concludes that performance of public secondary schools in Makueni County depend on TQM practices. There should be systems for recognition and appreciation of quality efforts in order to motivate the staff to work effectively. There is the need to employ quality functional deployment. This will enable quality systems to be built on customer needs and wants and also exceed customer expectations. It is recommended that the schools subscribe to a quality award system (ISO 2009) certification which can help them to put in place all the measures as well as practice TQM to the highest level. This will go a long way to boost customer confidence all over the world in the services of the schools.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Most Edward Deming, Joseph Juran and Kaoru Ishikawa (Hackman & Wageman, 2005) introduced the concept Total Quality management (TQM) in mid-1980s. TQM is understood as an integrated organizational strategy for improving product and service quality (Waldman, 2014). Total quality management is a holistic approach to long-term success that views continuous improvement in all aspects of an organization as a journey and not as a short-term destination. Quality management practices will be more effective in delivering desired quality results, proper utilization of resources, and effective service delivery among others in learning institutions. If implementation of quality management is performed under the committed, enthusiastic, knowledgeable, and supportive leadership from top management; employees are encouraged to have full participation in quality management implementation and are empowered in their area of responsibility.

The study will be guided by the following theories: contingency theory by Fred Fiedler (1964), Systems theory by Ludwig von Bertalanffy (1942) and chaos theory by Edward Lorenz (1961). The theories would provide the management of schools with better understanding of processes and identification of tools for implementing continual improvement programs that can lead to improved service delivery. All these will provide the schools with a valuable and distinctive competitive edge.

Schools are becoming increasingly aware of rising standards, having access to wide range of services to choose. There is an ever-increasing demand for quality product and/or services and this global revolution has forced organizations to invest substantial resources in adopting and implementing Total Quality Management practices (Shekhar & Joshi, 2011). TQM is a management philosophy, which focuses on work, processes and people with major concern for satisfying customers and improving the organization's performance. In order to obtain their purpose Organizations must have relationship with other parts. This issue is very important that managers design strategies, which through it improve organizations' performance (Pearce, 2003). The use of strategic approach to quality management in schools will

therefore improve their competitiveness (Globadian, 2004). TQM radically transforms an organization through progressive changes in the attitudes, practices, structures and systems. However not managing quality will mean no added value and assuming value to the schools (Peters, 2009).

1.1.1 Total Quality Management

Total Quality Management (TQM) is an approach that seeks to improve quality and performance, which will meet or exceed customer expectations. This is achieved by integrating all quality-related functions and processes throughout the organization. Total Quality Management takes into account all quality measures at all levels while involving all organization employees (Murray, 2009). TQM is a philosophy aiming at continuous improvement and involvement of the whole organization starting from the top of the hierarchy and ending at the bottom level of employees (Ndirangu, 2010).

Quality is achieved when customers' expressed and implied requirements are met fully. Some eminent definitions of quality have been derived from this core statement. They include: the totality of features and characteristics of a product or service that bears on its ability to meet a stated or implied need (ISO, 2004), fitness for use Juran (2008), and conformance to requirement (Crosby, 2009). It is important to note that satisfying the customers' needs and expectations is the main factor in all these definitions. Therefore, it is an imperative for organizations to identify such needs early in the product/service development cycle. Total quality is a strategic integrated system for achieving customer satisfaction that involves all managers and employees and uses quantitative methods to improve an organization's processes (Braxton 2013).

TQM practices can be classified as both external and internal. External TQM practices are those factors, which will influence the future of TQM from without the TQM discourse. The technology, markets and environmental drivers are all classed as external drivers. Internal TQM practices are a management approach aimed at incorporating awareness of quality in all organizational processes (Oakland, 1999). These are issues within the TQM movement. Internal TQM practices are those factors, which will influence the future of TQM from within the TQM discourse. They includes; focus on the customer, long term commitment and leadership, top

management support and direction, employee empowerment and involvement, effective and renewed communication, commitment to training, importance of rewards and recognition and reliance on standards and measures (McAdam& Henderson, 2002).

TQM offers many benefits when properly implemented, such as reduced scrap and rework, the elimination of defects, reduced levels of cost, increased levels of productivity & efficiency and better employee morale. Chin & Pun (2002) stated that successful TQM implementation will result in improved products and services, more satisfied employees and customers, reduced costs and an improvement in the organizational financial improvement. There are barriers that face TQM implementation identified as follows; competitive markets, bad attitudes/abdication of responsibility/management infallibility, lack of leadership for quality, and deficiency of cultural dynamism. Others include inadequate resources for total quality management, lack of customer focus, and lack of effective measurement of quality improvement, poor planning, lack of management commitment, resistance of the workforce and lack of proper training (Ustadh 2012).

1.1.2 Performance

According to Venkatraman and Ramanujam (2016), performance can be understood along three dimensions namely, theoretical, empirical and managerial. Machuki and Aosa (2011) argue that organizational performance can be viewed in terms of organizational effectiveness and efficiency with which an individual organization runs its affairs. Effectiveness is concerned with the unique capabilities that organizations develop to assure success. Efficiency is the cost per unit of output, describing the relationship between goods and services produced by a program or activity (outputs) and the resources used to produce them (input). Performance is the accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed. In a contract, performance is deemed to be the fulfillment of an obligation, in a manner that releases the performer from all liabilities under the contract (Karen, 2009).

Organizational performance is widely recognized as an important – if not the most important-construct in strategic management research. Researchers and practitioners also agree that organizational performance is a multidimensional and multifaceted construct so much so that performance indicators and measurements differ from an organization to another and industry-to-industry depending on their application (Combs et al, 2005). However, consensus among researchers on the best measurement tools or aspects remains elusive. Currently, the strength of a stakeholder in organizational matters determines the focus of performance measurement. Measurement of performance has evolved over time from traditional lens of profits, sales, market share, productivity, debt ratios and stock prices whose interest was only shareholder approaches such the balanced score card (Kaplan & Norton, 2002) and TBL (Elkington, 2007), due to the increasing influence of other stakeholders in organizations performance such as customers, environmentalists and social justice activists.

Performance measurement is a fundamental building block of TQM and a total quality organization. Historically, organizations have always measured performance in some way through the financial Performance, and show success by profit or failure through liquidation. In a successful total quality organization, performance will be measured by the improvements seen by the customer as well as by the results delivered to other stakeholders, such as the shareholders (Katherine & Cowell, 2010).In the context of a school setting, performance is measured in terms of good academic results, efficient service delivery among other result areas.

1.1.3 TQM Guiding Principles and Practices

Lovelock (2003) argues that TQM covers four guiding principles to improve quality at par in either sector .The four guiding principles are delighting the customer, management by fact, people-based management and continuous improvement. Delighting customers: Whatever you do for quality improvement, remember that only customers determine the level of quality. Whatever you do to foster quality, improvement, training, employees, integrating quality into processes management, only customers determine whether your efforts were worthwhile. Principals, who embrace this principle, end up in building high level of trust and loyalty by their

customers (students). **Continuous improvement:** Using analytical, quality tools and creative thinking to become more efficient and effective. There is need to continue to buttress the benefits that accrue to an organization from the implementation of TQM especially in developing economies like Kenya. Principals should focus on continuous improvement in all their processes in order to achieve high-level performance from time to time (Hendricks & Singhal, 2001).

This study embraced fact based management practices in decision-making. Decision-making must be based only on data, not personal or situational thinking. It is imperative for principals to quantify their decisions in order to gain confidence from the stakeholders. **People based management.** Fear should be removed from work place, and then empower employees. If principals provide a conducive environment for the employees, they will feel motivated and work to their best, which in turn will bring success to the institution. This study focused on people based management, which states that if people understand what to do, how to do it and obtain feedback on their performance, they can be encouraged to take responsibility for the quality of their work. The more people feel involved, the greater will be their commitment to customer satisfaction. The role of people is extremely important in the continuous improvement of quality within an organization (Brah, Lee and Raol 2002; Powell, 2015).

1.1.4 Link between TQM and Performance

Within the context of a successful TQM implementation, there is increasing recognition of the importance of human factor in quality management (Brah et al, 2002). For organizations to realize benefits of TQM, the consideration of human factor is critical for the successful implementation of TQM. Organizations that adopt TQM practices obtain a competitive advantage over organizations that do not adopt TQM (Brah et al., 2002; Powell, 2005). We can expect that to the extent an organization implements TQM practices, performance will be enhanced. TQM is a source of enhancing organizational performance through continuous improvement in organizations activities (Claver-cortes&Teh, 2009).

If TQM is properly practiced in a school setting, we expect the discipline of the students to be up to standards i.e. no strikes in schools and minimal complaints if any, the human resource will perform duties efficiently and effectively-this is so because TQM advocates for employee motivation and capacity building. On the side of financial management, a school principal who embraces TQM practices does not face problems of audit queries. A school, which posts good K.C.S.E results largely the principals, is champions of TQM practices in their schools.

1.2 Statement of the Problem

Although TQM initiatives initially focused on reducing defects and errors in products and services through the use of measurement, statistics, and other problem solving tools, organizations began to recognize that lasting improvement could not be accomplished without significant attention to the total quality of management practices used on a daily basis. Managers began to realize that the approaches they use to deliver services as leaders are the true enablers of quality, customer satisfaction, and business results (Evans & Lindsay 2008). In other words, they recognize that quality management is as important as management of quality.

However, the experience of public and private sector institutions that have implemented TQM practices has not always been positive (Law & Walker 2002). Failure is frequently identified as an implementation issue, rather than a failure of the concept and theory of TQM (Elshennawy& McCarthy 2002). Empirical studies of TQM practices reflect these concerns by exploring the extent of and success of implementation, rather than its consequences. Thus, schools have been implementing quality models without clear evidence on their effectiveness. In order to bridge the gap and provide schools with practical assistance in correctly managing and implementing the TQM practices to achieve quality performance, the purpose of the study sought to establish the effects of TQM practices on performance in public secondary schools in Makueni County.

