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The Influence of Quality Management Systems on the Relationship between Admission Systems and the Performance of Kenyan Public Universities

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***Abstract*: -** *In recent years, there have been attempts to import business models from the private sector into higher education systems and institutions in an attempt to improve their performance. This has led to the emergence of a debate on the applicability of Quality Management Systems (QMS) principles, methodologies and tools to the higher education sector and their relationship with performance of those institutions. There exists a lot of research on the importance of Quality Management Systems and how it impacts on performance of organizations in general. However, there is little research that specifically focuses on the influence of QMS on the relationship between internal factors and performance of Kenyan public universities. This study sought to establish the influence of Quality Management Systems on the relationships between admission systems on the performance of Kenyan public universities. The study adopted a survey research design. Seven certified public sponsored universities published by the Commission for Higher Education in Kenya were sampled. Structured questionnaires were used in the collection of data. A pilot study was conducted to check for the reliability and validity of the research instruments. SPSS software was used in analyzing and interpreting data that was collected. The findings of this study demonstrated that QMS played a significant influencing role between admission systems and the performance of Kenyan public universities, with an 98.5% coefficient of determination (R2) rating. These results will be beneficial to a range of beneficiaries; scholars in the subject of management; researchers who will use the results as a contribution towards the advancement of knowledge in the subject area; Government officials and university management will in particular, benefit from the knowledge on the linkages between QMS and its influence on internal factors and the performance of public universities in Kenya. The study recommended that for public universities to realize the dreams of a majority of Kenyans as envisioned in Vision 2030 and the Kenyan constitution, they should proactively adopt QMS in their operations across all internal factors in order to be effective and efficient in their performances. The study proposed two future studies.*

***Keywords*: -** *Internal factors, Organizational Performance, Public Universities, Quality Management Systems, and Strategy*

Introduction

Evolution of QMS IN public Universities

In the last decades, several factors have contributed to raising public concern over quality of education in higher institutions of learning. This has led to the emergence of quality measurement and improvement of in the flowing areas; development of performance indicators, programme accreditation, programme and institutional assessment and quality audits. According to Redmond, Curtis, Noon and Keenane (2008), a Quality Management System in its basic concept seeks to; recognize the external quality related requirements specified in Licenses to Trade, guidelines, specified customer requirements, and the chosen management system standard(s). The authors argue that for the system to be effective, all requirements have to be documented within the management system in the appropriate location in

terms of defined specific system requirements and confirm that employees receive applicable training in the quality system requirements. Redmond et al., (2008) affirm that performance processes should be aligned, where applicable, to the quality system requirements; at the same time produce records of evidence that system requirements have been met. The authors say that measuring, monitoring and reporting the extent of compliance with those performance procedures, analyzing changes to the requirements and conformance that all changes are reflected in the specific requirements when necessary should be monitored and evaluated.

In recent years, there have been attempts to import models from the private sector into higher education systems and institutions in the attempt to improve the performance (Sarrico, Rosa, Teixeira and Cardoso, 2010). This move has led to the emergence of a debate on the applicability of quality management systems, methodologies and tools in the higher education sector. Several voices have been heard about the non-applicability of those management models, especially because they are derived from industry and have nothing to do with the higher education ethos (Harvey, 1995; Kells, 1995; Birnbaum, 2000; Massy, 2003; Pratasavitskaya and Stensaker, 2010). Other authors gave a more nuanced view on the subject, claiming that although higher education institutions were not private business enterprises, some of the basic principles and tools could be applied as long as they were instruments at the service of institutions and their governance and management boards, subject to the institutions' academic mission, goals and strategies (Williams, 1993; Harvey, 1995; Dill, 1995).

Matsui and Chi (2006) who conducted their study in Vietnam argued that ISO 9000 implementation has been accepted worldwide as a useful first step towards Total Quality Management (TQM). The implementation of ISO 9000 is a critical organizational change that requires a transformation in the organizations' processes, strategic priorities, and culture. The result of the research showed that with the implementation of ISO 9000, quality management system is strengthened with more effectiveness in responsibility and authority, product standardization and process control. The research found that ISO 9000 requirements helped companies in Vietnam to improve quality performance, especially the internal process quality. The United Kingdom (UK) government, in spring 2011 announced that the UK Border Agency would be requiring all private colleges that provide higher education for UK degree-awarding bodies to undergo a standards and quality review by Quality Assurance Agency (QAA). In 2011, QAA, in consultation with the higher education sector, began to replace the Academic Infrastructure with a new suite of documents setting out UK national expectations about standards and quality in higher education. In 2012, there was a launch of a corresponding review method for higher education awarding bodies in England and Northern Ireland, called Institutional Review for England and Northern Ireland as reported in the Browne Commission Report of 2010.

In Africa, most heads of state have maintained tight control over their public universities (Oso, 2002). African presidents have traditionally been the chancellors and appointing officers of all the university chief officers. Government representatives have dominated the university councils and heavily dictated their budgets. These arrangements have infringed on the academic freedom and autonomy of the universities thus compromising the quality of the performance. In East Africa, the notion of Quality Assurance (QA) in higher education is an issue of great concern among all stakeholders, including policy makers, parents, employers, and students. A number of factors have contributed to this phenomenon. East Africa has experienced rapid expansion of the number and enrollment levels in higher learning institutions in recent times. This has been triggered by the exponential increase in demand of access to higher education in each of the countries in the region. As a result, the Inter-University Council of East Africa (IUCEA) felt the need to ensure that the rapid expansion of higher education in the region did not compromise quality of the very education

being delivered. Furthermore, in recent years, student mobility within East Africa has increased tremendously, necessitating the need to institute mechanisms for comparability of the quality of education in universities in East Africa. It is important to note that education has become a tradable commodity across borders and hence there have been efforts to institute international safeguards that would ensure maintenance of international quality standards. These efforts are being implemented within regional and international QA frameworks.

On the local scene, Kenya developed and adopted higher education reforms in 2012 aimed at streamlining and improving the management of university affairs. The Universities Act of 2012, finally signed into law by the then President, Mwai Kibaki introduced far-reaching changes. Public universities were subjected to quality assurance overseen by the Commission for University Education (CUE) a role previously prevented by university acts. In an effort to introduce professionalism in the recruitment of university chancellors in Kenya, such officers are now, constitutionally, picked by the university community and alumni. This brings to an end an era in which university leaders were appointed by the president of Kenya. This change has been welcomed by a number of scholars who are of the view that change programs in organizations such as institutions of higher learning largely depend on an organization's human resources (Jackson & Schuler, 2000; Weigl, Hartmann, Jahns, & Darkow, 2008). These authors viewed organizational development and change programs as part of an organization's internal systems, including quality management systems. Internal factors utilize the theories of change and their relationship to an organization because change affects individuals, groups and organizations. Internal systems have been positioned as a strategic partner in many organizations for facilitating organizational change (Jackson & Schuler, 2000; Dessler, 2003; Joy-Matthews, Megginson, & Surtees, 2004). These internal systems for managing change in organizations embrace a multi-disciplinary approach (Nafukho, Hairston & Brooks 2004) and "levels of analysis" perspective in organizations.

According to Torracco & Hoover (2005), learning has for long been acknowledged as a major determinant of institutional success. From the behavioral sciences, learning has been studied at the individual level and connected with change in behavior. Organization theorists have studied the concept from an organizational perspective. In both perspectives the aspect of change is not an ingredient in the learning process. Scholars in internal factors borrow from this change perspective to advance a case for the adoption of a learning orientation in order to respond to environmental dynamics (Bates and Chen, 2005).

Human resource development scholars have cited learning in institutions as a source of competitive advantage in the context of change. Learning in an environment of change positions people as a source of distinctive competence and makes them become the only source of differentiation and sustainable competitive advantage (Kontoghiorghes, Awbrey & Feurig, 2005; Storberg-Walker & Gubbins, 2007; Collin, 2007). The resource based view to competitive advantage on the basis of human resources identifies the critical conditions that bring about this distinctiveness as employees who add value, are rare and cannot be copied (Jackson & Schuler, 2000; Golding,2007). Lopez, Peon & Ordas (2005), argue that organizational learning constitutes a source of competitive advantage, and identify particular human resource activities that promote learning such as recruitment and selection activities, training programs and design of compensation systems that reward knowledge acquisition and learning. Prevailing change demands new ways of working which can only be supported through not only extensive training in new skills but also completely new ways of thinking about work and relating with one another.

