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EFFECTS OF QUALITY MANAGEMENT PRACTICES ON PERFORMANCE OF KENYAN UNIVERSITIES

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ABSTRACT: *The university education sector in Kenya has become very attractive due to changes in the environment. Quality has become an essential business strategy for all sectors and the implementation of quality management practices has become popular. In actual fact, quality management is an integrative management strategy aimed at the continuous improvement of universities performance. The purpose of this study is to establish the effects of quality management practices on performance of Kenyan universities. Deming's theory of quality management provided a theoretical basis for the study. The study adopted explanatory survey research design. The target population was the employees of public and private universities from which 321 respondents were selected using stratified random sampling techniques. Data was analysed using descriptive statistics Pearson correlations and structural equation modelling. The study unveiled that employee involvement in the university activities, leadership commitment and continuous improvement and customer focus have a significant effect on the university performance. Top management should facilitate employees for any successful implementation of quality management practices. The study recommended that universities operating in Kenya should embrace quality management system to improve their performance.*

KEYWORDS: Quality Management Practices, Leadership Commitment, Customer Focus, Employee Involvement, Performance, Universities

INTRODUCTION

Quality Management Systems (QMS) have become a popular choice for educational systems worldwide (Papadimitriou & Westerheijden, 2010; Maluleke, 2008). The purpose of QMS demonstrates a clear alignment with the organizations strategic directions and priority areas thus promoting formalized accountabilities and quality enhancement cycles for all core activities (Kaziliunas, 2010). The researcher further elaborates that QMS systematically monitors organizational performance outcomes against its planned and stated objectives. In universities, QMS is presumed to improve performance in main areas of research, quality teaching and community service in a university.

In Africa, quality management in universities has acquired a sense of urgency owing to the rapid growth of the university sector in the last two decades (Munene, 2013). Munene argues that in Kenya, the decline in budgetary support for higher education, evident in average per-student expenditure declined from US $6,300 to $1,500 by 1990, rising student enrolments coupled with inadequate and outdated teaching and learning resources, alongside massive staff exodus as well as poor governance have raised troubling questions about the quality of education provided. He further pointed out that the rising concerns about the quality of the

universities and the graduates have catalysed national educational authorities and individual institutions to adopt quality management practices in order to enhance the quality of education. The challenge for the top management of universities is whether adoption, implementation and effectiveness of quality management practices have improved on universities performance is still lacking (Osumba, 2014; Dado, Petrovicova, Riznic & Rajic, 2011). Consequently, the impact of quality management practices on organizations performance has been the subject of constant interest and challenge among researchers (Ebrahimi & Sadeghi, 2013).

A study by Garza-Rayes, Rocha-Lona and Kumar (2014) postulates that QMS frameworks take many forms and descriptions ranging from Total Quality Management (TQM), Business Excellence Models (BEMs), self-assessment models, International Organization for Standardization (ISO) standards, Six Sigma, and Lean Manufacturing. The most common framework adopted by universities is ISO standards. ISO 9001:2008 has eight principles (practices) namely: customer focus, continual improvement, leadership commitment, employee involvement, systematic approach, process approach, factual approach to decision making and mutually beneficial supplier relationship.

Like many business organizations, the survival, growth and prosperity of universities depend on how they respond to changes taking place in their particular environment. In view of this, strategic management plays a key role in positioning universities in their quest to achieve sustainable competitive advantage and improve performance. Therefore, for organizations to remain truly competitive over time as the environment changes, Mathooko and Ogutu (2014) recommends that universities have to learn to adapt and reorient themselves to the changing environment. Quality has become one of the most important drivers of the global competition today. Quality management practices (QMPs) incorporated overall organizational strategy, communicated to all employees and well implemented may have a positive impact on organizational performance (Sigei, 2014).

In Kenya, the Commission for University Education policy, the lecturer - student ratio should be 1:40 (CUE, 2015). However, the study of Ongaki and Nyamiobo (2014) noted that the current ratio in Kenyan public universities is up to 1:700. The researchers were of the view that having individualized teaching and consultation has become close to impossible in these universities. The increasing number of universities and the rapidly rising student population with a steeply rising student academic staff ratio coupled with declining resources have impacted negatively on the university performance (Ongaki & Nyamiobo, 2014). Implementing quality management system (QMS) is not without difficulties and achieving its promised benefits is not straight forward. Universities need to proactively adopt QMS in their operations across all internal factors in order to improve their performance (Mokamba, Oloko & Letting, 2014).Universities are good candidates of research publication, quality teaching with a rich application of the QMS, yet their performance is still debatable and require further investigation (Posmas, Fotopoulos & Kafetzopoulos, 2010). Therefore, this study sought to investigate the effects of quality management practices on universities performance in Kenya.

LITERATURE REVIEW

Theoretical Perspectives

The study was anchored on Deming's Theory of Quality Management. Deming's theory of profound knowledge is a management philosophy grounded in systems theory. Understanding the concepts of profound knowledge is critical to understanding Deming's approach to quality (Deming, 1989). The system of profound knowledge is made up of four interrelated parts: (i) theory of systems (ii) theory of variations (iii) theory of knowledge and (iv) knowledge of psychology. The theory of systems is based on the principle that each organization is composed of a system of interrelated processes and people which make up system's components (Deming, 1989). Deming's theory of quality management postulates that continuous improvement of organization systems and processes advocates for customer satisfaction that leads to excellence on organizational performance.

Deming's theory provides a profound understanding of how leaders need to involve people at all levels of the organization. Leadership commitment in a university is very important as it provides direction. Human relations come first in Deming's leadership thinking, and he emphasizes that leaders must understand well employee relations, treat their people fairly and respectfully and give them good working conditions that they may use all their abilities, develop their competences, feel comfort and enjoy their jobs. Leaders should provide opportunities for cooperation, stimulate people to cooperate, and remove system factors that may demotivate them from working together in teams. Further, Deming's theory stresses that the customer focus should be of central concern to leaders. The main objective of improvements is to satisfy the customer's needs and expectations. Lastly, Deming's theory is valuable because Deming is clear by providing a profound understanding of what goes on during the manufacture of any product or service (process management). To learn more about the proper use of the Deming cycle (PDCA model), that is, Planning-Doing-Checking-Acting (Deming, 1986) may prove helpful for university management who need to work systematically to create continuous improvements on universities performance.