1.3 Objectives of the Study

The objectives of the study included the following:

1.3.1 General Objective

The general objective of the study was to investigate the effects of Total Quality management practices on the performance of public secondary schools in Makueni County.

1.3.2 Specific Objectives

- i. To assess the effect of communication as a TQM practice on performance of public secondary schools in Makueni County.
- ii. To determine the influence of top management commitment as a TQM practice on performance of public secondary schools in Makueni County.
- iii. To assess the impact of Employee Empowerment and Involvement as a TQM practice on performance of public secondary schools in Makueni County.
- iv. To establish the effect of training and development as a TQM practice on performance of public secondary schools in Makueni County.

1.4 Research Questions

The study sought to answer the following questions.

- i. Has Communication as a Total Quality Management practice affected performance in public secondary Schools in Makueni County?
- ii. Does the Top management commitment as a Total Quality Management practice influenced performance in public secondary schools in Makueni County?
- iii. Has Employee Empowerment and Involvement as a Total Quality Management practice affected performance?
- iv. To what extent does training and development as a TQM practice impact on performance in public secondary schools in Makueni County?

1.5 Justification of the Study

The study will help the ministry of education in policy formulation and provision of a framework that can integrate several positive developments in the ministry such as teamwork would use the study, site based management, and cooperative learning and

outcomes based education. In schools, it will be used to foster teacher competence, commitment, creativity, teamwork, effective communication, and provide a way on how educational administrators are expected to lead and realize their full potentials of all personnel in educational organization. While students and lecturers would make references to this document, future researchers would decide to do more research based on the issues raised here.

1.6 Significance of the Study

The study Points out that recent discussion has centered on the application of total quality management (TQM) in education. Most writers appear inclined to suggest that TQM is a unique solution for effective school management. Nonetheless, TQM was initiated in the manufacturing sector and its successful application in the educational setting should only be justified with ample theoretical support and concrete evidence. The study Attempts to trace the literature that discusses the application of TQM in education. Also addresses the differences between industry and education.

An educational institution that takes the total quality route must take seriously the issue of learning styles and needs to have strategies for individualization and differentiation in learning. Educational institutions have an obligation to make learners aware of the variety of learning methods available to them. They need to give learners opportunities to sample learning in a variety of different styles

1.7 Limitations and Delimitations of the Study

In carrying out the study, the researcher encountered some challenges as with regard to unwillingness by respondents to give accurate and reliable information hence might affect the study negatively. This was mitigated by the researcher giving assurance to the respondents of confidentiality of the information given by allowing them not to indicate their names and other personal details in the questionnaires. They were further assured the information given would be solely used for the purpose of the study. The principals were also busy preparing for the form four examination and end of year examinations for forms one to three due to the shortening of the third term by the ministry of education. This also affected the study since it was not easy to get

appointment with them. This was addressed by booking appointment with the principals at their convenient times even though it delayed data collection process.

1.8 Scope of the Study

This study was carried out within Makueni County public secondary schools where total quality management was assumed to be an important element in administering the activities of the institutions. Fifty two (52) principals out of three hundred and forty nine (349) Principals were identified by the researcher. This represented 14% of the principals in the county which was sufficient according to Mugenda (2013).

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presented a review of literature; mainly focusing on theoretical literature, empirical literature, literature overview and research gaps based on implementation of quality management practices. The first section of theoretical review comprised of: a brief introduction to theoretical review, quality management system structural view, and theories guiding TQM implementation. The second section of empirical literature comprises of: a brief introduction on empirical literature, critical success factors of TQM, operational performance, employee empowerment, a principal of TQM and employee empowerment strategies.

2.2 Theoretical Review

A theory explains how and why events occur. Kerlinger (2004) defines a theory as a set of interrelated constructs (concepts), definitions and propositions that presents a systematic view of a phenomenon by specifying relations among variables with the purpose of explaining and predicting the phenomenon. Brah and Lim (2006) argue that theories occupy an important place in research methods. Quite often, it is believed that a research without a theory is blind.

Theories are constructed with elements like, variables, statements and formats. Theoretical statements then imply how concepts in a theory are connected to one another to exhibit a theoretical framework (Turner, 2001). Management theories are implemented to help increase organizational productivity and service quality. Not many managers use a single theory or concept when implementing strategies in the work place. Managers commonly use a combination of a number of theories depending on the workplace, purpose and workforce. The study was guided by the following theories: contingency theory by Fred Fiedler (1964), Systems theory by Ludwig von Bertalanffy (1942) and chaos theory by Edward Lorenz (1961).

2.2.1 Contingency Theory

The proponent of the theory was Psychologist Fred Edward Fiedler in 1964. The contingency theory emphasizes the importance of leader's personality and the

situation in which that leader operates proposed contingency theory of leadership. Assumptions of the study include the following. Different group task situations require a different leader group member interaction that is demand different types of behavior traits. Another assumption was that the demands covary systematically with the dimensions of the contingency model.

In contingency theory of leadership, the success of the leader is a function of various contingencies in the form of subordinate, task, and/or group variables. The effectiveness of a given pattern of a leader behavior is contingent upon the demands imposed by the situation. Contingency theory asserts that managers make decisions based on situations at hand rather than a “one size fits all” method. A manager takes an appropriate action based on aspects most important to the current situation.

Principals in a school may want to utilize a leadership approach that includes participation from workers while a leader in an army may want to use an autocratic approach. Principals should make judgmental decisions depending on situation they are in. The education sector is dynamic and school principal should not be rigid to embrace its dynamism. However there are several major challenges to the theory.. Some of the challenges are theoretical, and others empirical. A challenge is that the theory is static in a sense that it deals with how a static state of fit between structure and contingency causes high performance. It is also considered as an equilibrium theory, in that organizations are depicted as attaining fit and then being in equilibrium and so remaining static. Increased contingency variables such as size or diversification, may lead an organization to a misfit with its existing structure.

2.2.2 Systems Theory

The proponent of the systems theory was Ludwig von Bertalanffy (1940). The fundamental systems-interactive paradigm of organizational analysis features the continual stages of input, through input (processing), and output, which demonstrate the concept of openness/closeness. A closed system does not interact with its environment. It does not take in information and therefore is likely to atrophy, that is to vanish. An open system receives information, which it uses to interact dynamically with its environment (Littlejohn 2001). Managers who understand systems theory

recognize how different systems affect a worker and how a worker affects the system around them. A system is made up of a variety of parts that work together to achieve a common goal. System theory is a broad perspective that allows managers to coordinate programs to work as a collective whole for overall goal or mission of the organization rather than for isolated departments.

Principals should coordinate their institutions, which act like a system that. There are programs, if not properly coordinated the institution ends up not achieving its ultimate mission. Therefore, school administrators are encouraged to ensure formalized procedures to encourage employees think creatively on their jobs and environments, and generate ideas rewarded on a specific basis. If top management fails to support the schools system, it will lack commitment and competency, therefore no a suggestion system. Therefore, there is a lot of significance to keep the management informed through reports given on a regular basis. Through this way, the top management will know how the bottom line of the institution is influenced. The reports given to the top managers in the learning institution should also highlight the manner in which the institution met its basic predetermined objectives.

However, system theory has some critics that it never adequately addresses power, social inequalities and the causes in their systems. In addition, the approach is better at description and explanation than at predictions .It is considered better at probabilistic level of explanation compared to deterministic levels. In order to improve the process, the school as a system should focus on some predictive theory on how the system would react to certain changes or adjustments. The theory in turn should be based on knowledge or experience or on some restructuring of elements within or outside the present process.

2.2.3 Chaos Theory

The proponent of chaos theory was Edward Lorenz (1961). Chaos theory is therefore an apparent lack of order in a system something likely to be experienced in learning institutions. The understanding of the approach obeys particular rules. This theory advocates that change is constant. Although certain events and circumstances in an organisation can be controlled, others cannot. Chaos theory recognizes that change is

inevitable and is rarely controlled. While organizations grow complexity and the possibility for susceptible events increase, organizations increase energy to maintain the new level of complexity and as organizations spend more energy, more structure is needed for stability.

Application of chaos theory in academic environment (makueni secondary schools) will much focus on the student experiences that may lead to failure in their education process. This may lead to some challenges hard to solve in future. A single behavior of students in a schools setting can lead to long lasting attitudes like insecurity, lack of self-confidence, or even low motivation depending on the influence of the event. Therefore, adoption of the butterfly effect to could help bring up solutions to some of the challenges in education process in secondary schools. The system continues to evolve and change. School principals should embrace change for the prosperity of their institutions since the world where the institutions are in is experiencing changes from time to time.

However, the theory has demonstrated some disturbances that multiple over time due to non-linear relationships and feedback effects. Such systems will tend be sensitive in their initial stages. As a result, long term planning tends to be impossible.

2.3 Empirical Literature

Empirical evidence and report's findings from a new empirical study of TQM's performance suggest that most features generally associated with TQM such as quality training, process improvement, and benchmarking do not generally produce advantage, but that certain tacit, behavioural, imperfectly imitable features such as open culture, employee empowerment, and executive commitment can produce advantage. Since there are numerous empirical tests/studies on TQM, this Chapter seeks to identify some of them and link them to the research topic.

2.3.1 Communication and Performance

Excellent communication skills are essential for good performance management. They are important competencies used in the entire performance management process, from planning and communicating work expectations to recognizing

employees for their successful achievements. A study carried out by Watson Wyatt's (2010) in Harvard, show organizations that are effective communicators, have courage to talk about employees want to hear and redefine employment deal based on changing business conditions. Another study by (DiFonzo& Bordia, 1998). In Lagos shows courage, innovation and discipline help drive institutional performance especially in tough situations. as a result, Effective internal communications can keep employees engaged in the business and help companies retain key talent, provide consistent value to customers, and deliver superior financial performance to shareholders." A study by Silvestro (2002) in south Africa banking organizations show that companies that communicate effectively had a 47% higher return to shareholders over a five-year period. Thus link between communication and these three levers of performance -courage, innovation, and discipline had a positive implication to the organization.