Historical Development of Public Universities in Kenya

University education system in Kenya started way back in the colonial period with a significant

influence at the initial stages from the colonial masters. Initially, there was only one public university chartered in 1970, but over time the system has expanded with a rise in the number. Currently, there are twenty-two accredited public universities, seven of them chartered with nine constituent colleges (Commission for University Education, 2012). The historical experience of the development of the University system in Kenya bears resemblance to the situations faced in most developing countries with regard to the basic orientation reflecting the influence of the colonial forces (Mwiria et al., 2007; Oanda, et al., 2008). According to Sohn (2005), universities were established under such settings as part of education systems on the premise of supplying manpower to maintain existing industrial facilities developed during the colonial period and, therefore, play the significant role of contributing to the expansion of the nations, science and technical human resources.

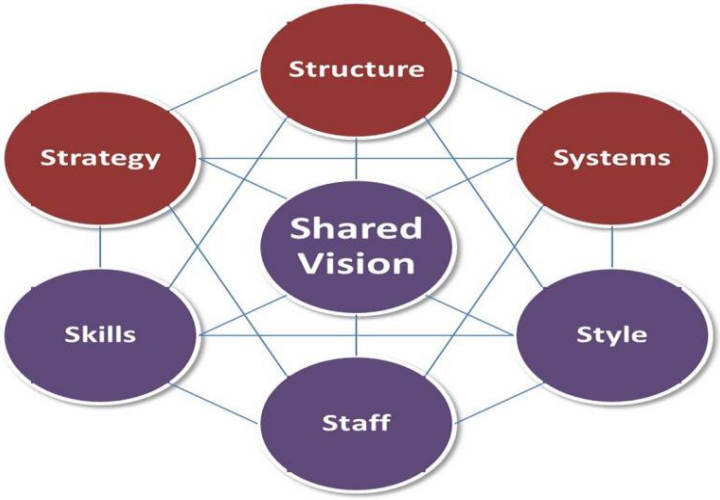
Internal Factors in Public Universities

Factors such as funding, administration, infrastructure and admission systems play a vital role in the networks that focus on uncompromised performance in the competitive world. Through the universities' orientation towards change, creativity and innovation, funds, administration, infrastructure, admissions are considered core aspects of the business of the university systems. It is this context that has placed universities and the entire institutions of Higher Learning as the centers of technological change whose source is science. Scholars agree that science is one of the factors that bring about technological change alongside other factors such as the input of labour and capital. Universities host the academia whose impact on the development of science is significant. Carrin et al., (2003), using experiences gained from biotechnology shows how the academia can contribute to technological change that will have profound effects on industrial development. To attain the great performance and remain relevant in the dynamic world, good procedures must be established giving the requirements for funds, administration, teaching, admissions, enrolments and the retention systems.

According to UNESCO (2009), higher education institutions, through their core functions (research, teaching and service to the community) carried out in the context of institutional autonomy and academic freedom, should increase their interdisciplinary focus and promote critical thinking and active citizenship. This would contribute to sustainable development, peace, wellbeing and the realization of human rights. Menger (2001) argues that to sustain innovation, institutions must develop and implement internal practices that encourage innovation and entrepreneurial behaviour. Institution's leadership must determine, develop and implement an infrastructure that actively encourages and supports innovation. Gillay et al., (2008) identified ability to coach, reward, communication, motivation, involvement and supporting others as factors that promote teamwork which leads to excellent performance. Fey and Furu (2008), advocate that development of incentive structures that promote knowledge creation and sharing at the institutional level should be determined, developed and implemented as this leads to improved performance. Thomspon (2001) agrees that the essence of the firm is its ability to create, transfer, assemble, integrate, protect and exploit knowledge assets. They all contend that knowledge is the most important source of competitive advantage and sustained superior performance.

The diagram below identifies the 7s model by McKinsey as a strong agent that could facilitate successful re-alignment of internal factors if the QMS is established and followed. By aligning the seven factors, improved and sustainable performance is possible. Summary highlights within each area are provided as follows: Strategy- which focuses on customers and service created by common vision that is communicated; Structure – which is planning from bottom up and top down in terms of functioning; Systems – which defines the flow of information, capital budgeting, quality control and performance standards; Staff – the staff

being provided with incentives and rewards, clear understanding, reduced tension between management and employees; Style – these includes collaborative team building, balanced stakeholder interests, building trust and stress competition; Skills – these includes, knowledge, encourage innovation, staff training, IT support. All the six lead to Shared Values which is an achieved consensus in valuing customers and social responsibility's role and increased performance.



Source: Strickland et al., (2010)

Figure1: McKinsey's 7s Model

The above diagram implies that all the internal factors must be coordinated well and the procedures should be set which clearly determine, develop and implement the roles of each and how they all work together towards attaining the common goal which is the shared value. Without determination of quality objectives that are in line with the quality policy of an institution, it would be impossible to realize the end product at the same time competing effectively and efficiently in the dynamic world.

Statement of the Problem

According to the United Nations Educational Scientific and Cultural Organization (UNESCO) World Conference on Higher Education (1998, 2009), low funding from the exchequer, increased enrolment, limited access compared to the population level, increased enrolment without commensurate improvement in the available facilities, gender inequality, and low research capacities are some of the problems facing public universities across Africa. These challenges have led to the fears that the quality of education is on a downward trend in most of these universities. UNESCO World Conference on Higher Education (2009) in a follow up of the 1998 Conference stated that, the current economic downturn may widen the gap in access to quality education between developed and developing countries as well as within countries, presenting additional challenges to countries where access is already restricted. The conference argued that expanding access to institutions of higher learning poses challenges to the quality of education. Quality assurance is a vital function in contemporary higher education and must involve all stakeholders. Quality requires both the establishment of quality assurance systems and patterns of evaluation as well as promoting a quality culture within institutions. It is in this context that the research sought to investigate how the quality of performance could be established and maintained in the Kenyan public universities.

Mwiria & Njuguna (2007) in their study found out that universities in Kenya bear resemblance to the situations faced in most developing countries with regard to the basic orientation reflecting the influence of the colonial forces. However, their study did not research on the relationship between the internal factors and QMS on the performance of the universities in Kenya. Oanda, Chege & Wesonga (2008), argued that the emergence of the private sector education in the African continent was a response to the increasing demand by

industries for technically competent labour force to manage their expanding industrial operations. Sohn (2005) concurred with Oanda et al., (2008) that universities worldwide were established as part of the education systems on the premise of supplying manpower to maintain existing industrial facilities developed during the colonial period.

In the recent past, several public universities have been accredited across Kenya that have the potential to release huge numbers of graduates into the employment market. Employers are, however, concerned with the quality of training offered to these graduates at the various public universities as these graduates are in most cases unable to undertake basic industry assignments. This challenge points fingers to poor internal infrastructure and quality management systems implemented by public universities across the country. The influence of Quality Management Systems (QMS) on the relationship between internal factors and performance of institutions of higher learning remains largely unexplored. Various studies focusing on QMS within institutions indicate that there are clear gaps with regard to the linkages on the relationships between the internal infrastructures and quality management systems. A study by Chacha (2004) on Higher education in Kenya argued that there was tremendous expansion in the number of students in public universities which has congested the education facilities that initially were designed to accommodate only a few students. He argued that the rising student numbers had compromised working conditions in public universities in the country. This necessitated a further research to show how the quality of performance in these public universities could be maintained. Internal infrastructure and quality management systems of public universities in Kenya, therefore, are expected to influence quality performance of these universities within the contexts in which they support national initiatives for development. This influence should arise from the development and establishment of appropriate internal factors and the implementation of quality management systems which are seemingly lacking currently. The design of internal infrastructure and the pursuit of the implementation of quality management systems are constrained by the existing national cultural contexts in which the universities operate. Based on the foregoing, it is evident that the influence of quality management systems on the relationships between internal factors and performance need investigation and explained through an empirical research, the main objective of this study.