Quality Management Practices

The notion of student-as-customer has originated within total quality management movement, which has started to gain certain popularity among academic institutions in light of funding and management changes in higher education context. Though its basic principles, such as customer delight, people-based management, continuous improvement and management by facts, have strong common sense, educational institutions have lagged behind manufacturing counterparts in the adoption of this paradigm (Dado *et al*., 2011). Dado *et al.* further noted that the practices emphasized in an organization are dictated by the underlying principles that have been adopted in the organization. In the context of a management system standard, these practices are often referred to as implementation factors, implementation constructs or simply practices

Universities may start their journey towards excellence by installing a QMS. Kaziliunas (2010) explains that a QMS of a university is commitment to statutory obligations and regulatory requirements which should demonstrate clear alignment with the university's strategic directions and priority areas thus promoting formalized accountabilities and quality enhancement cycles for all core activities and systematically monitors the university's performance outcomes against its planned and stated objectives. He further notes that QMS

promotes the understanding that responsibility for quality processes is embedded in the role of each of the university's staff members' at all organizational levels – cultivating a culture of (top-down/bottom-up) ownership, participation and responsiveness throughout the institution. University leadership needs enthusiasm to successfully implement QMS. However, deeper analysis of empirical studies has revealed that there is a lack of thorough understanding of QMS philosophies and techniques among university management. There seem to be two schools of thought that stimulated a debate that QMS universities did not differ significantly from those without. Nevertheless, past researchers revealed that there were statistically significant differences between education institutions which have adopted quality management systems and those that have not adopted (Kuncoro, 2013).

ISO 9001:2008 standard is part of a whole family of ISO standards that describes the quality management system requirements (ISO 9001:2008(E). ISO 9000, according to Quazi, Hong and Meng (2002), is a family of standards and instructional guidelines for the purpose of quality management system development. The requirements of this standard are documented based on eight quality management principles. These principles are: 1) customer focus; 2) leadership; 3) involvement of people; 4) process approach; 5) system approach to management; 6) continual improvement; 7) factual approach to decision making; and 8) mutually beneficial supplier relationship. These principles were translated into requirements and documented as ISO 9001:2008 standard requirements. Therefore, all work organizations, seeking ISO 9001: 2008 certification, shall adopt these principles and be compliant with the standard requirements. However, recently there is a new standard ISO 9001:2015 whereby universities that had already adopted the earlier standard are adopting the new one. For effective and efficient implementation of a QMS by a university, these principles are inter-linked, based on a process approach. This study focused on four quality management practices: top leadership commitment, employee involvement, customer focus and continual improvement.

Leadership Commitment

The top leadership commitment is very important for the successful implementation of quality management practices in an organization (Mutunga, 2013). The top leadership of a university is the top administrators holding key top positions. For example, the Vice-Chancellor, and deputy vice-chancellors, deans, human resource managers, among others. In a university, top management provides the vision of where the organization is going with its quality efforts and creates a cultural change within the organization. University top management is not randomly assigned, and the quality of a university is established over many years incorporating factors such as an institution's history, reputation, age and wealth (Goodall, 2009).

Top leadership in a quality management system view the university in a system approach whereby they need to support employee development, establish a multipoint communication, and customers, and use information efficiently and effectively to improve performance. In addition, leaders encourage employee participation in decision-making and empower the employees. However, top management commitment and participation in quality management practices are the most important factors for the success of an organization (Goetsch & Davis, 2010). Jaafreh and Al-abedallat (2013) explains that top leadership commitment is the most vital factor in quality management and leading to higher performance. Ardi, Hidayatno and Zagloel (2012) investigated relationships among quality dimensions in higher education in Indonesia. The study revealed the relationships among quality dimensions in university in an engineering faculty. The results showed that students' satisfaction was positively influenced by commitment of faculty management, the quality of course delivery, and the ease of giving

feedback for quality improvement. It is worth noting that top faculty management had an impact on university's performance.

In a university, the top leadership has to establish goals, quality policy and provide resources for QMS implementation. Okwiri (2013) claimed that the fundamental principle of leadership ought to bring about the appropriate organizational culture and direction. While identifying the critical factor in optimizing quality management process implementation of private higher education, Mail, Patrikto, Suparman and Santoso (2014) confirms that leadership effectiveness has a positive effect on organizational commitment, internal quality audits and quality culture. Leadership commitment and support is viewed as the most important principle because it is the top leadership that drives the entire institution. In a university top leaders communicate to all employees the importance of meeting students' requirements. Top leaders develop and facilitate the achievement of mission and vision of the university. The top leaders ensure that strategic quality objectives are developed and avail the required resources for the successful QMS implementation. However, if resources are not available, this can lead to compromising of university performance. Good university leadership would be linked to higher performance.

Employee Involvement

QMS is the most recent, along with high involvement and the most comprehensive approach to employee performance. It is achieved when the organization's goods and services exceed the customer's expectation. However, employee involvement and participation in the change process increases the likelihood that it will become part of the organization's culture. When implemented successfully, QMS is also aligned closely with the overall business strategy and attempts to change the entire organization towards continuous quality improvement (Gulali *et al*., 2015). Deming claimed that involvement and participation of employees at all level must to improve the quality of the current and future product or service (Talib, Rahman & Qureshi, 2010).

QMS practices ensure necessary training to all employees to improve their proficiencies in their tasks. Employee involvement refers to ensuring that employees are motivated and perform their jobs as per the required standards. Training should be given to all employees based on the results of the training needs assessment (Goetsch & Davis, 2010). With effective training, employees know the industry and the structure of the university. In addition, effective training will improve employees' loyalty to the firm, motivation, and work performance. Employee relations are important to promote teamwork and workforce management in the university. Some studies report that employee training is positively related to operational performance, employee performance, innovation performance, customer results, market and financial performance (Phan *et al*., 2011; MacKelprang, Jayaram & Xu, 2012). However, Rungtusanatham, Forza, Filippini & Anderson (1998) equally demonstrated and found negative/insignificant results. This may have been a result of non-commitment of employees to the QMS. In some cases, employees argue that QM practices are an additional responsibility, time consuming and expensive procedures difficult to implement. It is important to involve all employees in different functional areas to ensure success of QMS implementation.

Gulali *et al*. (2015) conducted a study on the effect of quality management system on the performance of Maseno University in Kenya. The study established that the QMS implementation had a strong positive impact on student enrolment and infrastructural growth. From this study the researchers were convinced that when employees are involved in the QMS implementation process; their performance aspect improves. In universities, employees' job

performance is seen to be triggered by their involvement in university programmes that encourage compliance and ownership. For the success of QMS requires a collective effort from everyone within the organization. It is therefore crucial for all employees to be involved in the early stages of the process of implementation. It is notable that organizations are faced with competitive demands for lower costs, higher performance and greater flexibility; as a result, they are increasingly turning to employee involvement to enhance customer loyalty, productivity and growth of the organization (Gulali *et al*., 2015). It is further believed that this increased employee involvement can lead to quicker, more responsive decisions, continuous performance improvement, and greater employee flexibility, commitment and satisfaction. In order to meet university objectives, management need to emphasize on teamwork and creation of synergy in all functional areas of the university.

Customer Focus

Karani and Bichanga (2012) defined customer focus as the degree to which a firm continuously satisfies customer needs and expectations. In universities, customer focus is where the ideas of services to student are supported through staff coaching and development, which encouraged student's preference and self-reliance (In'airat & Al-Kassem, 2014). According to Okwiri (2013), customer focus can be measured by the existence of the expected behavioural outcomes that are consistent with universities that emphasize customer-value. In the university, customer focus emphasizes on identifying the existence of systems to identify the customer to every activity, the needs of the identified customers and the processes which are used to create value that is passed to the identified customer. When customer expectations are met, their satisfaction will be increased, and the market share will increase.