The importance of communication during intended change has been empirically demonstrated and commonly agreed among practitioners. The empirical picture appeared indicated that organizational change and communication process are inextricably related processes (Lewis, 1999). Recent studies about communication show that communication has positive correlation with many organizational outputs like organizational commitment, performance, organizational citizenship behaviors, and job satisfaction.

However, some of the countries have been faced with an array of problems that seem to be an impediment to the growth of any organization such as, mismanagement of funds and resources, poor leadership. Again skills, low level of real income, and poor infrastructural facilities to mention but a few are among the research gaps on their impact of communication on worker performance, their productivity and their general commitment to work, using selected organizations in the areas of study. Again, change programs do not reach the results intended to produce. Poorly managed change communication in public secondary schools results in rumors and resistance to change and enlarging the negative aspects of the change. Communication is considered vital for the effective implementation of institutional change (DiFonzo& Bordia, 1998).

The importance of communication during intended change has been empirically demonstrated and commonly agreed among practitioners. The empirical picture appeared indicated that organizational change and communication process are inextricably related processes (Lewis, 1999). Recent studies about communication show that communication has positive correlation with many organizational outputs like organizational commitment, performance, organizational citizenship behaviors, and job satisfaction.

2.3.2 Top Management Commitment and Performance

A study by (Caroline 2013) on small enterprises in Kajiado agreed that the top leaders promoted quality. All enterprises would require leaders that are able to create within followers a capacity to develop higher levels of commitment to organizational goal. Bowen, Morara and Muriithi (2009) also observed that over 50% of youth projects fail within the first three years. For instance the Kenya youth enterprise and development fund launched in 2006; has been on the decline as 57 million is reported to have been lost through misappropriation and mismanagement of funds, political interference and leadership wrangles. Ameyya et al (2011) shows that the causes of failure of youth projects are lack of funding, management skills, and lack of stakeholder support. Mburu & Makori (2006) support this by reporting that many fail because of managerial issue.

Therefore the research indicates that , top management should be committed and focus on the following techniques; confronting reality in the institutions and articulating a compelling need for the change, demonstrating faith that the institution for a viable future and provision of a road- map to guide behavior and decision-making. Studies have shown that leaders who show commitment to their organizations perform better. By being committed their followers emulate the behavior which leads to the success of the organization. Knab (2009) asserts that such are transformational leaders who are able to develop trusting interactions through doing what they do or say that they are going to do succeed more. However, the study contradicts Meyer and Allen (1991) study, studies which argued that the commitment to the organization is not in any way related to the job performance in the organization.

2.3.3. Employee Empowerment and Performance

A study about service quality done in Nigeria by Albert, (2013) indicated that institutional managers need to promote organizational success, and give employees chances to give or innovate their ideas, decisions or solutions .also the study indicated that an empowering. Organization emphasizes on autonomy, proper information and individual participation for organization excellence.

Gomez Mejia et al (2004) on his study on Pakistan banking institutions stated that newer empowerments approach require managers to commit to coaching their team members to understand their roles and be able to execute them effectively. As a result, the studies are requiring managers to commit to coaching their team members to understand their roles and being able to execute them effectively.

For institutional managers to promote organizational success, the study indicates that employees should be given chances to give or innovate their ideas, decisions or solutions and give them an authority to monitor the implementation of the same. Empowerment will also make employees to work independently. The mentality among the employees leads to employees undertaking their tasks more skillfully and learn ways on how things can be done more efficiently for improved efficacy in their institutions.(Lawler et al (1992) Principals in public secondary schools should learn how to embrace the power of empowerment through decentralizing decision making. They should learn to share with frontline employees (H.O.DS/Deputy principal) in matters of administration for effective and efficient performance of their duties.

2.3.4 Training and Development on Performance

A research by Abbas,&Yaqoob, (2009) shows that training and Development in Pakistan prepared the employees to contribute more to organizations. Hence, training and development had a positive impact on employee performance in the banks of Pakistan.

Atiomo, (2010), carried a relative study in Nigeria banking organizations and reiterated that an organization's future prosperity depends not only upon providing a product, which is competitive neither in price, quality and quantity nor of simply

increasing the range of products produced. If the organization has people of vision, energy and experience to direct the force and facilities, then the other requirement for success should follow.

Therefore, an organization may have employees of ability and determination with appropriate equipment and managerial support yet productivity fails below expected standard. Largely, the missing factors in many cases are lack of adequate skills and knowledge, which are acquired through worker training and development.

Anderson (2010) states that despite the positive measure by Ghanaian Government to encourage national indigenous manpower development is still not encouraging. In a similar line of reasoning studies by Yusuf, (2013) also corroborated that most employing institutions in Nigeria tend to feel less concerned in training and development of its employees. Therefore, It was being evidenced through previous researches that training the workforce is inevitable for all the organizations keeping aside their size, scope, and geographical boundaries. This is much due to the increased need for innovation and increase expectations.

The study highlights that school managers should set up mechanisms for nurturing and unfolding and develop a multiple strategy approach to enable the educators fulfill their roles effectively. With this reasons, the principals should also be exposed professional development programs to ensure schools are managed and led by appropriate qualified principals who understand the notion of optimum utilization of educator's potential to enhance effective teaching and learning. however, there is need for further research to determine whether development and enhancement of educator's potential should relate to their work, not only nurturing the intellectual potential to the learners but moral formation and an appropriate humanization according to the national policies and goals.

2.4 Conceptual Framework

Total quality management is considered an important management philosophy, which supports the organizations in their efforts to obtain satisfied customers. TQM practices if implemented in small continuous steps ensure improvement. Quality management practices are made to improve internal quality performance measures

(Steebles, 1992). Good quality practices resulting in the improvement of internal quality performance will lead to the improvement of external performance (Deming, 1986). In this framework, TQM Practices that include communication, top management commitment, training and development and employee empowerment have been conceptualized as independent variables. The dependent variable is school performance, which will be analyzed using proper utilization of resources, quality exam results, effective service delivery and value added person.

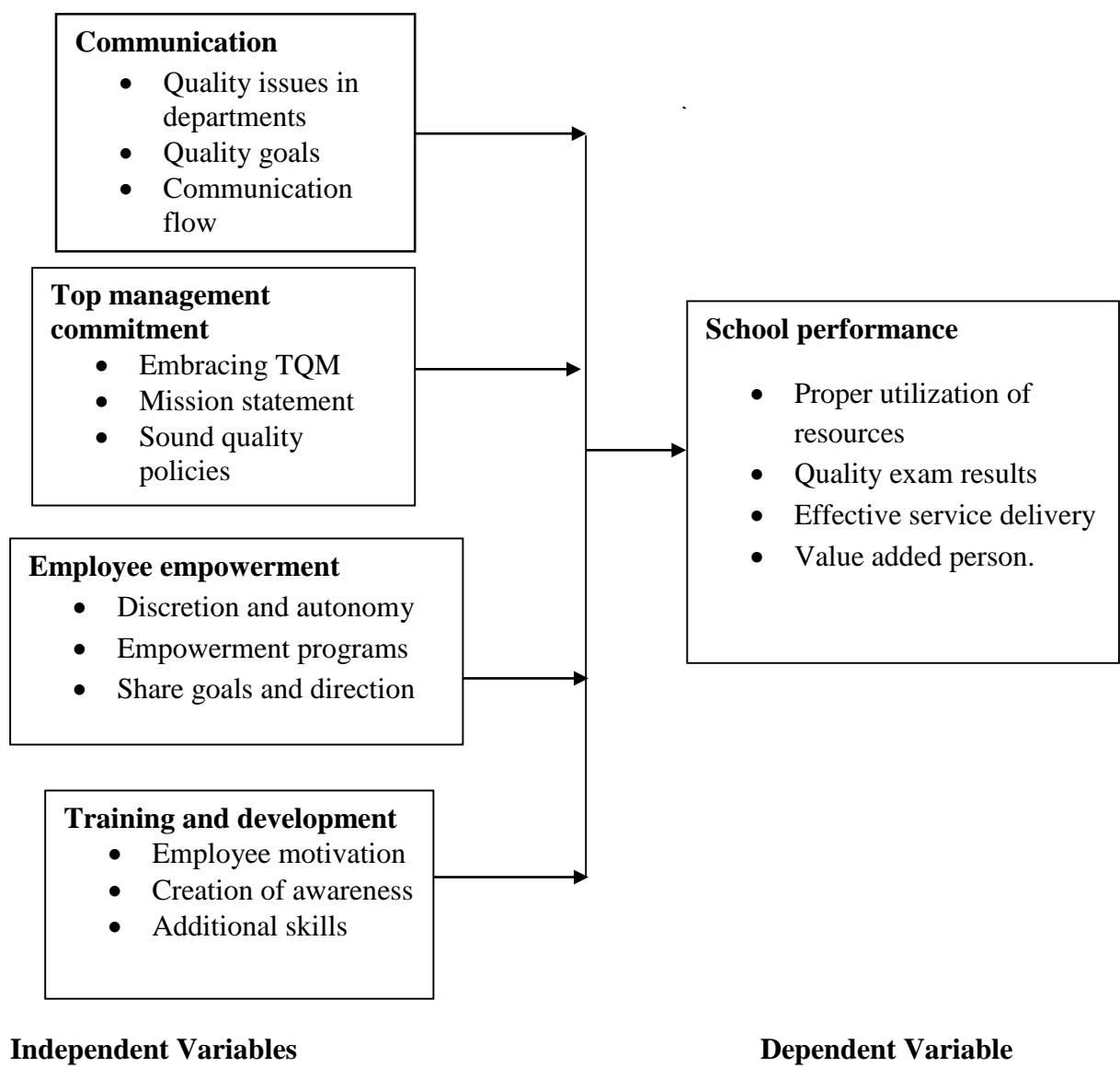


Figure 2.1: Conceptual Framework

CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction

This chapter sets out the research methodology that was adopted to meet the objectives of the study. The research design, the population of interest, sample frame, sample size and sampling techniques, pilot study, data collection instruments and data analysis techniques were discussed.