Objectives of the Study

The main objective of the study was to determine the influence of Quality Management Systems on the relationship between internal factors and the performance of Kenyan public universities. The Specific objective of the study was to find out the extent to which Quality Management Systems influences the relationship between admission systems and the performance of Kenyan public universities.

Study Methodology

This study adopted a survey research design. This entailed collecting of primary data from the sampled universities with the aid of a questionnaire. Secondary data was obtained using questionnaires and secondary data was collected through books, journals, and internet sources, among others. The population of the study comprised of all the 7 public universities in Kenya operating in their first cycle of QMS certification of three years. A base sample size of 221 respondents was targeted from the 7 public universities. A rate of 68.3% responses (or 151 responses) was achieved. A likert scale with the ranges 1-5 was used during data collection. This was appropriate because it allowed participants to provide feedback that was slightly more expansive than a simple close-ended question, and much easier to quantify than a completely open-ended response.

Significance of the Study

This study sought to investigate the influence of quality management systems on the relationship between internal factors and the performance of the Kenyan public universities. The results of this study will be beneficial across several spectrums. First, scholars in the subject of management and

researchers will find the results of this study useful as they will contribute to the advancement of knowledge in the subject area. In particular, scholars will benefit from the knowledge on the linkages between internal factors and quality management systems on performance. The findings will also support and enrich the theories and models of strategic management of public and private universities. Researchers in the thematic area of advanced education will also benefit from the research gaps identified by this study

The findings of this study will further help to inform policy makers of both the national government and institutions of higher learning on the relationships between QMS and internal factors on performance of public universities. It will also enable government and learning institutions to know how to determine, establish, develop and maintain informed and effective procedures and systems in the universities geared towards improved performance. The findings have brought out important and strategic issues that require high levels of attention in enhancing the competitiveness of institutions of higher learning in Kenya. The Kenyan public will, on the other hand, benefit from the empirical information on the critical factors to be closely monitored and implemented to ensure enhanced performance of public universities in Kenya. The study will create greater awareness among public universities on the importance of having properly established, implemented and monitored quality management systems as vehicles to institutional efficiency and effectiveness of service delivery that will influence high performance.

Empirical Literature Review

QMS and Organizational Performance

A study conducted by Sayeda, Rajendran and Lokachari (2010) explored the adoption of quality management practices in engineering educational institutions (EEIs) in India from management's perspective. The study adopted a descriptive research design and used questionnaires as instruments for data collection based on a literature review of research in quality management and based on the responses of the pilot survey among senior faculty/management staff. The psychometric properties of this instrument examined using tests of reliability and validity. Correlation and multiple regression analyses were used to analyze the impact of total quality management (TQM) dimensions on institutional performance effectiveness. The findings of this study highlighted 27 critical factors/dimensions of quality management which influenced the relationships between QMS dimensions and institutional performance. These critical factors/dimensions of quality management included, top management's commitment to institutional processes, strategic planning and execution, support infrastructure (external and internal services), core infrastructure (facilities and layout), Human resources excellence (faculty and staff focus), student academic development (programme development), Research and development, continuous improvement, exposure (networking) and other factors. Among the conclusions of this study was the fact that institutional performance should be based on five key elements namely; institutional reputation and image, infrastructure quality, faculty excellence, research and industry exposure, and stakeholder (internal and external) satisfaction.

The study by Sayeda et al., (2010) had significant relevance to this study in several ways. The study used a descriptive research design and used questionnaire as instruments of data collection, similar the design adopted in this study. Further striking similarity is noted in the specific independent variables studied. The scope of this study was within the EEIs in India, which is a totally different environment from the Kenyan environment. Besides, the study did not examine aspects such as funding mobilization, admission. The study carried out examined the extent to which QMs influences, factors similar to those studied in the Indian case within a Kenyan context.

Burli, Bagodi, and Kottursheettar (2012) investigated the dimensions of TQM, analyzed interrelationships and their combined influence on the results

achieved in ISO certified engineering institutions in India. The study adopted a descriptive research design and used questionnaire surveys of a sample of 216 faculty members serving in various ISO certified institutes of southern states of India. Data was obtained using a questionnaire that was in line with the self-assessment philosophy of the European Foundation for Quality Management Excellence Model (EFQM) discussed under section 2.3.1 of this study. The data set was subjected to exploratory factor analysis using SPSS programme for windows. The factor analysis confirmed the existence of ten important dimensions of TQM that guide ISO certified institutions in their quality journey. Leadership of top management was recognized as the most important of the ten main driving forces for establishing an effective quality management system (QMS) in engineering institutes in India. The other nine important dimensions include, People Management, Policy and Strategy, Infrastructure Management, Education Process, Administration Process, People results, customer results and society results. The results obtained from this study are expected to encourage academic leaders to implement TQM concepts in their institutions to achieve higher levels of stakeholder satisfaction.

Clearly, the study by Burli et al., (2012), similar to that one by Sayeda et al ((2010), has significant resemblance in several respects with the study carried out. Besides similarities in the descriptive nature of the research design and the use of questionnaire for data collection, the study used SPSS to analyze and interprets the data results. The internal factors studied in the reviewed research are highly similar to those in the study carried out, with the exception of funding. The study examined all the factors used in the study reviewed, including funding, in order to understand how QMs influences internal factors (all those mentioned above) in the Indian case within a Kenyan context.

A study conducted in South Africa by Malukeke (2008) sought to find out the employees' perceptions of the effect of the Quality Management System intervention that was implemented at one of South Africa's government departments. The findings of this study indicated that a Quality Management System can be used to improve the level of service delivery in the public sector. The Quality Management System should be planned developed and implemented over a period of time in five phases i) - Determination of the scope of Quality Management System implementation ii) – Training iii) – Development of Procedures iv) – Pilot implementation of procedures v) – Evaluation of Quality Management System and rollout. It usually takes three or more years to establish an organization's-wide Quality Management System, although technical improvement to the workflow can be as quickly as six to eight months. The findings of this third study by Malukeke (2008) did not provide room for continuous improvement. The findings ended at the evaluation and did not go further. The study further did not show the inter-linkages between the QMS and the internal factors and how this can improve performance. The study carried out, is one of the very few studies in the discipline of strategic management, aimed at aligning quality management systems and internal factors for improved performance in Kenyan public universities.

Pelagidis (2008) investigated the effectiveness of spin-offs' human resource organization quality and capacity within existing four Greek Science and Technology Parks (GSTPs). A critical number of questionnaires was distributed to the spin-offs and then analyzed quantitatively the data collected to examine whether firms born within parks developed a functional human resource organization and performance. Among the results of this study were, that all organizations are open, some extent, to rapid technological and social change. The study concluded, therefore, that a strong culture based on values that support the functions of managing change, organizational achievement, customer orientation and coordinated teamwork would provide greater stability of organizational functioning.

The study by Pelagidis (2008) found a relatively weak human resource situation among the spinoffs.

The recommendations were not possible to validate given that the study only used descriptive statistics. The study did not link the quality management and how it could improve on the performance and quality of education. In spite of the attempts made on the studies done, there seems to be a lack of empirical effort to show linkages between the learning orientation and the aspect of quality management. The theory so far developed has attempted to demonstrate the possible links between learning and development at both individual and organizational levels. There seems to be lack of empirical effort to extend this identified theoretical link into the level of development at the organizational level.

Internal Factors and Organizational Performance

Internal factors are the strengths of an institution that enables it to operate in an alien country. In the strength, weakness, opportunities and threats (SWOT) analysis, these factors represent the strengths or weaknesses depending upon their force on customer's wants and needs. Internal factors in a business environment refer to the strengths and weaknesses born within an organization. These factors include: customer service, production, development, marketing and sales resource mobilization, management systems, infrastructure and how Admission systems are structured. According to Smith & Cronje (2002) there are three levels of analysis recognized by the Organizational Behaviour model, namely individual, group and organizational for the application of various independent variables discussed in the study. The Organizational behaviour is concerned with the performance outcomes of individuals whose performance contributes to group performance which eventually contributes to organizational performance. The individual level according to Robbins considers ability, values, perception, attitudes, learning and individual decision-making while group level considers communication, group structure, leadership, power and politics in decision making. When all the three levels are satisfied, it leads to organizational performance which results in the effectiveness of an organization that is reflected through job satisfaction, psychological growth, economic benefits, security, efficiency, innovation, productivity, contribution to culture and adaptation to change.