Previous studies have found that customer focus positively affects operational performance, employee performance, customer satisfaction/results and aggregate firm performance (Phan *et al.,* 2011). Customer-focus is a central tenet of market orientation; it is a set of beliefs that puts the customer's interest first but does not exclude those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitability (Nwokah & Maclayton, 2006). Customer focus enhances customer related processes that are adopted by universities to meet customer satisfaction. The customers of universities are mainly the students among other stakeholders. In universities, monitoring and evaluation of students' performance is done through continuous assessment tests, term papers, class presentation and final examination at the end of semester/trimester. Examinations are moderated by experienced lecturers to ensure that they possess right course content. However, if monitoring of exams is not properly done, this may negatively affect the quality of education delivered and performance. Students' satisfaction is measured by conducting course evaluations taught by lecturers to create student value and commitment to understand students' needs. Universities have created students' forums to listen to their needs for example departmental meetings, general assembly where the students meet the lecturers and university administrators to discuss issues pertaining their needs. There are also suggestion boxes at strategic places for students to give their feedback. If the university is able to enrol and retain high numbers of students, this will improve financial performance and increase its market share in the region. Once students are satisfied with the services or products offered, a university is assured of future continuity. In this case the university acquires a competitive edge.

Continual Improvement

Continuous improvement can be considered as the wheel of the organizational vehicle (Zakuan *et al.,* 2012). Continual improvement emphasizes on existing audit processes, management reviews of university performance, and on the improvement processes based on the results. Improvements in the university are carefully planned and implemented based on factual data, using a system of documentation. Continuous improvement is the most important part of services, means searching for never-ending improvements and developing processes to find new or improved methods in the process of converting inputs into useful outputs (Sadikoglu & Zehir, 2010).

Continuous improvement is based on three fundamental principles that is, customer focus, employee involvement and process involvement. For successful implementation of continuous improvement in universities, there must be top management commitment and support to be at the fore front. It is important to ensure that the university has a structure that supports all the activities carried out, and encourage team work for all employees in their different functions. In order the employees to meet the set performance standards, education and training is vital for them. In the university there should be effective communication systems and a system for reward and recognition for the best performers. In order for universities to remain relevant and to focus on customer satisfaction for continuous improvement, universities need to focus on curriculum development, plans for delivery of courses, and review of programmes regularly based on market needs.

The process of ISO certification represents an international consensus on good management practices with the aim of ensuring quality service delivery to clients. ISO certification has become a widespread practice as organizations increasingly work to conform to the international standards. The standards place strong emphasis on process control and continuous improvement which are some of the key characteristics that a university must possess to be recognized as a leading player (Magoha, 2008). Dumond and Johnson (2013) conducted a study on managing university business educational quality: ISO or Association to Advance Collegiate Schools of Business (AACSB) at California State University in USA. The study compared two prevalent but different approaches to quality management: the AACSB accreditation standards and ISO 9001, a set of quality requirements developed by the International Organization for Standardization (ISO). For this comparison, the authors reviewed literature in the field, including published quality standards, organization examples documenting implementation of AACSB or ISO 9001 standards, and existing empirical research results on the two approaches. Findings of the study showed that both quality approaches have their merits and followers. It seems feasible that AACSB might be able to borrow some elements from the ISO 9001 components and process to improve their accreditation process.

Muindi (2014) confirm that service quality has spread and is currently embraced even in educational institutions. In terms of how the employees in the organization perceive their performance, an ISO 9001 certified organization is more likely to be perceived by its employees as a high performer relative to the non-certified ones. An implication from these findings is that two ISO 9001 certified organizations are not necessarily the same in terms of the drivers of customer focused performance. Kimani, Kagira and Kendi (2011) noted that service quality has been linked with increased profitability and is seen as providing an important competitive advantage by generating repeat sales, positive word of mouth feedback, customer loyalty and competitive product and service differentiation in universities. The

important dimensions or factors that determined service quality in Kenya universities were administrative quality, academic quality, programs quality, student support, and availability of resources.

RESEARCH METHODOLOGY

The study adopted explanatory cross-sectional survey research design. The target population for the study included all top management and heads of department from the eight selected universities. The total number of the staff was 876 by the time of conducting the study from which a sample size was 321 representing 36.6% of the respondents were selected. The researcher adopted simple random sampling techniques to select respondents from six departments. The researchers collected primary data using a self-administered questionnaire.

The researcher developed the measurement items to test the effect of quality management practices on university performance. In this study the researcher conducted factor analysis to analyse the interrelationships among the variables of the study (Cooper & Schindler, 2015). The researcher used principle components method with varimax rotation to identify the factors with higher loadings that were used for further analysis. Kaiser-Meyer-Olkin (KMO = 0.866) measure of sampling adequacy was above the threshold of 0.5. Bartlett's test of sphericity, which tests the overall significance of all the correlations within the correlation matrix, was significant ($\chi 2$ (703) = 11975.702, $p<0.000$), indicating that it was appropriate to use the factor analytic model on this set of data. The factor loadings for QMPs extracted three factors namely: continual improvement/customer focus, top management commitment and employee involvement. The researcher observed that the questions that loaded highly on factor one seemed to relate to continual improvement and customer focus measurement items.

RESULTS

Descriptive Statistics for Quality Management Practices

Reliability and Descriptive Statistics for Top Leadership Commitment

The study sought to find out the extent to which top leadership commitment have impacted on university performance. Out of ten statements, three statements were deleted and not used for further analysis (Table 1). The Cronbach alpha for seven items of top leadership commitment was 0.932. Seven statements for top leadership commitment had values ranging from 0.913 to 0.930. It can be concluded that the scales used in this study can be considered reliable.

Table 1: Top Leadership Commitment Practice in the University

	Mean	Std Dev	Skewness	Kurtosis	Cronbach Alpha if item deleted
Top management supports long-term quality improvement process in the university	3.91	0.994	-1.458	2.068	.930
Top management establishes a clear strategic direction of the university's future	3.77	1.111	-1.221	0.775	.913
Encourages commitment of all major departmental heads in the quality improvement process	3.78	1.014	-1.276	1.346	.923
Communicates often to the entire university to create awareness, interest, desire and action for quality management to all employees	3.76	1.014	-1.142	1.123	.923
Top management ensures required resources are available in all departments	3.45	1.101	-0.883	-0.186	.922
Top management ensures that activities are evaluated, aligned, and implemented in a unified way	3.49	1.021	-1.008	0.477	.919
Top management always inspires, encourages and recognize employees contributions in the university	3.32	1.151	-0.733	-0.575	.921
Composite Mean	3.6398	1.058	-1.441	1.770	
Cronbach's Alpha	0.932				

Source: Research data (2017)

Top management support is of essence in any key business decision. As such, the success of any critical decision made in an organization is highly dependent on top management support and commitment (Zakuan, Muniandy, Saman & MdArif, 2012). Table 1 established that the top management supports long-term quality improvement process in the university (mean = 3.91, SD = 0.944). This is a clear indication that the top management commitment is an essential element for ensuring successful quality management implementation in the sense that it ensures long-term quality improvement processes in the university. Other than support of long-term quality improvement process, the top management establishes a clear strategic direction of the university's future (mean = 3.77, SD = 1.111). The management plays a leading role by ensuring that there is a clear strategic direction of the university's future by ensuring that the university has the required resources to make the critical decisions.