3.2 Research Design

The study adopted a descriptive survey design. The purpose of survey research was to explore and describe. According to Mugenda, (2003) descriptive survey design is used on preliminaries and exploratory studies to allow the researcher to gather information, summarize, present and interpret the data for the purpose of clarification. It was intended to produce statistical information about aspects of education that interest policy makers and educators. By involving most Principals in secondary schools in Makueni County in Total Quality Management, the study fits within the cross sectional sub-types of descriptive survey designs.

3.3 Population

The population of the study was all the public secondary schools in Makueni County. The 349 Secondary schools in the county were distributed as shown in table 3.1.

Table 3.1: Number of Schools in the County

SUB COUNTY	NO.OF SCHOOLS
KILUNGU	20
MBOONI EAST	42
MBOONI WEST	37
MAKUENI	47
KATHONZWENI	35
KIBWEZI	61
MAKINDU	20
MUKAA	39
NZAUI	48
TOTAL	349

The table presents comprises of all the Principals of the schools that add up to 349.

Source: Makueni County Education Office (2015).

3.4 Sampling Frame and Sample Size

Sampling frame is the source material or device from which a sample is drawn. It is a list of all those within a population who can be sampled, and may include individuals, households or institutions. Importance of the sampling frame is stressed by Salant and Dillman (1995). The sampling frame constituted the list of all the public secondary schools in Makueni County.

Table 3.2: Sample Frame and Sample Size

Sub-county	No. of schools	Sampled school	No. of respondent (100%)
		(10%)	
KILUNGU	20	2	2
MBOONI EAST	42	4	4
MBOONI WEST	37	4	4
MAKUENI	47	4	4
KATHONZWENI	35	3	3
KIBWEZI	61	6	6
MAKINDU	20	2	2
MUKAA	39	4	4
NZAUI	48	5	5
	349	52	52

Sommer (1996) defines a sample as the small group selected for testing. Borg (1989) says sampling error which is the difference between characteristics of the population from which the sample may be drawn is a function of the size of the sample with error being largest when the sample is small. According to Mugenda (2003), a sample size of ten percent of 10 percent is considered adequate for descriptive study. Therefore 10% of the researcher's population size was 52 respondents as the ones used in the actual study as indicated in Table 3.2. The selection of principals was done based on random sampling technique.

3.5 Data Collection Instrument

The data collection instrument was a questionnaire prepared for the Principals selected for the study. A questionnaire was adopted since it could collect information from a large sample and diverse region. Moreover, they save time and uphold confidentiality since the respondents do not write their names anywhere in the questionnaire according to Adams (2007). Before the study was undertaken, a project proposal on factors influencing the performance of public secondary schools was developed, presented to a panel of experts at south eastern Kenya university. All the comments and recommendations given by the panel of experts during the defense were incorporated in the research 25 project .On approval, research instruments were developed with the help of the supervisor.

3.6 Data Collection Procedure

Data was collected using a structured questionnaire on the basis of the objectives of the study. The questionnaires were administered using drop- and pick-later method. The respondents were principals in Makueni County. A two weeks period was given for the respondents to fill in the questionnaire after which they were collected for analysis. The principals were the chief executive officers entrusted with the lead supervisory duty of implementing the TQM practices in schools.

3.7 Pilot Study

Pilot study is a small-scale preliminary study conducted to evaluate feasibility, time, cost, adverse events and effects in attempt to predict an appropriate sample size and improve upon the study design prior to performance of a full-scale research. (Quantitative research).It is carried out on members of relevant population but not all those who will form part of the final sample-because it may influence the later behavior of research subjects if they have already been involved in the research.

To ascertain the reliability and validity of the research instruments, the research pilot was conducted in Kitui County in six schools, and then repeated the same process after two weeks in the same schools (test-retest method). The findings from the pilot study were used to redesign the questionnaire before the actual data collection. Validity of the questionnaire was ascertained through consultation with research

experts in the department of business and Entrepreneurship studies in the school of Business and Economics.

3.8 Data Processing and Analysis

The study employed descriptive statistics that is mean and standard deviation as well as inferential statistics; correlation and regression analysis to analyze the data obtained. Statistical package for social sciences was used to analyze the data. Data was presented by use of frequency distribution tables. The researcher used Multiple Regression Model, whereby the variables of interest are TQM practices (independent variables) and performance (dependent variable). However, an error was realized since there were only four variables of interest on the study. Other TQM practices were not discussed in the study. The model was of the form and it was applicable. (Researcher, 2017).

$$Y = \beta + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

Y is the Performance

X variables are:

X_1 = Communication,

X_2 = Top Management commitment,

X_3 = Employee Empowerment & Involvement,

X_4 = Training and Development,

β is the model's constant,

β_1 to β_4 are the model's coefficients

ϵ is the error term.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This chapter presents results of the analysis of the data collected from respondents from public secondary schools in Makueni County. The chapter is divided into five sections. The preliminary findings are presented in section 4.2. Section 4.2 gives a summary of the respondents' findings on general information; section 4.4 gives information on TQM practices and section 4.5 gives information on inferential statistics respectively.

4.2 Preliminary Findings

This section covers the preliminary results of the study. The result includes response rate, reliability test and validity test.

4.2.1 Response Rate

A total of 52 questionnaires were distributed and 46 were received with responses, an equivalent of 88.5% response rate. According to Saunders et.al (2009), a 50% response rate is adequate, 60% good and above 70% rated very well, the response rate in this case of 86.7% was very good, as presented in Table 4.1.

Table 4.1: Response Rate

Response	Frequency	Percentage
Returned questionnaires	46	88.5
Not returned questionnaires	6	11.5
Total	52	100.0

4.2.2 Reliability Test

A co-efficient of 0.70 or more implies that there is a high reliability of data (Saunders, Lewis & Thornhill, 2009) therefore the study accepted values more than 0.70 to be reliable. As shown in table 4.2, 23 items in the instrument in overall resulted in $\alpha = 0.728$ while the individual variables each had a coefficient greater than 0.70 hence the questionnaire was very reliable.

Table 4.2: Reliability Statistics

Variables	Cronbach's Alpha	No of items
Communication	.724	6
Top Management commitment	.936	7
Employee Empowerment & Involvement	.713	5
Training and Development	.803	5
Overall	.728	23

4.3 Demographic Information

This section covers the response obtained from the respondents in terms of the demographic information. Specifically the findings refer to the respondents rating on gender, age, highest education level and categories of school.

4.3.1. Distribution of Respondents by Gender

This study sought to find out how the respondents were distributed on genders basis. This was thought to be an important indicator towards the diversity of the respondents. The findings were as shown in Table 4.3.

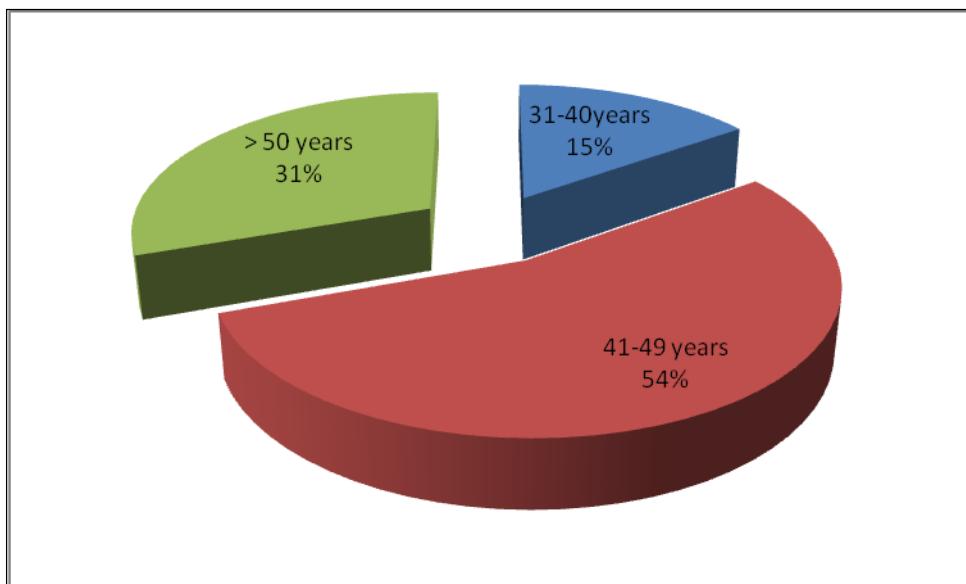
Table 4.3: Gender Distribution

	Frequency	Percent
Male	26	56.5
Female	20	43.5
Total	46	100.0

As indicated in Table 4.3, the respondents were made up of 56.5% male and 43.5% female. In general there was no significant difference of the respondents in terms of gender. This further shows that schools leadership (principals) embraces both genders, that is, no gender discrimination.

4.3.2 Distribution of Respondents on Age Bracket

The respondents were asked to indicate their ages. The results are shown in Figure 4.1.

**Figure 4.1: Age Bracket Distribution**

The result in Figure 4.1 shows that the respondent's ages varied from 31 years to over 50 years. Specifically 15% of the respondents were of age 31 to 40 years, 54% were of age 41-50 years and the rest 31% were of age over 50 years. Majority of the respondents were above 41 years of age.

4.3.3 Highest Level of Education of the Respondents

The respondents were asked to indicate their highest level of education. The results are as shown in Table 4.4.

Table 4.4: Distribution of Respondents by Highest Education Level

	Frequency	Percent
Masters	4	8.7
Bachelors	37	80.4
Diploma	5	10.9
Total	46	100.0

The finding in table 4.4 shows that, majority of the respondents (80.4%) had bachelor's degree qualification; 10.9% had diploma qualifications and only 8.7% had master's qualification. These findings show that the respondents had level of education to understand the questionnaire thus the response would be reliable.

4.3.4 Distribution of Respondents by School Categories

The respondents were asked to state their respective school categories. The results are shown in Table 4.5.