Admission Systems and Organizational Performance

One of the primary roles of Universities is to enroll, admit, retain and offer appropriate programmes to meet and surpass the customer expectations UNESCO, (2009). This call for the institution to plan and develop the processes needed for product realization of high quality and improved performance. Planning of product realization shall be consistent with the requirements of the other processes of the quality management system, quality objectives and requirements for the product/services. To realize these, the institution needs to establish, document and implement processes, at the same time provide resources towards the realization of the set objectives (ISO 9001:2008).

Scholars cite several aspects of learning that are relevant to the development and growth of human resource, which starts with enrollment and admission in institutions of learning, such as Universities. Universities have a different role, which is to help create an environment sympathetic to and supportive of innovation, and particularly where there is internationally-competitive research and excellent graduates. They produce centres of creativity that attract research-intensive companies and investment into a region, and help catalyze innovation in indigenous businesses. London & Sessa (2007); are on the opinion that institutions of higher learning should adapt adaptive learning. They further argue that adaptive learning happens when a group fine tunes existing behavior patterns through trial and error. This is what is supported by Deming, Crosby and Juran in their theories that the PDCA cycle must be continuous in order to continually improved the performance in the dynamic world. London & Sessa (2007) content that generative learning arises when groups seek and discover information proactively acquire new

knowledge and skills and then apply the information, knowledge and skills. The group gathers information, seeks alternatives, reflects on the work processes, tests assumptions, obtains different opinions and adapts new routines.

According to UNESCO (2009), Participants welcomed the recommendations of the Dakar Regional Preparatory Conference of November 2008 and noted the progress recorded since the 1998, World Conference on Higher Education – especially increased enrolments in higher education. Participants underscored the critical need to confront emerging challenges relating to gender and racial inequality, academic freedom, brain drain and lack of graduates' preparedness for the labour market. They underlined the urgency for the adoption of new dynamics in African higher education that work towards a comprehensive transformation to sharply enhance its relevance and responsiveness to the political, social and economic realities of African countries. This new momentum can provide a trajectory in the fight against under-development and poverty in Africa. This will demand greater attention to higher education and research in Africa than has been given for the last eleven years. Higher education in Africa should foster good governance based on robust accountability and sound financial principles. The evolution of a quality African higher education and research area will be stimulated through institutional, national, regional and international collaboration. This could only be achieved on the establishment and implementation of good procedures in place.

Study Results

Student Population Growth in Public Universities over the Past Five Years

The study sought to find out if the population of the students had increased in the past five years. The findings were presented in Figure 2. From the figure, 54.46% of the respondents strongly agreed that the student population had increased significantly in the past five years. Additionally, 30.61% agreed, 10.88% were neutral, and only 1.36% and 0.68% disagreed and strongly disagreed that the student population had increased significantly. Therefore, the findings show that majority of the universities had an increased population in the past five years. Hence, it could be concluded that they were performing well.

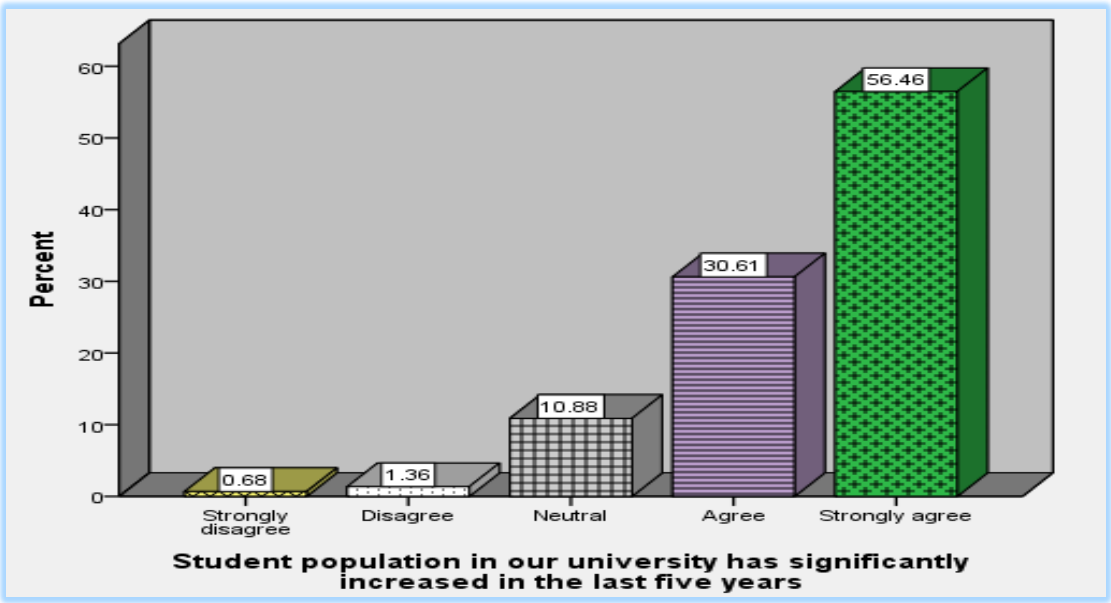


Figure 2: Student Population Growth in Five Years

Admitted Students Graduate on Time

The study went out to find if all the admitted students graduate on time. The findings were presented in Table 1. The Table shows that 3.4% of the respondents strongly disagreed that all the admitted student's graduate at the right time.

Further, 6.1% disagreed, and 19.7% remained neutral. On the other hand, a majority (50.3%) agreed, and 20.4% strongly agreed. Therefore, the findings show that all the students in majority of the public universities graduated on time as majority of the respondents either agreed or strongly agreed to the statement, as is indicated in Table 1.

Table 1: All the Admitted Students Graduate at the Right Time

	Frequency	Percent	Cumulative Percent
Strongly Disagree	5	3.4	3.4
Disagree	9	6.1	9.5
Neutral	29	19.7	29.3
Agree	74	50.3	79.6
Strongly Agree	30	20.4	100.0
Total	**147**	**100.0**	

Quality of Programmes in the University

The study sought to find out the number of academic programmes that have been accredited by the Commission of University Education in the universities. The findings were presented in Figure 3. Majority (37.06%) said their universities had more than 10 accredited programmes, 25.87% said they did not know, 18.18% said their universities had less than 5 accredited programmes, 16.08% said their universities had less than 10 accredited programmes, and only 2.8% said that their universities had no accredited programmes. The findings showed that majority of the universities had more than 10 accredited programmes. Therefore, this might have contributed positively to the increase in population and subsequent good performance overall.

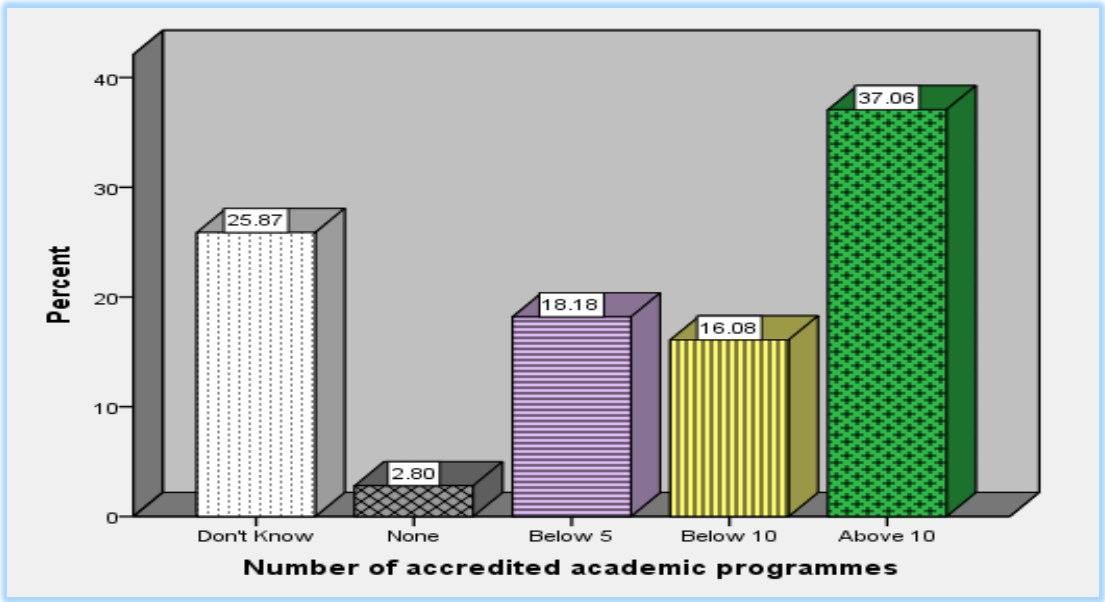


Figure 3: Approximate Number of Accredited Programmes

Knowledge Creation and Innovation

The research sought to know the number of innovations that had been patented from the universities in the past 3 years. The findings are tabulated in Table 2. The Table shows that, 40.4% of the respondents said they did not know, 4.8% said none, 23.3% said at least three, 11.6% said at least five, and 19.9% said more than five. The findings indicated that majority of the respondents were not aware of their universities innovations patents or they did not understand the question.