Besides, the top management encourages commitment of all major departmental heads in the quality improvement process (mean = 3.78, SD = 1.014). By encouraging commitment of all

major departmental heads in the quality improvement process, the university's quality policy is well communicated hence establishing a quality management structure. As well, the top management communicates often to the entire university to create awareness, interest, desire and action for quality management to all employees (mean = 3.76, SD = 1.014). The top management is therefore capable of communicating to the entire university issues pertaining quality policies, establishing and deploying quality goals and providing resources for quality management to all the employees. They also ensure that required resources are available in all departments (mean = 3.45, SD = 1.101). The top management engages in ensuring that the required resources are available in all departments so that student needs are met and the quality of service offered is not affected. Similarly, the top management ensures that activities are evaluated, aligned, and implemented in a unified way (mean = 3.49, SD = 1.021). With this in place, set goals are clearly outlined and communicated to the concerned stakeholders. They are therefore aware of what is required of them so as to meet the required quality standards.

However, it was undefined whether the top management always inspires, encourages and recognize employees' contributions in the university (mean = 3.32, SD = 1.151).The results on top leadership commitment summed up to a mean of 3.6398, standard deviation of 1.058, skewness -1.441 and kurtosis 1.770. The mean value (3.6398) indicates that the respondents were in agreement on most items on top leadership commitment practices in the university. The standard deviation composite mean (1.058) indicates that individual responses on average were a little over 1 point away from the mean. It is evident that top leadership commitment to university performance is relevant and ought to be encouraged at all levels in the university.

Reliability and Descriptive Statistics for Employee Involvement

The study sought to find out the extent to which employee involvement influence on university performance. Out of the nine statements, one statement was deleted. The Cronbach alpha for the eight items of employee involvement was 0.880 (Table 2). Eight statements for employee involvement practices had Cronbach alpha coefficient values ranging from 0.855 to 0.875. It can be concluded that the scales used in this study can be considered reliable. This section also highlights the descriptive results on employee involvement. The findings were as presented in Table 2below.

Table 2: Employee Involvement Practice in the University

	Mean	Std. Dev	Skewness	Kurtosis	Cronbach Alpha if item deleted
All employees in the university are involved in quality management training programs	3.5	1.008	-0.68	-0.306	.871
All departments participate in quality management programs	3.97	0.832	-1.414	3.144	.863
Employees are motivated, committed and involved in quality management programs	3.46	1.146	-0.684	-0.424	.857
Employees are held accountable for their own performance	3.86	0.87	-1.186	2.209	.875
Employees are provided with clear job descriptions	3.89	1.046	-1.252	1.358	.871
Employees openly discuss problems and issues pertaining quality management programs	3.49	1.058	-0.836	0.101	.857
All employees work closely together and promote team work	3.59	1.061	-1.055	0.505	.871
Employees actively seek opportunities to enhance their competence, knowledge and experience	3.71	0.939	-1.126	1.206	.855
Composite Mean	3.6816	0.995	-1.029	0.974	
Cronbach's Alpha	0.880				

Source: Research data (2017)

The study findings have revealed that all employees in the university are involved in quality management training programs (mean = 3.5, SD = 1.008). Involvement of employees in quality management training programs equips them with the requisite skills and knowledge needed to meet the quality standards within the institution and this enhances performance of the university. Also, all departments participate in quality management programs (mean = 3.97, SD = 0.832). Consequently, there is heightened awareness across all departments in the university with regard to the quality standards to be met in service delivery. On the same note, employees are motivated, committed and involved in quality management programs (mean = 3.46, SD = 1.146). The resulting outcome is employees that are capable of meeting and maintaining the quality standards needed since they are aware of what is required of them.

In addition, employees are held accountable for their own performance (mean = 3.86, SD = 0.87). Since employees are held accountable, they are likely to adhere to set organizational goals pertaining to quality standards. As well, employees are provided with clear job descriptions (mean = 3.89, SD = 1.046). Clear job descriptions make it possible for employees to know what is required of them and in turn they can work towards meeting the requirements of the job schedules. Besides, employees openly discuss problems and issues pertaining quality

management programs (mean = 3.49, SD = 1.058). Consequently, areas to be improved on are identified and the strategies to be put in place to improve quality management programs.

To add on the above, all employees work closely together and promote team work (mean = 3.59, SD = 1.061). This is key in enhancing the quality of services offered since employees can work together towards meeting the organizational goals and objectives. Finally, employees actively seek opportunities to enhance their competence, knowledge and experience (mean = 3.71, SD = 0.939). Employees are therefore capable of gaining new and advanced knowledge or skills that assists them to do their job better. They are also able to understand the key skills and capabilities required to improve university performance. Generally, the results on employee involvement indicate that the respondents were generally in agreement with most items on employee involvement. The mean value (3.6816) indicates that the respondents were in agreement on most items on top leadership commitment practices in the university. The standard deviation composite mean (0.995) indicated that individual responses on average were having less variation from the mean.

Reliability and Descriptive Statistics for Customer Focus

The study sought to find out the extent to which customer focus has impacted on university performance. The Cronbach alpha for seven items of customer focus was 0.895. Seven statements for customer focus had Cronbach alpha coefficient values ranging from 0.867 to 0.893. It can be concluded that the scales used in this study can be considered reliable. The study therefore deemed it important to establish the extent of customer focus by the universities. Table 3 illustrates the results.