Table 4.5: Distribution of Respondents by School Categories

	Frequency	Percent
Extra county	4	8.7
County	31	67.4
Sub county	11	23.9
Total	46	100.0

As shown in Table 4.5, 67.4% of the respondents were from county schools, 23.9% were principals of sub county schools and only 8.7% were principals of extra county schools.

4.4 Rating of TQM Practices and Performance of Public Secondary Schools

This section covers questions posed to the respondent on TQM practices. It covers rating on communication, top management commitment, employee empowerment and involvement as training and development as TQM practices. The findings from the responses were based on a five Likert scale of 1=strongly disagree, 2= disagree, 3= undecided, 4= agree and 5= strongly agree.

4.4.1 Rating of Implementation of Communication TQM Practices

The study sought to determine the extent to which schools have implemented communication TQM practices. The findings are shown in table 4.6 below.

Table 4.6: Implementation of Communication Practice

The respondents were asked to rate the level of communication practice relating to top quality management and the results were as follows.

Statements	Mean	Std. Deviation
Communication has played a significant role in connection with the schools quality issues	4.6087	.88870
Communication has been an important means of realizing quality goals of the school	4.3261	.47396
There has been a strong relationship between communication and quality implementation.	4.0217	.57693
Total quality management has depended on communication that flows in all directions up, down and laterally	4.1957	.49976
Communication between all levels in the organization is vital	4.2174	.41703

From the findings, respondents unanimously agreed that Communication has played a significant role in connection with schools quality issues (mean of 4.6087). Communication has been an important means of realizing quality goals of the school (mean of 4.3261), Communication between all levels in the organization is vital (mean of 4.2174), Total quality management has depended on communication that flows in all directions up, down and laterally (mean of 4.1957) and Communication is the center of success in your school (mean of 4.1522). Delight factors in your service or product quickly become stated requirements, which in turn usually become basic

expectations. To assess customer changing expectations, customer information must be updated continuously hence communication aspect of TQM practice. Further improving communication is a good way of understanding what customers want and solving their problems.

4.4.2 Rating of Variables relating to Top Management Commitment TQM practices

The respondents were asked to rate statements relating to Top Management Commitment TQM practice. The results are as shown in Table 4.7

Table 4.7: School implementation of Top Management Commitment

The respondents were asked to rate the following statements based on top management commitment in public secondary schools

	Mean	Std. Deviation
Schools should embraces top management commitment as a total quality management practice in the school	3.5435	.75149
The schools leadership should develops a mission statement and strategies that are translated into action plans within the institution	3.1304	.90942
TQM initiatives in the school should start at the top with the senior managers of the school	3.0652	.92861
All senior managers should demonstrate their seriousness and commitment to quality implementation in the school	2.9778	.96505
The school has a sound quality policy that is supported by plans and facilities to implement it	2.9130	.96208
The school's leadership prepares, reviews and monitors quality policy of the school	2.8478	.98809
Senior managers should communicate the principles, strategies and benefits of TQM to other employees	2.5652	.74988

From the findings, When asked to rate statements relating to top management commitment, according to the table above (4.7) respondents moderately agreed that; the school embraces top management commitment. Top management should give delegate authority and empower their project managers to make decisions as they think that are important. They should give quality a first priority to set standards and

allocate sufficient resources to continuous quality improvement and reward according to their performances.

4.4.3 Employee Empowerment and Involvement

The respondents were asked to indicate the extent to which their school had implemented the following Employee Empowerment and Involvement TQM Practices. The findings are presented in Table 4.8.

Table 4.8: School Implementation of Employee Empowerment and Involvement

The respondents were asked to rate the following statements based on employee empowerment and involvement in public secondary schools

Statements	Mean	Std. Deviation
The school leadership give more discretion and autonomy to employees	2.4773	.66433
There exists employees involvement that allows the school to benefit from knowledge and skills individuals bring to the workplace	2.4545	.76111
Employees at all levels are charged to review and change their work processes in an effort to improve the overall quality of service	2.3409	.64495
Critical empowerment programs are designed to enable those with little or no power to overcome whatever form of challenge that comes on their way	2.3409	.64495
Employees overcome challenges by having control over key resources and having access to decision making process	2.2273	.47562

As shown in table 4.8, the school leadership give more discretion and autonomy to employees is the key measure of employee empowerment and involvement. TQM Practice. The result states that, an increasing numbers of companies are using teams to leverage the knowledge and experience of their employees to improve quality, reduces costs and satisfies the customer. The rationale for empowerment is that it is the best way to increase creative thinking and initiate on the part of employees.

4.4.4 Rating of Variables relating to Training and Development

The respondents were asked to rate statements relating to training and development as a TQM practice. The results are as shown in Table 4.9.

Table 4.9: School Implementation of Training and Development

The respondents were asked to rate the following statements based on training and development in public secondary schools.

Statements	Mean	Std. Deviation
Training and development has been absolutely vital to the success of total quality management in our school	3.8304	.71051
Training has provided an opportunity to empower and motivate employees in the school	3.7609	.82151
Training and development has provided an opportunity to inform employees about the schools goals of total quality management	3.6739	.84471
The school conducts awareness training for the top-level managers, mid-level managers and non-managers.	2.4783	.72232
The school has additional skills training for successful total quality management implementation.	2.2174	.55430

As shown in Table 4.9; The respondents were of the opinion that; Training and development has been absolutely vital to the success of total quality management in our school (mean of 3.8304), Training has provided an opportunity to empower and motivate employees in the school (mean of 3.7609) and Training and development has provided an opportunity to inform employees about the schools goals of total quality management (mean of 3.6739).. The firm needs to identify its short- and long-term training needs, design-training programs that address technical and behavioural issues, and have an evaluation system in place to check whether the training and development programs meet its objectives. Employees should be regarded as valuable, long-term resources worthy of receiving education and training throughout their careers.

4.4.5 Rating of Extent Has the Following School Performance Measures Improved After Implementation of TQM Practices.

The respondents were asked to rate statements relating to school performance measures improved after the implementation of TQM practices. The results are as shown in Table 4.10.

Table 4.10: School Performance Measures

The respondents were asked to rate the extent to which school performance measures improved after implementation of TQM practices.

Statements	Mean	Std. Deviation
Proper utilization of resources	4.1014	.02125
Quality exam results	3.9515	.00456
Effective service delivery	4.0000	.00447
Value added person	3.8795	.14572

When asked to rate statements relating to school performance measures improved after the implementation of TQM practices, the respondents unanimously agreed/strongly agreed that; There is a very low spread of the rating on the variables measuring schools performance as indicated by the standard deviation values. This shows a very strong schools performance after the implementation of TQM practices.

4.5 Relationship between Total Quality Management Practices on the Performance of Public Secondary Schools in Makueni County

The study proposed that there exist a relationship between total quality management practices and performance of public secondary schools in Makueni County. Correlation analysis was used to establish the strength of the association between the variables while regression analysis was used to come up with the model for forecasting purposes. Further t-test and F-test were done to check on the statistical significance of the model parameters.

4.5.1 Goodness of Fit of the Model

The finding in Table 4.11 indicates a coefficient of determination of 0.759; a significant level of prediction. More specific it shows that 75.9% of the variations in performance of public secondary schools in Makueni County could be explained by the changes in TQM practices, leaving 24.1% unexplained (error term).

Table 4.11: Model Summary

				Change Statistics								
				R							Durbin	
R	Square	Adjusted R Square	R Square	Error of the Estimate	Standard Error	Change Square	F Change	df 1	df 2	Sig. Chang e	F	- Watso n
.57	.759	.738	1.17952	.759	3.178	4	38	.008	1.984			
6												

a. Predictors: (Constant), communication, top management commitment, employee empowerment and involvement, training and development

b. Dependent Variable: performance of public secondary schools

Table 4.12: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	8.318	4	2.079	3.178	.008
Residual	24.868	38	.654		
Total	33.186	42			

a. Predictors: (Constant), communication, top management commitment, employee empowerment and involvement, training and development

b. Dependent Variable: performance of public secondary schools

4.5.2 Statistical Significance

The findings in Table 4.12 shows that $F(4, 38) = 3.178 > 2.61$ and $P\text{-Value}=0.008 < 0.05$. The F-ratio measure how different the means are relative to the variability within each sample. Since F-ratio is large and P-value < 0.05 , there is a greater likelihood that the differences between the means are due to real effects, that is, the independent variables significantly predict the dependent variable. Hence the regression model was a good fit of the data.

4.5.3 Estimated Model Coefficients and Statistical Significance of the Independent Variables

Table 4.13 indicated findings in terms of coefficients, t-values, p-values and VIF. Unstandardized Coefficients were used to write the forecasting model. Unstandardized coefficients indicate how much the dependent variable varies with an independent variable, when all other independent variables are held constant (elasticity). Standardized coefficient does not have the value of the constant hence could not be used in the model for forecasting. Both t-values and P-values were used to test the individual significance of the independent variables. For purposes of forecasting, the regression model was established by using the unstandardized coefficients established regression model was of the form

$$Y = 0.721 + 0.478X1 + 0.398X2 + 0.784X3 + 0.417X4$$

Statistical significance of the independent variables tests was used to test whether the Unstandardized coefficients are equal to 0 (zero) in the population. Using p-values at $\alpha = .05$; each predictor variable was linearly related with the dependent variable hence the predictor variables are statistically significant in the model. It therefore means that a model of four independent variables could be used in forecasting performance of public secondary schools in Makueni County. Variance inflation factor (VIF) were all <10 , thus there was no problem of multicollinearity.

Table 4.13: Coefficients

	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	.721	.293		2.461	.003		
Communication	.478	.184	.412	2.603	.000	.914	6.094
Top Management Commitment	.398	.124	.371	3.210	.010	.351	7.850
Employee Empowerment And Involvement	.784	.241	.697	3.249	.002	.540	8.852
Training And Development	.417	.190	.384	2.195	.003	.325	6.073

a. Dependent Variable: performance of public secondary schools

CHAPTER FIVE

5.0 DISCUSSION

5.1Introduction

This chapter presents answers to research questions, summary and discussion of the same base of relationship between total quality management practices and performance of public secondary schools.