Table 2: Number of Innovations Patented in the 3 years

	Frequency	Percent	Cumulative Percent
Don't Know	59	40.4	40.4
None	7	4.8	45.2
At least 3	34	23.3	68.5
At least 5	17	11.6	80.1
More than 5	29	19.9	100.0
Total	**146**	**100.0**	

Reliability test on the moderating variable

Cronbach's Alpha Coefficient was used to test for internal consistency of the data collected on the moderating variable (QMS). The closer Cronbach's alpha is to 1, the higher the internal consistency (Sekaran, 2006). Sekaran further argues that reliability of a measure indicates the extent to which it is without bias and hence ensures consistent measurement across time and across the various items in the instrument. If the Cronbach's alpha is above 0.7 the instrument is reliable. The findings were tabulated in Table 3. The Table shows that Cronbach's Alpha is 0.886 and since it is above 0.7, the data therefore, can be termed as reliable.

Table3: Reliability Test on the Moderating Variable Reliability Statistics

Cronbach's Alpha	N of Items
.886	7

Factor Analysis on the Moderating Variable

Factor analysis was done on the moderating variable. From the table, there were no factor loadings with a value less 0.4. Therefore, there was no factor eliminated from the analysis.

Descriptive Statistics on QM, the Moderating Variable

Responses were sought from seven different questions on the influence of the quality management systems on admission systems and the performance of public universities in Kenya. Table 4 presents the detailed descriptive statistics on the moderating variable of this study. A question posed on whether the management review meetings are held by the universities at least twice a year received the following responses: a majority of 56.3% (32.5% and 23.8%) of the respondents agreed that this was the case to a large and very large extents, 33.1% were moderate, 9.9% were to a little extent and 0.7% said not at all. On the question of whether the internal QMS audits are done twice a year by the universities, 72.9% (37.1% plus 35.8%) said this was the case to a large and very large extents, 21.9% were moderate, 4.6% and 0.7% were to a little extent and no extent at all respectively. On the whether the there is a budget allocation by the universities for QMS, 66.9% (36.4% plus 30.5%) said this was the case to a large and very large extents, 25.2% were moderate while 7.3% and 0.7% were to a little extent and to no extent at all respectively. On whether there are follow ups done on the audits are implemented by the universities, 69.5% (43.7% and 25.8%) said this was the case to a large and very large extents, 25.2% were moderate while 4% and 1.3% were to a little and no extent at all respectively. A question on whether effective infrastructure was established by the universities 60.2 (41.7% and 18.5%) responded that this was the case to a large and very large extents, 33.8% were moderate while 3.3% and 2.6% were to a little and no extent at all respectively. A question asked on whether various university departments had well established procedures elicited the following responses; 61.5% (37.7 plus 23.8%) responded that this was the case to a large and very large extents, 31.8% were moderate while 4.6% and 2% were to a little and no extent at all respectively. A final question on the moderating variable was asked regarding whether all staff in the universities were

aware of QMS, 63.6% (35.8% plus 27.8%) responded that this was the case to a large and very large extents, 30.5% were moderate while 4% and 2% were to a little and no extent at all respectively.

The results obtained from this study concur with ISO 9001 which affirms that Quality management is a powerful system, when well developed and maintained which could enable every organization to increase quality of products and/or services offered through continual improvement of processes. The standard affirms that QMS is that part of the organization's management system that focuses on the achievements of results, in relation to the quality objectives, to satisfy the needs, expectations and requirements of interested parties, as appropriate. Paris (2003) observed that process based QMS enables organizations to identify, measure, control and improve the various core business processes that will ultimately lead to improved business performance which tallies well with the results of this study. A study by Amyx (2005) concluded that when an institution has a working QMS, it is able to demonstrate its ability to meet customer and regulatory requirements and to enhance customer satisfaction. This position taken by Amyx resonates well with the findings obtained from this study on QMS as a moderating variable. Further, the results obtained from this study are congruent to the arguments advanced by Karipidis, Athanassiadis, Aggelopoulos and Giompliakis (2008) who contended that from the very beginning of the process, it is essential that organizations establish a balanced view between a short-term focus and a long-term focus of QMS. They emphasized that QMS documentation should be considered as an enabler along the way and organizations must guard against the creation of unnecessary documentation. A successful QMS must be fully functional and appropriately documented (Mert and Cory, 2011).

In each of the questions relating to the QMS as a moderating variable, over 50% responded in the affirmative with a clear indication that they either agreed or strongly agreed with the statement that QMS was an integral part of the performance of public universities in Kenya. Diverse streams of scholarship support the position of a strong link between QMS and institutional performance. Bosse, Robert and Harrison (2009) identified performance as a dependent variable in organizational studies. A successful QMS must be fully functional and appropriately documented (ISO, 2008). It could, therefore, be strongly argued that QMS is an influential moderating factor between internal factors and the performance at all levels achieved by public universities in Kenya.

Table 4: Descriptive Statistics of the Moderating Variable

Statements	Not at all		Little extent		Moderate extent		To a large extent		A very large extent		Total %
	F	%	F	%	F	%	F	%	F	%	
Review Meetings	1	.7	15	9.9	50	33.1	36	23.8	49	32.5	100
Internal Audits	1	.7	7	4.6	33	21.9	56	37.1	54	35.8	100
QMS Budget	1	.7	11	7.3	38	25.2	55	36.4	46	30.5	100
Audit Follow Ups	2	1.3	6	4	38	25.2	66	43.7	39	25.8	100
Infrastructure	4	2.6	5	3.3	51	33.8	63	41.7	28	18.5	100
Procedures	3	2	7	4.6	48	31.8	57	37.7	36	23.8	100
QMS Awareness	3	2	6	4	46	30.5	54	35.8	42	27.8	100

Admission Systems

The study sought to establish if Quality Management System had an influence in the relationship between performance of Kenyan public universities and admission system. The findings were discussed under this section.

Reliability test for Admission and Teaching Systems

Reliability analysis was tested using Cronbach's Alpha so as to find out if indicators of admission system had internal consistency between themselves. The findings were presented in Table 5. The Table shows that Cronbach's Alpha was .844 which was above .7 thresholds. The data was considered sufficiently reliable for analysis.

Table 5: Reliability Test on Admission and Teaching Systems Reliability Statistics

Cronbach's Alpha	N of Items
.844	6

Factor Analysis for Admission System

Indicators of admission system were subjected to factor analysis so as to establish the ones which had factor loading less than .4. From the Table there were no factor loadings less than .4. Therefore, no indicator was dropped from the data set.