Table 3: Customer Focus Practice in the University

	Mean	Std Dev	Skewness	Kurtosis	Cronbach Alpha if item deleted
External customers' complaints are effectively resolved	3.6	1.108	-0.391	-0.748	.871
All employees are made aware to focus on customer needs	4.01	0.763	-0.823	1.381	.893
Effective ways of communicating with customers are determined and practiced	3.6	1.199	-0.781	-0.256	.883
University strives to meet and exceed customer needs and expectations	3.93	0.779	-0.925	1.66	.889
University maintains close link with all our customers.	3.77	0.893	-0.977	0.818	.867
University incorporates customer needs in developing and offering quality services	3.94	0.771	-0.971	1.401	.877
Customer focus is a central tenet of market orientation for the university	3.94	0.855	-0.985	1.415	.877
Composite Mean	3.8274	0.72396	-0.652	0.816	
Cronbach's Alpha	0.895				

Source: Research data, 2017

The results of the study revealed that external customers' complaints are effectively resolved (mean = 3.6, SD = 1.108). This implies that external customers' complaints are treated with top priority in an attempt to improve customer focus efforts. Also, by effectively resolving customer complaints, product and service quality is improved hence performance of university is improved. In addition, all employees are made aware to focus on customer needs (mean = 4.01, SD = 0.763). There is therefore a close relationship with the customers thus employees are able to determine the customers' needs together with receiving feedback on the extent to which the aforementioned needs are being met. Besides, effective ways of communicating with customers are determined and practiced (mean = 3.6, SD = 1.199). Information is therefore effectively disseminated to customers. The institution can therefore engage with customers on the way forward in terms of offering quality service to them. To add on the above, the university strives to meet and exceed customer needs and expectations (mean = 3.93, SD = 0.779). This implies that there is efficient and accurate service and competent employees that can effectively handle the customers' needs.

Similarly, the university maintains close link with all their customers (mean = 3.77, SD = 0.893). As such, it is possible for the institution to respond promptly to customer complaints and identify the areas that need to be improved on in terms of service delivery. Furthermore, the university incorporates customer needs in developing and offering quality services (mean = 3.94, SD = 0.771). Such an initiative ensures that customers' preferences are put into consideration while developing and offering quality services. Finally, customer focus is a central tenet of market orientation for the university (mean = 3.94, SD = 0.855).The results on customer focus summed up to a mean of 3.886, standard deviation of 0.72396, skewness -0.652 and kurtosis 0.816. The results suggest that the respondents were generally in agreement with most items on customer focus. Besides, the standard deviation composite mean (0.72396) indicates that there were less variations in the responses.

Reliability and Descriptive Statistics for Continual Improvement

The study sought to find out the extent to which continual improvement has impacted on university performance. The Cronbach alpha for nine items of continual improvement was 0.911. Nine statements for continual improvement had Cronbach alpha coefficient values ranging from 0.889 to 0.912. It can be concluded that the scales used in this study can be considered reliable. The descriptive results on continual improvement are as presented in Table 4. From the findings, it is evident that there is effectiveness on continual improvement of processes in the university (mean = 3.79, SD = 0.877) meaning that the institution establishes, document, implement and maintain quality management system and continually improves its effectiveness. Further, continuous improvement is measured through university internal and external audits (mean = 3.97, SD = 0.816). The university is therefore capable of ascertaining objectively whether the quality standards have been adhered to. Table 4 presents the results.

Continual Improvement Practice in the University

	Mean	Std Dev	Skewness	Kurtosis	Cronbach Alpha if item deleted
There is effectiveness on continual improvement of processes in the university	3.79	0.877	-0.833	0.38	.899
Continuous improvement is measured through university internal and external audits	3.97	0.816	-1.041	1.428	.912
Continuous improvement leads to competitive advantage of the university	3.93	0.762	-0.911	1.568	.905
Review of programs is up to date to ensure relevance of programs and courses offered in the university	4.02	0.756	-1.089	2.192	.912
There is emphasis of continual improvement of all operations and at all levels in the university	3.88	0.844	-0.761	0.726	.889
Corrective actions with respect to non-conformity and areas of improvement are taken immediately by all departments	3.77	0.944	-0.885	0.765	.899
The is continual improvement of employees' work activities	3.71	0.973	-0.949	0.575	.896
There is continual monitoring/improving processes and products/services	3.8	0.813	-0.876	0.687	.891
We have a structure that empowers employees continuously improve on their work systems	3.66	1.03	-0.864	0.181	.901
Composite Mean	3.838	0.66667	-0.941	1.201	
Cronbach's Alpha	0.911				

Source: Research data, 2017

Moreover, continuous improvement leads to competitive advantage of the university (mean = 3.93, SD = 0.762). This is the case since the institution is able to improve on its service delivery

to be better than that of its competitors so as to adequately satisfy customers. Besides, review of programs is up to date to ensure relevance of programs and courses offered in the university (mean = 4.02, SD = 0.756). Students therefore have a wide array of programs to choose from that are relevant to their career prospects. They are therefore satisfied with the quality of programs on offer by the university.

In addition, there is emphasis of continual improvement of all operations and at all level in the university (mean = 3.88, SD = 0.844). The institution is therefore capable of having a competitive advantage since all level of operations is continually improved to meet the changing needs of its customers. Furthermore, corrective actions with respect to non-conformity and areas of improvement are taken immediately by all departments (mean = 3.77, SD = 0.944). The institution is therefore capable of transforming itself from an operation that is continually reacting to failures to one with the processes in place to prevent problems in the first place. In the end, the university retains its customers. As well, there is continual improvement of employees' work activities (mean = 3.71, SD = 0.973). Continual improvement of employees work activities means that the institution strives at finding new ways of doing things most probably by setting goals and doing what it takes to reach the set goals. Similarly, there is continual monitoring/improving processes and products/services (mean = 3.8, SD = 0.813). Continual monitoring and improvement of processes and products/services makes it possible for the universities to have an edge over competitors and meet the needs of its customers satisfactorily.

Finally, there is a structure that empowers employees continuously to improve on their work systems (mean = 3.66, SD = 1.03). This implies that the structures in place act as a means to attract and motivate employees to continuously improve on their work. The findings on continual improvement summed up to a mean of 3.8382, standard deviation of 0.66667, skewness -0.941 and Kurtosis of 1.201. The results indicated that the respondents were in agreement with most items on continual improvement processes in the universities. There was also less variation in the responses as indicated by the composite standard deviation (0.66667).

Reliability and Descriptive Statistics for University Performance

Table 5 presents the results of Cronbach alpha and descriptive statistics. The Cronbach alpha coefficient for ten items of university performance was 0.957 hence far above the threshold of 0.70 (Kline, 2010). All university performance indicators had values of Cronbach alpha ranging from 0.949 to 0.956 indicating very high construct reliability. It was concluded that the measurement items were compositely reliable and internally consisted as suggested by Kline (2010). The results indicated how strong the measurement items were holding together in measuring performance.