5.2 Summary

The main objective of the study was to investigate the effects of Total Quality management practices on the performance of public secondary schools in Makueni County. The study was guided by four specific objectives which were to; assess the extent to which communication as a TQM practice affects performance, determine the extent to which top management commitment as a TQM practice influences performance, assess the extent to which Employee Empowerment and Involvement as a TQM practice affects performance and establish the extent to which training and development as a TQM practice impacts on performance.

5.2.1 Communication and Performance

The study revealed that Communication has played a significant role in connection with the schools quality issues, Communication has been an important means of realizing quality goals of the school. Based on my study, communication remains vital for the successf any organizations. This conforms with a study by (DiFonzo& Bordia, 1998). In Lagos that shows courage, innovation and discipline help drive institutional performance especially in tough situations.as a result, Effective internal communications can keep employees engaged in the business and help companies retain key talent, provide consistent value to customers. To assess customer changing expectations, customer information must be updated continuously hence communication aspect of TQM practice. Further improving communication is a good way of understanding what customers want and solving their problems.

5.2.2 Top Management Commitment and Performance

The study found out that largely; the school embraces top management commitment as a total quality management practice in the school; the schools leadership develops a mission statement and strategies that are translated into action plans within the institution. Total quality management initiatives in the school start at the top with the senior managers of the school and all senior managers demonstrate their seriousness and commitment to quality implementation in the school. According to Pheng and Jasmine (2004), the degree of support, that management takes in the Management role has been given very importance in success of TQM hence top management should give delegate authority and empower their project managers to make decisions as they think that are important as indicated in literature review. Top quality managers should give quality a first priority to set standards. And allocate sufficient resources to continuous quality improvement and reward employees according to their performances.(minjoon, 2006) They should further give quality a first priority to set standards and allocate sufficient resources to continuous quality improvement and reward employees according to their performances.

5.2.3 Employee Empowerment and Involvement as and Performance

The rationale for employee empowerment is that it is the best way to increase creative thinking and initiate on the part of employees. The study found out that the top management should give more discretion and autonomy to employees. Employees at all levels are charged to review and change their work processes in an effort to improve the overall quality of service and Critical empowerment programs are designed to enable those with little or no power to overcome whatever form of challenge that comes on their way. This conforms with (Caroline ,2013) research on small enterprises in Kajiado with the agreement that the top leaders promoted quality and All enterprises require leaders that are able to create within followers a capacity to develop higher levels of commitment to organizational goal.

5.2.4 Training and Development and Performance

The study indicates that training and development has been vital to the success of total quality management in schools, Training has provided an opportunity to empower and motivate employees in the school and training and development has provided an opportunity to inform employees about the schools goals of total quality management. The findings conform to A research by Abbas,& Yaqoob, (2009) showing that training and Development in Pakistan prepared employees to contribute more to organizations hence it had a positive impact on employee performance in the banks of Pakistan.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study was based on four main objectives. One was to assess the effect of communication as a TQM practice on performance of public secondary schools in Makueni County. The research found out that communication is vital in embracing performance in public secondary schools. Excellent communication skills are essential for good performance management. The study highlights that important competencies should be used in the entire management process, from planning and communicating work expectations to recognizing employees for their successful achievements. This conforms to the study carried out by Watson Wyatt's (2010) in Harvard, showing that successful organizations are effective communicators. Again, there is need for school administrators to outline a clear vision to the teachers and student bodies. The administrators should encourage their students about their achievements and hard work, address specific areas that need improvements and encourage the student bodies to work for more achievement. The staff meetings should carry a similar procedure. They should be conducted in a more direct manner with open forums for feedback from the staffs. In addition, the staffs should be given a chance to voice their opinions, concerns and ideas.

In determining the influence of top management commitment as a TQM practice on performance of public secondary schools in Makueni County, the study out found that top management should be committed and focus on the following techniques; confronting reality in the institutions and articulating a compelling need for the change, demonstrating faith that the institution for a viable future and provision of a road- map to guide behavior and decision-making. This conforms to a study by (Caroline 2013) on small enterprises in Kajiado agreed that the top leaders promoted quality. All enterprises require leaders that are able to create within followers a capacity to develop higher levels of commitment to organizational goal. The principals are required to address the human side of change systematically in their institutions. Successful transformation in an institution will create people issues. Jobs

may be changed among the staff, transfers, new skills and capabilities and will bring changes among the employees.

On assessing the impact of Employee Empowerment and Involvement as a TQM practice on performance of public secondary schools in Makueni County the study has found that managers should embrace organizational success, and are expected to give employees chances to give or innovate their ideas, decisions or solutions and give them an authority to monitor the implementation of the same. Empowerment will also make employees to work independently. This conforms to a study about service quality done in Nigeria by Albert, (2013) that indicated that managers need to promote organizational success, and give employees chances to give or innovate their ideas, decisions or solutions.

On matters of establishing the effect of training and development as a TQM practice on performance of public secondary schools in Makueni County, The study highlights that school managers should set up mechanisms for nurturing and unfolding and develop a multiple strategy approach to enable the educators fulfill their roles effectively. This conforms to a study research by Abbas,& Yaqoob, (2009) showing that training and Development in Pakistan prepared employees to contribute more to organizations. Hence, training and development had a positive impact on employee performance in the banks of Pakistan. The study further concluded that the establish regression model was perfect for foresting and could be used for forecasting performance of public secondary schools in Makueni County.

6.2 Recommendations

The study makes an important contribution in understanding the effects of TQM practices. It further brings out the factors that influence the performance of public secondary schools. The study Points out that recent discussions have centered on the application of total quality management (TQM) in education. Most writers appear inclined to suggest that TQM is a unique solution for effective school management. Nonetheless, TQM was initiated in the manufacturing sector and its successful application in the educational setting should only be justified with ample theoretical support and concrete evidence. Attempts to trace the literature that discusses the

application of TQM in education. Hence, the education ministry aims to explore the relevance of employing TQM in education.

In practice, education is about learning. The study recommends that educational institutions should take total quality management route seriously in the issue of, learning styles and needs to have strategies for individualization and differentiation in learning. Educational institutions have an obligation to make learners aware of the variety of learning methods available to them. They need to give learners opportunities to sample learning in a variety of different styles. In line with the research findings, the study recommends schools to continue embracing the four TQM practices. Educational leaders again should work towards a quality framework of TQM practices.

The study recommends that a comparative study should be carried out to compare the influence of TQM practices on performance of both private and public secondary schools since the research was carried only in public secondary schools in Makueni County.

The study also recommends use of other data collection methods such as interviews since the researcher used a questionnaire. This would help the researchers get responses that are relatively free from bias. This is because interviews afford the researcher the opportunity to allay fears, anxieties and concerns that the respondents may have. The researcher may also offer clarification when needed and help respondents to think through difficult issues.

REFERENCES

Adams, R.J., Wu, M.L., & Wilson, M. (2012). The Rasch rating model and the disordered threshold controversy. *Educational and Psychological Measurement*, 72(4), 547–573. Retrieved from.

Ahmed PK (2008). *Culture and climate for innovation*. Eur. J. Innov. Manage. 1(1): 30-43.

Bechtell Michele., (2003). *Untangling organizational gridlock: strategies for building a customer focus*, Milwaukee, ASQC Quality Press, Wisconsin.

Benson, G. P., Saraph, J.V., Schroeder, R.G. (2011). “The effects of organizational context on quality management: An empirical investigation”, *Management Science*, Vol 37, No 9, pp. 1107-1124.

Bergman, B. and Klefsjö, B. (2003). *Quality from Customer Needs to Customer Satisfaction*.

Borg, W. R. and Gall, M. D. (2009). *Educational Research: An Introduction* 5th. ed. New York: Longman.

Brah, S.A., Lee, S.L. and Rao, B.M. (2002). “Relationship between TQM and Performance of Singapore companies”, *International Journal of Quality & Reliability Management*, Vol. 19.

Brymer, R. (2001). *Empowerment: A guest-driven leadership strategy*. Cornell Hotel and Restaurant Administration Quarterly, 32, 58-68.

Burril, C. W. and Ledolter, J. (2000). *Achieving Quality through Continual Improvement*. New York: John Wiley.

Chen, G. (2003). Chaotification via feedback: the discrete case. In Chaos control: theory and applications (ed. G. Chen & X. Yu), pp. 159–178. Berlin, Germany: Springer.

Chenhall, R. (1997). “Reliance on manufacturing performance measures, total quality Management and Organizational Performance”, *Management Accounting Research*, Vol. 8 No. 2, pp. 187-206.

Chin, K.S., and K.F. Pun. (2002). A proposed framework for implementing TQM in Chinese organizations, *International Journal of Quality & Reliability Management*, Vol. 19 Iss: 3, pp.272 – 294.

Claver-Cortés, E., Pereira-Moliner, J., Tarí, J. J. and Molina-Azorín, J. F. (2009). *TQM, managerial factors and performance in the Spanish hotel industry*. Industrial Management and Data Systems, Vol. 108, No. 2, pp. 228-244.

Combs, J. G., Crook, R. T., & Shook, C. L. (2005). The dimensionality of organizational performance and its implications for strategic management research. *Research Methodology in Strategy and Management*, 2, 259-286.

Cua, K.; McKone, K.; Schroeder, R. G. (2001). Relationships between implementation of TQM, JIT, and TPM and manufacturing performance. *Journal of Operations Management*, Vol. 19.

De Ridder, J. (2003). Organizational communication and supportive employees. *Human Resource Management Journal*, 4(4), 1-10.

Deming, W. E. (2000). *The new economics* (2nd ed.). Cambridge, MA: The MIT Press.

Deming, W.E. (1986). *Out of the Crisis*, Centre for Advanced Engineering Study, Massachusetts Institute of Technology, Cambridge, MA.

Deming, W.E., (1986). *Out of the Crisis*, MIT Center for Advanced Engineering Study, Cambridge, MA.

DiFonzo, N., Bordia, P., & Rosnow, R. L. (1994). *Reining in rumors*. *Organizational Dynamics*, 23(1), 47-62.