Descriptive Statistics for Admission and Teaching Systems

Under predictor variable on admission systems, respondents were expected to respond to the six different questions on the subject, in relation to the performance of public universities in Kenya. Table 6. presents the detailed descriptive statics on this variable. On the question of whether universities had well established and communicated clear enrollment and admission guidelines 72.2% (sum of 51% and 21.2%) of the respondents agreed that this was the case to a large and very large extent, 25.2% were moderate and 2.6% were to a little extent while none responded to the not at all option. On the question of whether the universities' training programmes were approved by the delegated authority, 88% (48.3% plus 39.7%) said this was the case to a large and very large extents, 10.6% were moderate, 0.7% were to a little extent and to a no extent at all respectively. On the question whether the universities continue to diversify their training programmes to attract many students, 74.8% (45.7% plus 29.1%) of the respondents said this was the case to a large and very large extents, 23.2% were moderate while 2% were to a little extent. Asked on whether all the admission requirements for the programmes offered were clearly outlined and communicated, 72.2%(39.7% and 32.5%) said this was the case to a large and very large extents, 25.2% were moderate while 2.6% were to a little extent. Asked on whether universities have developed good record management systems, 61.5% (43% and 18.5%) said this was the case to a large and very large extents, 35.1% were moderate while 3.3% were to a little extent. On the final question relating to whether QMS was adopted in order to improve admission systems of the universities, 66.3% (41.1% and 25.2%) responded that this was the case to a large and very large extents, 26.5% were moderate while 6.6% were to a little extent while the insignificant figure of 0.7% were to no extent at all.

These findings demonstrate that development of good admission systems have strong linkages with QMS and that this leads to good performance of public universities in Kenya. As discussed by Chacha (2012), public universities enrollment in recent years have caused serious strains in university resources. The matter will be even more complicated if the admission systems are not of good quality. This therefore means that all public institutions should endeavour to adopt QMS practices in developing good admission systems in order to be guaranteed of good performance.

Table 6: Descriptive Statistics for Admission and Teaching Systems

Statements	Not at all		Little extent		Moderate extent		To a large extent		A very large extent		Total %
	F	%	F	%	F	%	F	%	F	%	
Admin & Enroll	0	0	4	2.6	38	25.2	77	51	32	21.2	100
Prog. Approval	1	.7	1	.7	16	10.6	73	48.3	60	39.7	100
Prog. Diversity	0	0	3	2	35	23.2	69	45.7	44	29.1	100
Communication	0	0	4	2.6	38	25.2	60	39.7	49	32.5	100
Record Mgt	0	0	5	3.3	53	35.1	65	43	28	18.5	100
QMS & Admission	1	.7	10	6.6	40	26.5	62	41.1	38	25.2	100

Scatter Plot of Performance and Admission System

Scatter diagram was used to show linear relationship between performance of Kenyan public universities and admission system. Figure 4 shows the findings. From the figure, it can be observed that there is positive linear relationship between Performance of the Kenyan public universities and admission system.

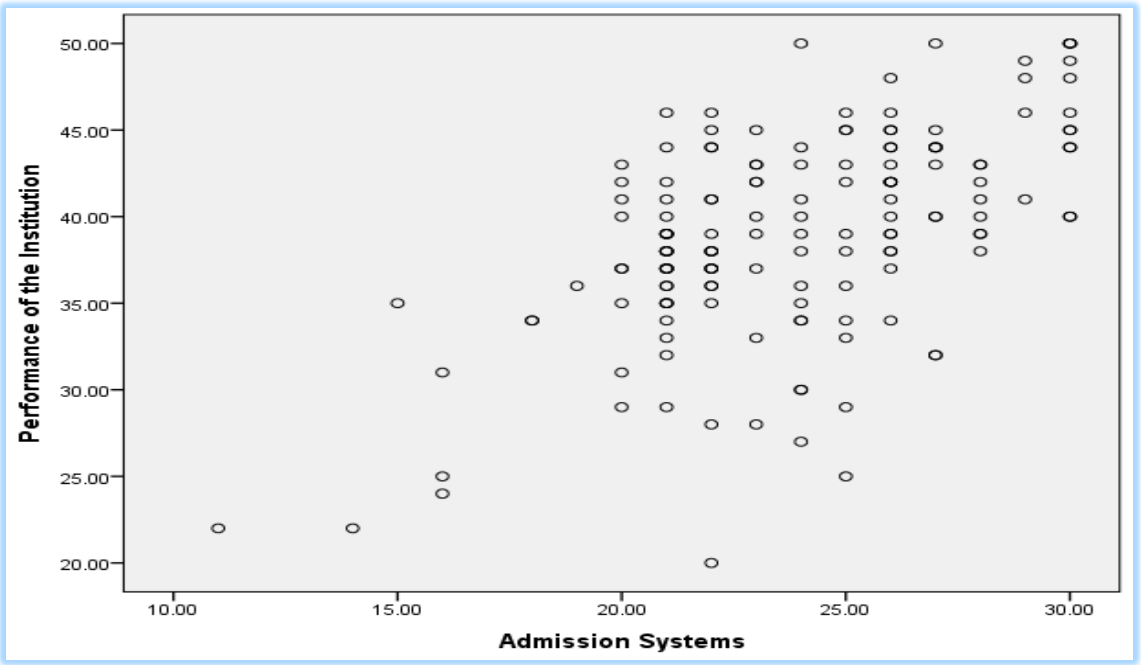


Figure 4: Scatter Diagram of Performance and Admission and Teaching System

Regression and Correlation Analysis of Performance and Admission Systems

Regression analysis was done between performance and systems and findings were presented in sections below.

Line of Best Fit between Performance and Admission Systems

The line of best fit between performance and Admission systems showed that there was a positive linear relationship, as is shown in Figure 5. Therefore, increasing Admission systems will positively affect performance of universities.

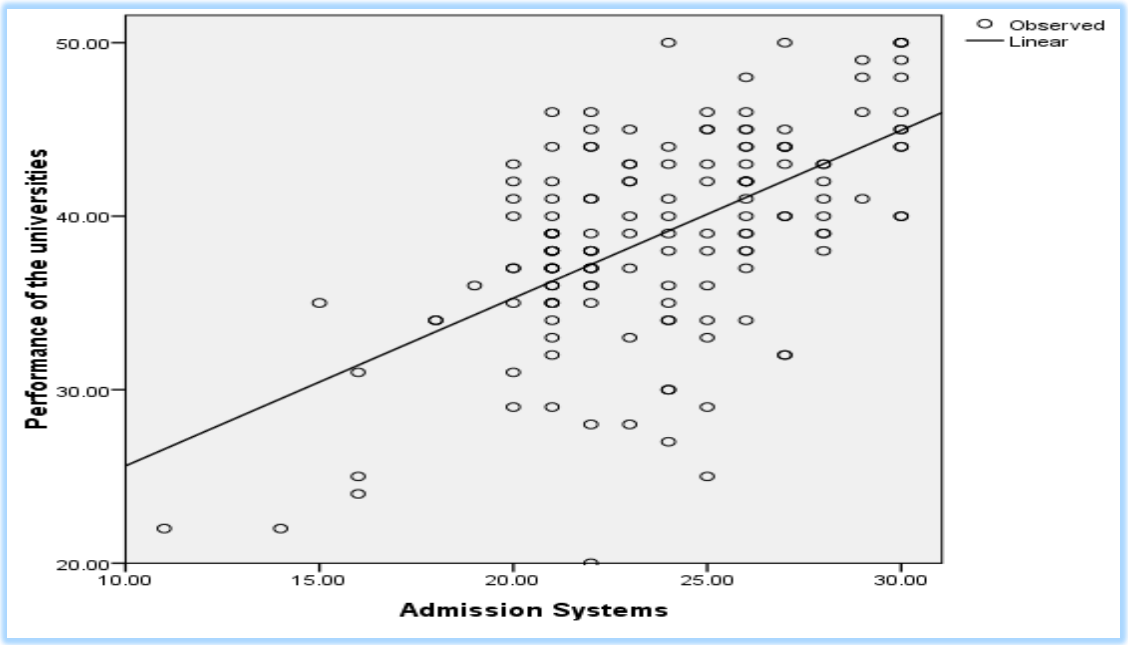


Figure 5: Line of Best Fit for Performance against Admission Systems

The Moderating Effect of QMS on the Relationship between Admission Systems and Performance

The researcher carried out a linear regression analysis to find out the influence Quality Management System had on the relationship between performance of the universities and Admission systems. The findings were discussed under this section.