Table 5: Descriptive Statistics for University Performance

	Mean	Std Dev	Skewness	Kurtosis	Cronbach Alpha if item deleted
Increased number of research publications in the university	3.38	1.064	-0.588	-0.175	.956
Increased on the number of papers presented by staff	3.39	1.015	-0.465	-0.361	.955
Staff attend and participate at national/international conferences	3.42	1.136	-0.602	-0.253	.951
Number of staff on development programmes has increased	3.37	1.204	-0.683	-0.49	.950
Levels of staff qualifications has improved in our university	3.55	1.108	-0.861	0.097	.953
We have an increase on the enrolment number of students	3.47	1.147	-0.697	-0.385	.954
Benchmarking practices have increased	3.48	1.139	-0.678	-0.259	.952
Promotes and increases number for local/international Collaborations with other institutions/organizations	3.73	1.972	1.556	1.965	.950
Collaboration supports research, training and knowledge Transfer	3.612	1.0799	-0.967	0.451	.949
Knowledge and expertise is gained through collaboration efforts	3.7	1.077	-1.033	0.683	.952
Composite Mean	3.5104	1.1941	-0.838	0.458	
Cronbach's Alpha	0.957				

Source: Research data (2017)

An analysis of descriptive statistics for university performance was carried out. Table 5 shows that the levels of staff qualifications have improved in the university (mean = 3.55, SD = 1.108). This is indicative of improved university performance because staff in possession of high qualifications bring on board top notch skills and knowledge that are of great use to the university. As well, the number of local/international collaborations with other institutions/organizations has increased (mean = 3.64, SD = 1.040). Collaborations with other institutions is instrumental in enhancing university performance since the university is able to have exchange programmes, access funds for research, secure scholarships and internships for students which will in turn market the university. The eventual outcome is improved university performance. Similarly, there is collaboration to support research, training and knowledge transfer (mean = 3.612, SD = 1.0799). Furthermore, knowledge and expertise is gained through collaboration efforts (mean = 3.7, SD = 1.077). Knowledge and expertise gained through collaboration efforts is beneficial to the university in that the staff gain new knowledge and skills. Consequently, such knowledge and skills can be made use of in improving university performance.

Other than enhanced knowledge and expertise, benchmarking practices have increased (mean = 3.48, SD = 1.139). As well, there is an increase in the number of students enrolled (mean =

3.47, SD = 1.147). An increase in the number of students enrolled is indicative of improved university performance since their increase is indicative of increased customer base and market position. There is thus increase in revenue as a result of increase in the number of students. However, it has not been fully established if the staff attend and participate at national/international conferences (mean = 3.42, SD = 1.136). It could be that the staffs have limited exposure to both national and international conferences. There is also doubt if there is increase in the number of papers presented by staff (mean = 3.39, SD = 1.015).

Further, it is undefined whether there is increased number of publications in the university (mean = 3.38, SD = 1.064). Finally, it has not been fully established if the number of staff on development programs has increased (mean = 3.37, SD = 1.204). Generally, the results on university performance summed up to a mean of 3.5104, standard deviation of 1.1941, skewness -0.838 and kurtosis of 0.458. Generally, the respondents were in agreement with most items on university performance. There was some variation in their responses depicted by the standard deviation was not concentrated around the mean. The standard deviation composite mean of 1.1941 shows that the individual responses on average were a little over 1 point away from the mean. The results of the study, based on mean score and standard deviation, reflect respondents' general agreement to the dimensions of the model.

Table 6 presents a summary of the number of items carried forward for further analysis and Cronbach reliability test results for all variables.

Table 6: Cronbach Alpha Reliability Test Results

Construct name	Construct identifier	Initial number of items	Number of items carried forward to the analysis	Cronbach Alpha
University performance	UP	10	10	0.957
Top leadership commitment	TL	10	7	0.932
Employee involvement	EI	9	8	0.880
Customer focus	CF	10	7	0.895
Continual improvement	CI	9	9	0.911

Source: Research data, 2017

Exploratory Factor Analysis

Exploratory Factor Analysis for Quality Management Practices

The results reported on Table 7 below show that the factor loading results for Quality Management Practices (QMPs) were above 0.50 threshold. This meant that unidimensionality and construct validity of the measures were satisfied. The results on Table 7 give the rotated component matrix (rotated factor matrix) which shows is a matrix of the factor loadings for each variable on each factor. The factor loadings for QMPs extracted three factors namely: continual improvement/customer focus, top management commitment and employee involvement. The researcher observed that the questions that loaded highly on factor one seemed to relate to continual improvement and customer focus measurement items.

The measurement items (questions) for QMPs were thirty eight (38) and out of thirty eight items, eleven (11) had low loadings (requested that all loadings less than 0.5 to be suppressed in the output) and were not used for further analysis: All employees work closely together and promote team work; Communicates often to the entire university to create awareness, interest, desire and action for quality management to all employees; All employees in the university are involved in quality management training programs; Top management supports long-term quality improvement process in the university; Top management takes a leading role in management of quality in your university; Top management ensures comprehensiveness of the goal-setting process for quality within the university; Employees are encouraged to be more innovative in furthering the department's objectives; Encourages commitment of all employees to quality audits and promotes quality culture in the university; Understanding and dissemination of customers' requirements is practiced throughout the university; Exams are moderated by external examiners to ensure quality; All employees are made aware to focus on customer needs. Therefore, twenty-seven (27) measurement items (questions) were used for further analysis.

The total variance explained showed that factor 1 accounted for considerably more variance than the remaining two (30.363% compared to 8.727% and 5.800%), however after rotation sums of squared loading it accounts for only 23.894% of variance (compared to 15.808% and 14.188%, respectively).

Table 7: Exploratory Factor Analysis for Quality Management Practices

	1	2	3
Customer focus is a central tenet of market orientation for the university	.785		
There is continual monitoring/improving processes and products/services	.774		
Effective ways of communicating with customers are determined and practiced	.772		
External customers' complaints are effectively resolved	.772		
University maintains close link with all our customers.	.754		
University incorporates customer needs in developing and offering quality services	.740		
There is emphasis of continual improvement of all operations and at all levels in the university	.738		
Continuous improvement leads to competitive advantage of the university	.730		
We have a structure that empowers employees continuously improve on their work systems	.683		
Corrective actions with respect to non-conformity and areas of improvement are taken immediately by all departments	.668		
Continuous improvement is measured through university internal and external audits	.643		
Employees openly discuss problems and issues pertaining quality management programs	.610		

There is effectiveness on continual improvement of processes in the university	.609		
The is continual improvement of employees' work activities	.570		
Top management ensures that activities are evaluated, aligned, and implemented in a unified way		.752	
Top management always inspires, encourages and recognize employees contributions in the university		.715	
Top management establishes a clear strategic direction of the university's future		.691	
Encourages commitment of all major departmental heads in the quality improvement process		.614	
All departments participate in quality management programs		.606	
Top management ensures required resources are available in all departments		.556	
Employees are provided with clear job descriptions		.546	
Review of programs is up to date to ensure relevance of programs and courses offered in the university			.720
Employees are held accountable for their own performance			.717
University strives to meet and exceed customer needs and expectations			.699
Employees are motivated, committed and involved in quality management programs			.676
Employees actively seek opportunities to enhance their competence, knowledge and experience			.617
Lecturers monitor and evaluate students' performance			.548
Total Eigen Values	14.958	3.316	2.204
% of variance	39.363	8.727	5.800
Cumulative %	39.363	48.090	53.890
KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.866		
Bartlett's Test of Sphericity Approx. Chi-Square	11975.702		
Df	703		
Sig.	.000		
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 6 iterations.			