Douglas, T.J. and Judge, W.Q. (2001). "Total quality management implementation and Competitive advantage: the role of structural control and exploration", *Academy of Management Journal*, Vol. 44 No. 1, pp. 158-69.

Easton, G. S. (1993). The 1993 state of U.S. *total quality management*: a Baldrige examiner's perspective. *California Management Review*, 35 (3), 32 ± 54.

Ehigie B O, Akpan RC (2004). *Roles of perceived leadership styles and rewards in the practice of total quality management* Leadersh.Organ. Manage. Dev. J. 25(1): 24-40.

Elkington, J. (2007). *Cannibals with Forks: the Triple Bottom Line of 21st Century Business*. Oxford: Capstone.

Ellinger AD, Bostrom RP (2009). *Managerial coaching behaviors in learning organizations*. J. Manage Dev. 18(9): 752-771.

Elshennawy, A.K. & MacCarthy, K.M. (1992). *Implementing Total Quality management at US department of defence*. Total Quality management, 3(1): 31-45.

Evans, J.R. & Lindsay, W.M. (2008). *Managing for quality and performance excellence*. Seventh ed. Canada: Thomson.

F. Criado and A. Calvo-Mora, (2009). "Excellence profiles in Spanish firms with quality management systems," *Total Quality Management*, vol. 20, no. 6, pp. 655–679.

Freiesleben, J. (2005). The Economic Effects of Quality Improvement. *Total Quality Management*.

Gadenne, D., & Sharma, B. (2002). *An Inter-Industry Comparison of Quality Management Practices and Performance*. *Managing Service Quality*, 12(6), 394-404.

Goetsch and S. B. Davis, (2010). *Quality Management for Organizational Excellence*, Pearson, New Jersey, NJ, USA, 6th edition.

Goldberg, J.S & Cole, B.R (2002.) *Quality Management in Education*; Building Excellence and Equity in Student Performance. *Quality management journal* Vol 9 pp 8-22 .

Goldhaber, G. M. (2003). *Organizational communication* (5th Ed.). Dubuque, IO: Wm. C. Brown.

Golhar, D., Deshpande, S. and Ahire, S. (2007). "Supervisors' role in TQM and non-TQM firms", *International Journal of Quality & Reliability Management*, Vol. 14 No. 6, pp. 555-68.

Griffins, G. (1994). *School Masterly, Straight Talk about Boarding School Management in Kenya*, Lectern publication.

Hackman, J. and Wageman, R. (2015). "Total quality management: empirical, conceptual and practical issues", *Administrative Science Quarterly*, Vol. 40, pp. 309-42.

Hackman, R. J., & Wageman, R. (2015). *Total Quality Management: Empirical, Conceptual, and Practical Issues*. *Administrative Science Quarterly*, 40, 309-342.

Harrington, H. J. (2007). *The Improvement Process: How America's leading Companies Improve Quality*. New York: McGraw-Hill.

Hendricks, K. & Singhal V., (2001). Firm Characteristics, total quality management, and financial performance. *Journal of Operations Management*, 19, 269-285.

Isaac, R.G., Herremans, I.M. and Kline, T.J.B. (2004). "Intellectual capital management: pathways to wealth creation", *Journal of Intellectual Capital*, Vol. 10 No. 1, pp. 81-92.

Juran, J. M. (2005). *A History of Managing for Quality*. ASQC quality Press, Milwaukee, Wisconsin.

Juran, J.M. (2004). *Product quality, a prescription for the west, upper management leadership and employee relations management review* pp. 70 - 77. The Free Press.

Kaplan, R. S., & Norton, D. (2002). The balanced scorecard: Measures that drive performance. *Harvard Business Review*, 70(1), 71-79.

Kappelman, L.A and Prybutok, V.R. (2015). *Measuring user involvement: a diffusion of innovation perspective*. ACM SIGIMIS database vol. 26 No. 2-3 pp. 65-86.

Karen C., Nigel P., and David C., (2009). Assessing the Performance of Strategic Alliances: Matching Metrics to Strategies. *European Management Journal* Vol. 18, No. 5.

Kerlinger, F.N. (2014). *The mythology of educational research: The methods approach*. School and Society, 88, 149-151.

Kerlinger, F.N. (2006). *Foundations of behavioral research*, Holt, Rinehart and Winston publishers, New York.

Knouse, S.B and Strutton, O.S. (2007). *Top management commitment and empowerment of employees in TQM implementation*. <http://hdl.handle.net/2320/3756>.

Kreps, G. L. (2010). *Organizational communication* (2nd Ed.). United Kingdom: Longman.

L.A. Dobrzański and M.T. Roszak, (2008). Implementation and functioning of quality management in the research centre, *Journal of Achievements in Materials and Manufacturing Engineering* 30/2 197-203.

Lawler, E.E (2012). *Total quality oriented Human Resource Management*.

Lawler, E.E. (2014). *High involvement management participative strategies for improving organizational performance*; San Francisco, Jossey publishers.

Lewis, L. K. (2009). Disseminating information and soliciting input during planned organizational change: Implementers' targets, sources, and channels for communicating. *Management Communication Quarterly*, 13(1), 43-75. The Business & Management Review, Vol.3 Number-2.

Littlejohn, S.W. (2001). *Theories of Human Communication*. Belmont, CA: Wadsworth/ Thomson Learning.

Lorenz, E.N. (1972). *Predictability*: does the flap of a butterfly's wings in Brazil set off a tornado in Texas? 139th Annual Meeting of the American Association for the Advancement of Science.

Lovelock , C.H (2013).*Consumer promotion in service marketing*. Business Horizon May- June pp. 6.

Machuki, V. N., & Aosa, E. (2011). The influence of the external environment on performance of publicly quoted companies in Kenya. *Prime Journal of Business Administration and Management*, 1(7), 205-208.

March, J. G., & Sutton, R. I. (1997). Organizational Performance as a dependent variable. *Organization Science*, 8(6), 698-706.

Mbiu J.M (2007).*Extent of teachers participation in decision making* unpublished masters thesis, Kenyatta University.

McAdam, R., and J. Henderson (2002).*Influencing the future of TQM*: Internal and external driving factors.

Mele C, Colurcio M (2006). *The evolving path of TQM*: towards business excellence and stakeholder value. *Int. J. Qual. Reliability Manage*. 23(5): 464-489.

Minjoon, J., Shaohan, C and Hojung, S., (2006). *TQM practice in Maquiladora*: Antecedents of employee satisfaction and loyalty. *Journal of operations management*.Vol 13 pp 791-812.

Montes, F., Jover, A. and Fernandez, L. (2003), "Factors affecting the relationship between total Quality management and organisational performance", *International Journal of Quality & Reliability Management*, Vol. 20 No. 2, pp. 189-209.

Mugenda O.M. &Mugenda A.G. (2003). *Research Methods Quantitative and qualitative approaches*. Nairobi: Acts Press.

Mullins LJ (1996). *Management and Organizational Behavior*. Pitman Publishing, London.

Murray, M. (2009).*Total Quality Management (TQM)*.Logistics / Supply Chain.

Ndirangu, N. (2010). An assessment of the TQM practices in the thermal power plants in Kenya. *A management Research Project*.pp.1.

Pearce, C.L. (2003). "The future of leadership: combining vertical and shared leadership to transform knowledge work", *Academy of Management Executive*, Vol. 18 No. 1, pp. 47-57.

Peter, D.R. (2009). *Company Performance and Measures of Value Added*. The Research Foundation of the Institute of Chartered Financial Analysts, Charlottesville, VA.

Phan, A. C. A. B. Abdallah, and Y. Matsui, (2011). "Quality management practices and competitive performance: empirical evidence from Japanese manufacturing companies," *International Journal of Production Economics*, vol. 133, no. 2, pp. 518-529.

Phattanacheewapul, A., & P. Ussahawanitchakit (2008). Organizational justice versus organizational support: The driven-factors of employee satisfaction and employee commitment on job performance. *Journal of Academy of Business and Economics*, 8(2), 114-123.

Pheng, L.S., and Jasmine, A.T., (2004). Implementing Total Quality Management in Construction firms. *Journal of management in Engineering*. Vol. 20 (1).pp 1-9.

Powell, T. C. (2015). Total Quality Management as Competitive Advantage: A Review and Empirical Study. *Strategic Management Journal*, 16(1), 15-37.

Robbins, S.P. (2003). *Organizational Behaviour: Concepts, Controversies, Applications*. 11th edition, Prentice-Hall, USA.

Robertson, P. J., Roberts, D. R., &Porras, J. I. (1993). Dynamics of planned organizational change: Assessing empirical support for a theoretical model. *Academy of Management Journal*, 36(3), 619-34.

Rungtusanatham.M, C. Forza, R. Filippini, and J. C. Anderson, (1998). "A replication study of a theory of quality management underlying the Deming management method: insights from an Italian context," *Journal of Operations Management*, vol. 17, no. 1, pp. 77-95.

Salant, P., &Dillman, D. A. (1994). *How to conduct your own survey*. New York: John Wiley and Sons.

Saunders, Lewis and Thornhill, (2009). *Research Methods for Business Students*, 5th edition. Financial Times Prentice Hall.

ShahabAlam Malik 1 Laeeq Hassan JaswalShujahAlam Malik TahirMumtazAwan (2010). Measuring service quality perceptions of the customers of restaurants in Pakistan. *International Journal for Quality Research* 7(2) 187-200 ISSN 1800-6450.

Sharma, B. (2006). Quality management dimensions, contextual factors and performance: an empirical investigation. *Total Quality Management & Business Excellence*, 17, 1231–1244.

Shekhar, V.J., and H. Joshi. (2008). *Relevance of Total Quality Management (TQM) or Business Excellence Strategy Implementation for Enterprise Resource Planning (ERP). A Conceptual Study.*

Steeple, Marion Mills.(1992). *The Corporate Guide to the Malcolm Baldrige National Quality Award: Proven Strategies for Building Quality into your Organization.* ASQC Quality Press: Wisconsin.