Model Summary

The model summary Table 7 indicated that R2 for the first model was .334, meaning that Admission systems, on its own, contributed 33.4% to the change in the performance of the Kenyan Public Universities. However, the nature of this relationship between Admission systems and the performance of Kenyan universities significantly changes with the introduction of QMS. Table 7 indicates that the coefficient of determination, R2 before the introduction of QMS was .334. However, upon the introduction of QMS, the coefficient of determination, R2 significantly changed from .334 (33.4%) to .985 (98.5%). This means that with the introduction of QMS, Admission systems can explain up to 98.5% of the performance of Kenyan public universities,

Table 7: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.578	.334	.329	4.91771
2	.992	.985	.985	4.87464

Figure 6 clearly demonstrates the significant effect of the moderating variable, QMS on the relationship between Admission systems and performance of the Kenyan Public Universities. This significant moderation effect is demonstrated by the fact that the two lines, performance versus QMS and Performance and Admission systems intersect in the graph. It is also noted that the relationship between the two lines is significantly positive, which further confirms that QMS makes a direct positive contribution on the relationship between Admission systems and the performance of Kenyan public universities.

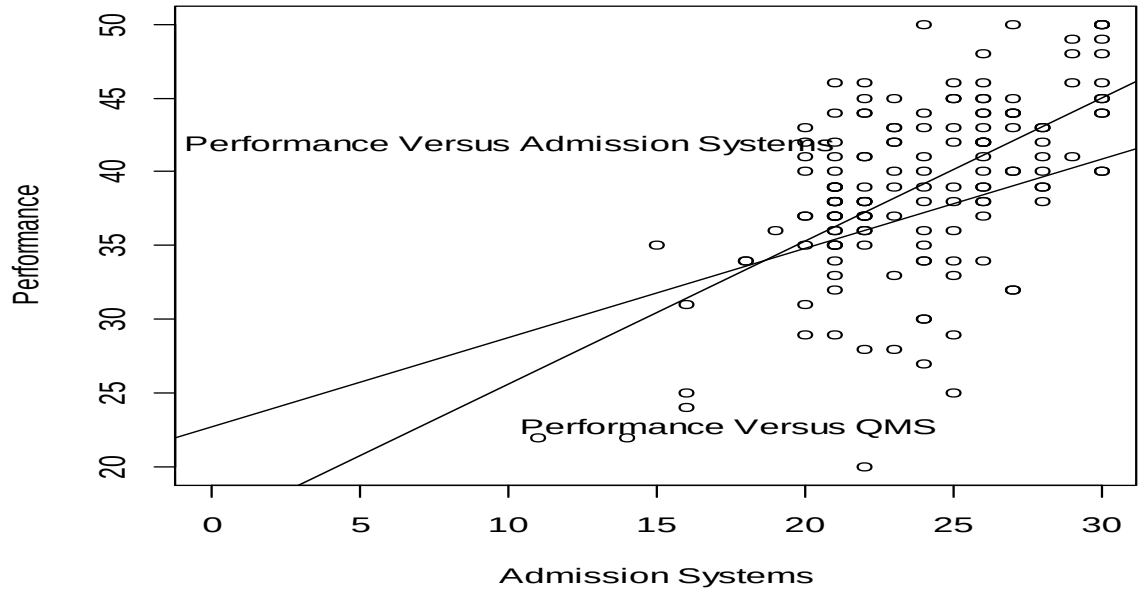


Figure 6: Effect of QMS between Admission Systems and Performance

ANOVA for Admission Systems

Table 8 shows that the predictor variable, Admission systems has a P-value equal to .000. This demonstrates that the variable in this model is statistically significant in influencing the change in performance of Kenyan public universities considering that its P- value is less than .05 at the 95% level of confidence.

Table 8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1806.358	1	1806.38	74.693	.000
	Residual	3603.404	149	24.184		
	Total	**5409.762**	**150**			
2	Regression	231096.205	3	77032.068	3241.800	.000
	Residual	3516.795	148	23.762		
	Total	**234613.000**	**151**			

Model Coefficients for Admission Systems

Model 1 of Table 9 shows the relationships between the coefficients of Admission systems and performance of Kenyan public universities. Model 2 of the table shows the moderating effect of QMS on the relationships between the coefficients of Admission systems and performance of the Kenyan Public Universities. Based on model 1, the study shows that for every unit increase in performance of the Kenyan public universities (Y), Admission systems (X4) contributes 0.967 units i.e. Y = 15.936+.967X4. However, with the introduction of QMS (model 2), the study shows that for every unit increase in performance of the Kenyan public universities (Y), Admission systems (X4), contributes 1.387 units plus 0.794 units of X5 less .024 units of result of X4X5; i.e. Y = 1.387X4+ 0.794X5 - 0.024X4X5. This demonstrates that the introduction of QMS leads to a significant change in the performance of Kenyan public universities. The P-values of Admission systems, both before and after the introduction of QMS is less that .005, meaning that Admission systems are statistically significant in explaining the change in performance of Kenyan public universities.

$$Y = 1.387x_4 + 0.794x_5 - 0.024x_4x_5$$

Table 9: Performance and Admission Systems Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.936	2.694		5.915	.000
	Admission Systems	.967	.112	.578	8.642	.000
2	Admission and Teaching Systems	1.387	.126	.847	10.964	.000
	Quality Management System	.794	.138	.551	5.737	.000
	QMS and Admission Systems	-.024	.004	-.409	-5.509	.000

Summary of the Study

The study established that when controlling for QMS as a moderating variable, the coefficient of determination, R2 of admission and teaching systems on the performance of Kenyan public universities was 33.4%. This meant that admission and teaching systems as a predictor variable contributed up to 33.4% of the change in the performance of Kenyan public universities. When QMS was uncontrolled, the coefficient of determination, R2 of admission and teaching systems on the performance of Kenyan public universities improved significantly to 98.5%, meaning that with the influence of QMS, the contribution to the performance of Kenyan public universities improved to 98.5%. It was also established that there was a positive correlation of 57.8% between admission and teaching systems and the performance of Kenyan public universities when QMS was controlled. This correlation improved to 99.2% with the introduction of QMS. In all these cases, the p-value between the independent variable and the dependent variable was less that .05 at 95% level of confidence. This meant that admission and teaching systems were statistically significant in the change in the performance of Kenyan public universities.

The study further established that: there was a positive linear relationship between admission and teaching systems and the performance of Kenyan public universities; over 72.2% of the respondents said that their universities had well established and communicated clear enrollment and admission guidelines; over 88.8% of the respondents said that their universities had their training programmes approved by the responsible authority; over 74.8% of the respondents said that their universities continued to diversify their training programmes to attract many students; over 72.2% of the respondents agreed that their universities clearly outlined and communicated their admission requirements for the programmes offered; 61.5% of the respondents said their universities had developed good record management systems; and 66.3% said that their universities had adopted QMS in order to improve their admission and teaching systems as a way of enhancing performance. These findings, thus; led to rejection of the fourth null hypothesis that QMS had no influence on admission and teaching systems and performance of Kenyan public universities.

Conclusions of the Study

QMS has a significant moderating influence on Admission systems and that this has a direct positive impact on the performance of the Kenyan public universities. This means that all public universities require embracing the culture of sound QMS processes in all their admission and enrollment processes. In particular, the Kenyan public universities require to ensure that; there are well established, documented and communicated clear enrollment and admission guidelines and ensure all training programmes offered are dully approved by a legally recognized and accredited government authority. To compete favourably in

the dynamic world, universities should ensure that there is continual diversification of their training programmes in order to attract many students at the same time meet the growing industry demands. The universities need to establish, document and communicate clear outlines for admission for all the programmes offered; and also develop good record management systems as part of QMS and the improvement of performance.

Research Recommendations

QMS has a significant moderating influence on infrastructure systems. All public universities should embrace the culture of sound QMS in all their admission and enrollment processes. In particular, the Kenyan public universities should ensure that; there are clear and well established communication enrollment and admission guidelines; and that all training programmes are duly approved by a legally recognized and accredited government authority. To compete favorably, universities should continue diversifying their training programmes to attract many students and also meet the growing demand in industries; at the same time ensure that there are clearly outlined and communicated admission requirements for all the programmes offered.