Source: Research data (2017)

Table 7 results revealed that the three factors accounted for 53.890% indicating it could be used for further analysis. Kaiser-Meyer-Olkin (KMO = 0.866) measure of sampling adequacy was above the threshold of 0.5. Bartlett's test of sphericity, which tests the overall significance of all the correlations within the correlation matrix, was significant ($\chi 2$ (703) = 11975.702, $p<0.000$), indicating that it was appropriate to use the factor analytic model on this set of data.

Exploratory Factor Analysis for University Performance

The factor analysis for university performance indicated that all items scored above the threshold of 0.50. In this study the theorized model for university performance was initially measured by four factors namely: collaborations, publications, teaching outcomes and enrolment growth rate. Table 8 shows the results.

Table 8: Exploratory Factor Analysis for University Performance

	1	2	3
Knowledge and expertise is gained through collaboration efforts	.834		
Collaboration supports research, training and knowledge Transfer	.830		
Promotes and increases number for local/international Collaborations with other institutions/organizations	.797		
We have an increase on the enrolment number of students	.786		
Increased number of research publications in the university		.897	
Increased on the number of papers presented by staff		.886	
Staff attend and participate at national/international conferences		.732	
Levels of staff qualifications has improved in our university			.801
Benchmarking practices have increased have increased			.661
Number of staff on development programs has increased			.611
Total Eigen Values	7.226	1.043	427
% of variance	72.262	10.428	4.268
Cumulative %	72.262	82.690	86.958
KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.914		
Bartlett's Test of Sphericity Approx. Chi-Square	3549.852		
Df	45		
Sig.	.000		
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

Source: Research data (2017)

The total variance explained showed that factor 1 accounted for considerably more variance than the remaining two (72.262% compared to 10.428% and 4.268%), however after rotation sums of squared loading accounted for only 35.921% of variance (compared to 29.323% and 21.714% respectively). The extraction sums of squared loadings explained a cumulative variance of 86.958% of the three factors. Enrolment growth rate factor was dropped and not

used for further analysis because of suppressing loadings at cut-off of 0.50. As evidenced in Table 9, KMO (0.914) was greater than threshold of 0.5, and Bartlett's Test was significant. It is evident that all the items (10 items) measuring university performance were viable and reliable to be used for further analysis.

Correlation Analysis

The researcher performed a bivariate correlation analysis to identify the strength and direction of association between the dependent and independent variables of the study. A Pearson correlation matrix for quality management practices indicators (top leadership commitment, employee involvement, customer focus/continual improvement) and university performance (collaborations, publications and teaching outcomes) intended to bring about improved university performance and hence effectiveness is presented in Table 9.

Table 9: Correlation Analysis

Correlations							
		CICF	TLC	EI	COL	PUB	TEO
CICF	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	298					
TLC	Pearson Correlation	.613**	1				
	Sig. (2-tailed)	.000					
	N	298	298				
EI	Pearson Correlation	.579**	.702**	1			
	Sig. (2-tailed)	.000	.000				
	N	298	298	298			
COL	Pearson Correlation	.586**	.445**	.499**	1		
	Sig. (2-tailed)	.000	.000	.000			
	N	298	298	298	298		
PUB	Pearson Correlation	.580**	.381**	.430**	.655**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	298	298	298	298	298	
TEO	Pearson Correlation	.628**	.454**	.376**	.818**	.738**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	298	298	298	298	298	298

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research data (2017)

Key: Collaboration (COL); Publication (PUB); Teaching outcome (TEO); Continual improvement/customer focus (CICF); top leadership commitment (TLC); Employee involvement (EI).

The results in Table 9 showed that the strength of association among the variables and all factors had a positive and significant correlation if the p-value is 0.01 or 0.05 level. Highest correlation is observed among teaching outcomes (TEO) and collaboration (COL) with which is (r=0.818, p<0.01) and teaching outcomes (TEO) and collaborations (COL) which is (r=0.738, p<0.01).

Majority of the exogenous and endogenous constructs were moderately correlated. The results reflect that majority of the variables were positively correlated with each other at the significant level of p<0.01. The correlation coefficients were used to test discriminant validity. The requirement of discriminant validity is that correlation value exceeding 0.85 indicates the two exogenous constructs are redundant or having some multicollinearity problem (Kline, 2010). Table 9 shows that correlation coefficients were not excessively high (0.376 to 0.818), are below the cut-off value of 0.85 these coefficients have shown evidence of discriminant validity demonstrating that the factors are distinct from each other (Kline, 2010; Riquelme & Rios, 2010). Therefore, the results in Table 9 indicated the positive correlation among the dependent and independent variables. Since the highest correlation coefficient is (0.818), the results meant that there was no multicollinearity problem in this study and the factors were distinct from each other.

Effect of Quality Management Practices on Performance of Universities

The researcher tested the third condition of the second indirect effect of quality management on performance of universities. An examination of the hypothesized model after running it for the first time indicated there was need to use modification indices. The following paths were correlated e2 to e4, e3 to e5, e4 to e5 and e5 to e6 as shown in Figure 2 below.

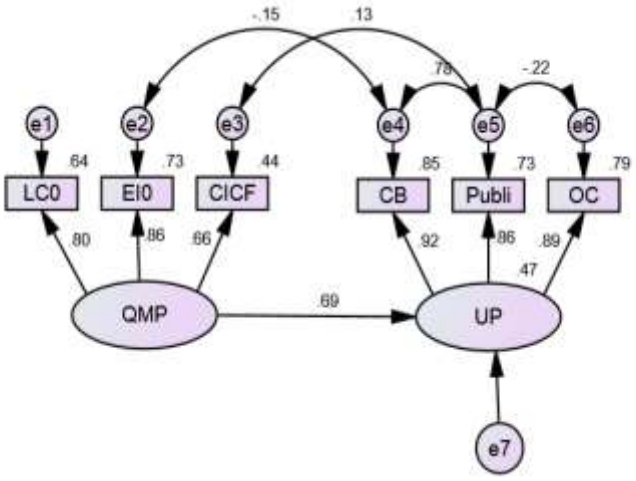

Figure 1: Quality management practices and university performance

Source: Research data (2017)

Results of the model (Figure 1) indicated that QMP was positively related to performance of universities with a standardized path coefficient of 69% and an R^2 of 47% indicating the variability percent in the dependent variable that can be accounted for by quality management practices in performance of universities. This confirmed the third condition that QMP was a mediating variable between strategic decision and university performance. Further results from the model indicated that normed chi-square was statistically significant (CMIN/DF 1.962

p=.097). Other fit indices NFI= .995, CFI= .997 TLI = .990 were within the acceptable threshold of above .90 (Suhr, 2006). The parsimony – adjusted measure were below the threshold of 0.5 (PNFI= .265 PCFI = .266) and RMSEA (.058) was almost within the acceptable threshold of RMSEA<.05 (Alavi & Ghaemi, 2011). After thorough examination of all the three conditions for partial mediation, the results of the study showed that they were met. The study found that quality management practices are very critical and they positively mediate the relationship between strategic decisions and performance of universities.