Thomas, K. W. & Velthouse, B. A. (1990, October). *Cognitive elements of empowerment: An “interpretive” model of intrinsic task motivation.* Academy of Management. The Academy of Management Review. 15(4): 666-681.

Turner, J. C. (1991). *Social influence.* Milton Keynes, England: Open University Press and Pacific Grove, Calif.: Brooks/Cole.

Ugboro, I. O. & Obeng, K. (2000). *Top management leadership, employee empowerment, job Management.*

Ustadh, T. (2012). *Barriers to Total Quality Management Implementation.*

Venkatraman, N. (2009). *Strategic orientation of business enterprises: The construct, dimensionality, and measurement.* Management Sci. 942–962.

Waldman, D.A. (2014). “*The contributions of total quality management to a theory of work performance*”, Academy of Management Review, Vol. 19 No. 3, pp. 510-36.

Wiklund, H., Klefsjö, B., Wiklund, P. S., & Edvardsson, B. (2003). *Innovation and TQM in Swedish higher education institutions-Possibilities and pitfalls.* The TQM Magazine.

Wong KY (2006). *Critical success factors for implementing knowledge management in small and medium enterprises.* Ind. Manage. Data Syst. 105(3): 261-279.

Youssef, C. M., & Luthans, F. (2007). Positive organizational behavior in the workplace. *Journal of Management*, 33(5): 774-800.

Zairi M, Youssef MA (2015). *Benchmarking critical factors for TQM. Part II: empirical results from different regions in the world.* Benchmark. Qual. Manage. Technol. 2: 3-19.

Zhang, H., & N. C. Agarwal (2009). The mediating roles of organizational justice on the relationships between HR practices and workplace outcomes: An investigation in China. The International *Journal of Human Resource Management*, 20(3), 676-693.

Zu, L. D. Fredendall, and T. J. Douglas, (2008). “The evolving theory of quality management: the role of Six Sigma,” *Journal of Operations Management*, vol. 26, no. 5, pp. 630–650.

APPENDICES

APPENDIX I: PRINCIPALS' QUESTIONNAIRE

Dear Respondent,

This questionnaire is designed to collect data from principals that will help in a research about, "Effects of Total Quality Management (TQM) practices on performance of public secondary schools in Makueni County – Kenya." TQM is a type of management which involves continuous improvement of all systems, processes, goods and services in which all stakeholders are involved.

You are therefore chosen to be part of this research. Be honest in giving your responses. Confidentiality will be assured.

PART A: BACKGROUND INFORMATION

1. Sex

(a) Male (b) Female

2. Age bracket

(a) 22-30 (b) 31-40 years
(c) 41-49years (d.) 50 years and above

3. Highest education level

(a) Doctorate (b) Masters
(c) Bachelors (d) Diploma

4. School categories

(a) Extra-county (b) County
(c) Sub-county

PART B

(1) To what extent has your school implemented the following Communication TQM practices? (Please tick appropriately)

Indicate the extent to which you agree or disagree with each statement by ticking on the appropriate column, using the scale below.

SD-(Strongly Disagree)-1, (Disagree)-2, U (Undecided)-3, A-(Agree)-4, SA-(Strongly Agree)-5,

Question No	Question	1	2	3	4	5
1	Has communication contributed positively in ensuring quality education in the public secondary schools?					
2	Communication has been an important means of realizing quality goals of the school.					
3	There exists a strong relationship between good communication and successful quality implementation					
4	Total quality management depends on communication that flows in all directions up, down and laterally.					
5	Communication between all levels in the organization is vital.					

(ii)The table below present statements regarding the extent your school has implemented Top Management Commitment TQM practice.

Indicate the extent to which you agree or disagree with each statement by ticking on the appropriate column, using the scale below.

SD-(Strongly Disagree)-1, (Disagree)-2, U (Undecided)-3, A-(Agree)-4, SA-(Strongly Agree)-5

Qst No	Question	1	2	3	4	5
1	The school embraces Top Management Commitment as a total quality management practice in the school.					
2	Total Quality Management initiatives in the school start at the top with the senior managers of the school.					
3	All senior managers demonstrate their seriousness and commitment to quality implementation in the school.					
4	Senior managers Communicate the principles, strategies and benefits of Total quality management to the other employees.					
5	The school has a sound quality policy that is supported by plans and facilities to implement it.					
6	The schools Leadership prepare, review and monitor quality policy of the school.					
7	The schools leadership develops a mission statement and strategies that are translated into action plans within the institution.					

(iii) To what extent has your school implemented the following Employee Empowerment and Involvement TQM Practice? Indicate the extent to which you agree or disagree with each statement by ticking on the appropriate column, using the scale below.

SD-(Strongly Disagree)-1, (Disagree)-2, U (Undecided)-3, A-(Agree)-4, SA-(Strongly Agree)-5

Qst No	Question	1	2	3	4	5
1	The school leadership give more discretion and autonomy to the employees.					
2	There exists employee involvement that allows the school to benefit from knowledge and skills individuals bring to the workplace.					
3	Employees at all levels are charged to review and change their work processes in an effort to improve the overall quality of service.					
4	Critical empowerment programs are designed to enable those with little or no power to overcome whatever form of challenge that comes on their way.					
5	Employees overcome challenges by having control over key resources and having access to decision making process.					

(iv) Extent your school has implemented Training and Development as a TQM practice

Indicate the extent to which you agree or disagree with each statement by ticking on the appropriate column, using the scale below.

SD-(Strongly Disagree)-1, (Disagree)-2, U (Undecided)-3, A-(Agree)-4, SA-(Strongly Agree)-5

Qst No	Question	1	2	3	4	5
1	Training and development has been absolutely vital to the success of Total Quality Management in your school.					
2	The school conducts awareness training for the top level managers, mid-level managers, and non-managers.					
3	Training and development has provided an opportunity to inform employees about the schools goal of Total Quality Management.					
4	Training has provided an opportunity to empower and motivate employees in the school					
5	The school has additional skills' training for successful Total Quality Management implementation.					

(v) To what extent has the following school performance measures improved after the implementation of TQM practices?

Statement	Not at all	Little extent	Moderate extent	Great extent	Very great extent
Proper utilization of resources					
Quality exam results					
Effective service delivery					
Value added person					

Please give any other information / comments you deem necessary to enrich this study.

Thank you for your cooperation.

APPENDIX II: AUTHORIZATION LETTER FOR DATA COLLECTION



SOUTH EASTERN KENYA UNIVERSITY OFFICE OF THE DIRECTOR BOARD OF POST GRADUATE STUDIES

P.O. BOX 170-90200
KITUI, KENYA
Email: info@sek.ac.ke

Email:bps@sek.ac.ke

TEL: 020-4213859 (KITUI)

Our Ref: D61/WTE/2019/2012

Date: 6th December, 2016

Munywoki Kavutai
Reg. No. D61/WTE/2019/2012
Masters of Business Economics
C/O Dean, School of Business Economics

Dear Kavutai

RE: PERMISSION TO PROCEED FOR DATA COLLECTION

This is to acknowledge receipt of your Masters in Business Administration Proposal document entitled, *"Effects of Total Quality Management Practices on Performance of Public Secondary Schools in Makueni County"*

Following a successful presentation of your Master Proposal, the School of Business and Economics in conjunction with the Directorate, Board of Post graduate Studies (BPS) have approved that you proceed on and carry out your Research Data Collection in accordance with your approved proposal.

During your research work, you will be closely supervised by Dr. Lawrence Kimando. You should ensure that you liaise with your supervisor at all times. In addition, you are required to fill in a Progress Report (*SEKU/ARSA/BPS/F-02*) which can be downloaded from the University Website.

The Board of Postgraduate Studies wishes you well and a successful research data collection as a critical stage in your Master of Business Administration.


Prof. Cornelius Wanjala
Director, Board of Postgraduate Studies

Copy to: Deputy Vice Chancellor, Academic, Research and Students Affairs
Dean, School of Business and Economics
Director, Wote Campus
Chairman, Department of Business and Entrepreneurship
Dr. Lawrence Kimando
BPS Office To file

ARID TO GREEN

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TRANSFORMING LIVES

APPENDIX III: LIST OF SCHOOLS SAMPLED PER SUB COUNTY

MAKUENI SUB-COUNTY

- Makueni Boys' secondary
- Makueni Girls' Secondary
- Nthangu Secondary
- Utaati Secondary
- Muambani Secondary
- Kambi Mawe Secondary

MBOONI WEST SUB-COUNTY

- Mbooni Boys' Secondary
- Mbooni Girls' Secondary
- Mukatini Secondary
- Nzeveni Secondary
- Kikima Secondary
- Kyuu Secondary

MBOONI EAST SUB-COUNTY

- Kiteta Girls' Secondary
- Kitoto Secondary
- Kathulumbi Secondary
- Kalawa Girls' Secondary
- Kalawa Boys' Secondary
- Ititu Secondary

KILUNGU SUB-COUNTY

- Ndolo Secondary
- Kilungu day Secondary
- Precious blood Kilungu Secondary
- Nthomeandu Secondary
- Inyookoni Secondary

MUKAA SUB-COUNTY

- Mukaa Boys' Secondary



- Mukaa Girls' Secondary
- Bishop Ngala Secondary
- Maiani Secondary
- Kitaingo Secondary

KIBWEZI SUB-COUNTY

- Kaluluni Secondary school
- Moi Girls Secondary School
- St. Joseph's Kibwezi Secondary
- Darajani Secondary
- Nguumo Secondary

MAKINDU SUB-COUNTY

- Makindu Boys' Secondary
- Kamboo Secondary
- Ikungu Secondary
- Chyeni Secondary

NZAUI SUB-COUNTY

- Ngoto Secondary School
- Mbuthani Secondary
- Barazani Secondary
- Matiliku Boys' Secondary
- Manooni Secondary

KATHONZWENI SUB-COUNTY

- Kathonzweni Boys' Secondary
- Syandoo Secondary
- Itumbule Secondary
- Kathonzweni Girls' Secondary