References

1. Amyx, C. (2005). Small Business Challenges – The Perception Problem: Size Doesn't Matter. Washington Business Journal.
2. Bates, R. & Chen, H.C. (2005). Value Priorities of Human Resource development Professionals. Human resource development Quarterly, 16(3).
3. Birnbaum, R., & Deshotels, J. (1999). Has the academy adopted TQM? Planning for Higher Education, 2, 29-37.
4. Birnbaum, R. (2000). Management Fads in Higher Education. Where they come from, what they do, why they fail. San Francisco: Jossey-Bass Inc.
5. Bok, D., (2013). Higher Education in America. Princeton University Press.
6. Bosse, D.A.,Robert, A., & Harrison, J. (2009). Stakeholders, Reciprocity and firm Performance. Strategic Management Journal, 30:447-456.
7. Burli, S., Bagodi, V and Kotturshettar, B. (2012). TQM dimensions and their interrelationships in ISO certified engineering institutes of India.
8. Carrin, J.B., Harayama, Y., Mack, A.J.K., & Zarin-Nejada, M. (2003). Science Technology Industry Network-The competitiveness of Swiss biotechnology: A case study of innovation. RIETI discussion Paper series 04-E-007.
9. Chacha, N.C. (2012). Reforming Higher Education in Kenya: Nairobi.
10. Collin, A. (2007). Developing the Human Resource. In Beardwell & Claydon, Ibid.
11. Commission for University Education (2012). Accredited and Quality Assurance Report July 2006 to June 2012.
12. Dessler, G. (2003). Human Resource Management. New Delhi: Prentice Hall
13. Dill, D. (1995). Through Deming's eyes: a cross-national analysis of quality assurance policies in higher education. Quality in Higher Education, 95- 110.
14. Fey, C.F., & Furu, P. (2008). To Management Compensation and Knowledge Sharing in Multinational Corporations. Strategic Management Journal, 29:1301 1323.
15. Gillay, J. W., Eggland, S.A., &Maycunich-Gilley, A. (2002). Principles of Human Resource Development, 2nd.Ed. Cambridge, M.A: Perseaus.
16. Golding, N. (2007). Strategic Human Resource Management in Beardwell, J. & Glaydon, T. (2007). Human Resource Management, A contemporary approach. England: Pearson Educational Publication
17. Harvey, L. (1995). Beyond TQM. Quality in Higher Education, 123-146.
18. Huisman, J., Meek, L. and Wood, F. (2007). Institutional diversity in higher education: A cross-national and longitudinal analysis. Higher Education Quarterly, 61-64, 563 - 577.

19. International Labour Organization. (2012). Policy Guidelines for Results-Based Evaluation: Principles, Rationale, Planning and Managing for Evaluations. International Labour Office. Geneva.
20. International Organization for Standardization (2007). The ISO Survey 2007. International Organization for Standardization, Geneva.
21. International Organization for Standardization ISO 9001 (2008). Quality Management System-Requirements.
22. Inter-University Council for East Africa. (2013). Benchmarks for Bachelor of Business Related Studies. Nairobi, Kenya
23. Jackson, S and & Schuler. R. S. (2000). Managing Human Resource: a Partnership PerspectiveOhio: Thompson Learning.
24. Joy-Matthews, J., Megginson, D., & Surtees, M. (2004). Human Resource development, New Delhi: Kogan Page.
25. Joy, S & Kolb, D.A. (2009). Are there cultural differences in learning style? International Journal of Intercultural Relations 33 (1):69-85.
26. Karipidis, P., Athanassiadis, K., Aggelopoulos S and Giompliakis, E. (2008). Factors affecting the adoption of quality assurance systems in small food enterprises. Food Control. In Press.
27. Kells, H. (1995). Creating a culture of evaluation and self-regulation in higher education organizations. To a Quality Management 6(5/6), 457-467.
28. Kontoghiorghes, C., Awbrey, S.M. & Feurig, P.L. (2005). Examining the relationship between Learning Organization Characteristics and change, adaptation, Innovation and Organizational Performance. Human resource development quarterly, Iss: 16, (2).
29. London, M. & Sessa, V., I. (2007). The development of Group Interaction Patterns: How Groups become adaptive, Generative and Transformative Learners. Human Resource development Review, 6:(4).
30. Lopez, S. P., Peon, J. M. M., & Ordas, C. J. V. (2005). Human Resource Practices, Organizational Learning and Business Performance. Human Resource Development International, 8(2).
31. Malukeke Y.L. (2008). Evaluation of an implemented Quality Management System (QMS). Employee perceptions of the effect of the QMS intervention. Rhodes University: South Africa.
32. Matsui, Y & Chi, A. P. (2006). Quality Management and Competitive Performance – An empirical evident of impact of ISO 9000 in Vietnamese manufacturing companies. Department of Business Management Systems International Graduate School of Social Sciences Yokohama National University.
33. Massy, W. F. (2003). Honoring the trust. Quality and Cost containment in Higher Education. Bolton: Anker Publishing.
34. Menger, R. (2001). Small firm innovation and strategic competitiveness: The role of the firm infrastructure. Journal of the institute of behavioral and applied management, 3(1):26.
35. Mert, A, & Cory, S. (2011). Implementing a Functional ISO 9001 Quality Management System in Small and Medium-Sized Enterprises.
36. Mwiria, K. & Njuguna, N. (2007). Public University Reform in Kenya: Mapping the key changes of the last decade. Nairobi: East African Educational Publishers.
37. Nafukho, F., Hairston, N. R., & Brooks, K. (2004). Human Capital Theory: Implications for Human Resource Development. Human Resource Development International.
38. Oanda, O. I., Chege, F. N., & Wesonga, D. M. (2008). Private Higher Education in Kenya: Implications for access, equity and knowledge production. Dakar: Council for the development social science research in Africa.
39. Oso, W.Y. (2002). State control and the Management of Public Universities in Uganda: The case of Makerere University. Master's thesis (Unpublished). Makerere University, Kampala.
40. Patton, M. (2002). Qualitative Research and Evaluation Methods. Thousand Oaks. Sage Publications.

41. Pelagidis, T. (2008). Human resource development within Greek Science and Technology parks Spinoffs Human Resource Development International, 11 (2):207-214.
42. Pratasavitskaya, H, & Stensaker, B. (2010). Quality management in higher education: towards a better understanding of an emerging field. Quality in Higher Education, 6(1), 37-50.
43. Redmond, R., Curtis, E., Noon, T & Keenane, P. (2008). Quality in Higher Education. The Contribution of Edward Demming's Princples. International Journal of Educational Management, 22 (5), 432-441.
44. Sarrico, C. S., Rosa, M. J., Teixeira, P. N., & Cardoso, M. F. (2010). Assessing quality and evaluating performance in higher education: worlds apart or complementary views? Minerva, 48, 35-54.
45. Sayeda, B. Rajendran, C. and Lokachari, P. S. (2010). An Empirical study of Total Quality Management in Engineering Educational Institutions of India. New Delhi. John Wiley & Sons.
46. Sohn, D.W. (2005). University-Industry linkage and High Tech Development of Seoul. Inha University.
47. Strickland, A., Thompson, A., & Gamble, J. (2010). Crafting and executing strategy: Text and reading. New York. McGraw-Hill Irwin.
48. Thompson, J. (2001). Understanding Corporate Strategy. Oxford. Thomson Learning Publications.
49. Torraco, R. J. & Hoover, R. E. (2005). Organization development and change in Universities: Implications for research and practice. Advances in developing Human resources, 7 (3):422 437).
50. UNESCO. (1998). World conference on higher education. UNESCO, Paris.
51. UNESCO. (2009). World Conference on higher education. UNESCO, Paris.
52. Varghese N., Puttmann, V. (2011). Trends in Diversification of Post-Secondary Education. International Institute of Educational Planning. France. Paris.
53. Verbeek, M. (2004). A Guide to Modern Econometrics. Chichester: John Wiley & Sons.
54. Weigl, T., Hartmann, E., Jahns, C. & Darkow, I.L. (2008). Inter-Organizational network structures in Russia: Organizational Changes from institutional and social embeddedness perspectives. Human Resource Development International, 11(2).
55. Williams, G. (1993). Total quality management in higher education: panacea or placebo?
56. William, N. S. R. (2001). Your research project; A step- by – step guide for the first time researcher. London. Sage Publications Ltd.