Hypotheses Testing

To test the defined hypothesis of the proposed model of this study, the researcher used structural equation modelling (SEM) technique. Path analyses were performed to check the relationship among constructs of the study. The path diagram of the proposed model provides insights that the proposed model is good indicator of model fit as all values of the proposed model are quite satisfactory as they are meeting the given criterion of goodness of fit. It is evident from the results that the proposed model had achieved the required level of normed chi-square, normed fit index, comparative fit index and root mean square error of approximation and that the results of the study are falling within the described range of values and it is evident that the proposed model provides a reasonable fit. To determine the accuracy and validity of the hypotheses of the statistical importance of all the structural parameters were checked. Maximum likelihood estimates were used to test the hypotheses using regression weight of Amos output. From the results the p-value shows the significance of the model. The results show that the entire hypothesized model was significant with $p<0.05$.

Ho_1: There is no significant relationship between quality management practices and performance of universities in Kenya

The study findings found that there was a significant relationship between quality management practices and performance of universities. The study results indicated that quality management practices had a significant effect on performance of universities (path coefficients = 1.047; $p<0.05$). The path coefficient was 0.69 was great and it meant that there was a strong positive relationship between quality management practices and performance of universities. The results further indicated that a one-unit increase in quality management practices increase performance of universities by 1.047. From these results, we reject the null hypothesis that there is no significant relationship between quality management practices and performance of universities and affirm that quality management practices have a significant relationship with performance of universities. It is necessary for all employees to embrace the QMPs and work towards improving performance of their departments as well as the entire university at large.

DISCUSSION OF THE FINDINGS

The study found that there is significant relationship between quality management practices and performance of universities. This study is in agreement with past researchers who revealed statistically significant differences of institutions that have adopted QMS and those that have not (Kuncoro, 2013). The study has established that top leadership commitment has a positive influence on university performance. In tally with the results, the extant literature (Phan *et al*., 2011; Parast & Adams, 2012) indicated that leadership improves the overall firm performance. The findings are also corroborated by Jaafreh and Al-abedallat (2013) who explained that top

leadership commitment is the most vital factor in quality management and leading to higher performance. University leadership is therefore important in influencing various groups of employees and mobilizing the available resources to achieve the goal of the university. Effective leadership promotes the strategic direction of the organization to achieve customer satisfaction and business results (Jaafreh & Al-abedallat, 2013). The researcher is of the view that top leadership management enhances quality and productivity and help staff at all levels to cope with momentous and rapid change to enhance performance. Employee involvement was found to have a positive and significant effect on university performance. This is in line with findings by Gulali *et al*. (2015) indicating that employee involvement in the QMS implementation improved the overall performance. Precisely, employees are involved in all daily operations so as to enhance customer loyalty, productivity and growth of the organization. The results are corroborated by Deming theory that elucidated that involvement and participation of employees at all levels leads to an improvement in the quality of the current and future product or service (Talib *et al*., 2010). Among the QMPs, employee involvement had the highest correlation (73%). This is an indication that employee involvement is key to successful implementation of quality management system.

The results of factor analysis combined customer focus and continual improvement into one factor. Earlier empirical studies have always found these two indicators different. However, the factor analysis cross loading combined the measurements items of these two indicators into one (customer focus/continual improvement). The results indicate that in order to continuously meet customer needs, universities have to ensure continual improvement of all the process that are linked to customer satisfaction. Consistently, the extant literature has indicated that customer focus positively affects operational performance, employee performance, customer satisfaction/results and aggregate firm performance (Phan *et al*., 2011; Kim *et al*., 2012). Deming's theory stresses on customer focus that it should be a central concern for all leaders in an organization and involve customers in quality improvement. Finally, continual improvement was found to have a positive influence on university performance. This is in tally with findings by Sabella *et al*., (2014) who found that TQM constructs were positively related to organizational performance. This was also the case with Sadikoglu and Zehir (2010) who postulated that continuous improvement brings about never-ending improvements and developing processes to find new or improved methods in the process of converting inputs into useful outputs thus enhancing the overall performance. This study supports the theory of constraints that quality management practices should treat continuous improvement as an on-going process. This theory is applicable in universities to be able to identify bottlenecks/constraints that limit the systems performance.

CONCLUSION

The objective of this study was to establish the relationship between quality management practices and performance of universities in Kenya. In support of the expectations of the study, findings indicated that quality management practices had a significant effect on performance of universities. The hypothesis of the study suggested that there is no significant relationship between quality management practices and performance of universities. The results of this study found a significant relationship between quality management practices and performance of universities. From the path analysis, it was found that quality management practices had great effect on performance of universities.

Based on the above results, it can be inferred that these findings validate the conceptualized framework as they shed some light that quality management practices have a significant effect on performance of universities in Kenya. However, as indicated by other empirical studies, installing a quality management system is not a guarantee to success. This process utilizes a system approach method where by each and every functional department has a role to play either at individual or departmental levels. Top management is being encouraged to take a leading role and give directions to their employees in order to improve performance and be compliant with the standards requirements.

Contribution of the Study

This study has revealed that one of the benefits of implementing quality management systems in universities is basically to improve performance in terms of collaborations, publication and teaching outcomes. The study adopted four QMPs (continual improvement, customer focus, top leadership commitment and employee involvement). The study established that top leadership commitment plays a key role in enhancing university performance. Precisely, good leadership in institutions of higher learning is associated with employees' satisfaction as well as improved product and service outcomes. This is as a result of the good culture and direction put in place by the top leadership.

The study also established that employee involvement contributes to improve university performance. This implies that whenever there is collective effort from everyone with the university, the eventual outcome is that employees are motivated and will perform their duties to meet the required performance standards. Such employee involvement leads to quicker, more responsive decisions, continuous performance improvement as well as enhanced university performance. However, staffing of the ISO/quality assurance departments in majority of the universities were yet to be fully established. This is a very key department in the university and it's the responsibility of top management to ensure that this department is well established, facilitated and provide required resources for efficient and effective operations.

Additionally, customer focus is key in enhancing the overall university performance mainly because satisfied customers will automatically enhance university competitive advantage. This is in form of increase in enrolment growth and improved financial performance resulting from rise in the enrolment of students. There has been unhealthy competition by universities for students and quality of education has been compromised. The Commission for University Education in Kenya needs to put stringent policies and measures on managing quality of education. The study found that customer satisfaction survey is rarely done. There is need for university management to ensure customer satisfaction surveys are conducted on a yearly basis. This will assist the university management to monitor the environmental changes and understand the changing customer needs as well as the market demands. Finally, continual improvement by universities ensures the smooth running of university activities. Emphasis on continual improvement in the operations of the business at all levels results in gained competitive advantage and long term sustainability is possible.

Recommendations for Further Research

This study has looked at the effects of quality management practices performance of Kenyan universities. The researcher recommends another study to be conducted in other sectors/industry to test the conceptual model of this current study.

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