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EFFECTIVENESS OF THE QUALITY SYSTEMS AND STRUCTURES EMPLOYED BY KENYAN UNIVERSITIES IN ENHANCING QUALITY EDUCATION

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Abstract:
Establishing quality systems in an organization is key to improving its productivity and giving it a competitive edge in the market. For example, effective implementation of quality systems enables an organization to meet the needs of both the customers and the organization and this helps to sustain and grow the business. The stiff competition in the market today requires organizations to think through ways of ensuring that they offer quality services in order to retain customers, attract new ones and remain relevant and competitive. Universities in Kenya for instance are facing a very high competition over student numbers admitted into similar programmes duplicated across universities and their constituent colleges. For a university to attract students, it is crucial to establish robust quality systems to enhance high standards of education that can give it a competitive edge above other universities. This paper reviews literature on the quality management systems employed by universities with a view to making recommendations on effective quality systems and their implementation, in order to enhance best practices in education that could enable universities to excel in scholarship, research and community service.

Keywords: quality, quality systems, total quality management, customer satisfaction

1. Introduction

There have been several approaches to quality in the history of quality movement which has led to emergence of several organizations dedicated solely to setting standards for quality such as International Organization for Standardization (ISO)-a series of quality management systems (QMS) standards used by manufacturing and service industries across the globe; total quality management (TQM), continuous quality improvement (CQI) and six sigma. However, effective employment of these management systems requires putting proper quality structures and systems in place and also ensuring that the quality systems are systematically implemented with

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adequate involvement of all employees and other stakeholders. It also requires taking cognizance of key elements of quality such as senior leadership support in influencing quality in all departments, developing a clear vision and values on quality that is embedded with the organization vision and core values, developing the quality plan, communication of quality management information to all employees, providing rewards and acknowledgement on quality and developing quality system design (Quality Management Systems). It is imperative that a quality system incorporates all these elements for its success.

Other important QMS include the organization's quality policy and quality objectives; quality manual; procedures, instructions, and records; data management; internal processes; customer satisfaction from product quality; improvement opportunities and quality analysis. These elements should address an organization's unique needs, cognizant of the fact that each element serves a purpose toward the overall goals of meeting the customers' and organization's requirements. A proper execution and function of the QMS requires that each of the elements of a QMS is present (International Organization for Standardization. Iso.org). The Commission for University Education (CUE) requires a university to spell out key policies in its curricula programmes including Students Assessment Policy, Curriculum Development Policy, Examination Policy, and Internship and/or Teaching Practice Policy to enhance quality management. Further, CUE requires universities to develop quality manuals to guide students and faculty on issues including academic standards, code of conduct and discipline for the purpose of promoting positive values in the institution (CUE Curriculum Standards Guidelines).

These requirements notwithstanding, however, research indicates that universities do not have clear quality systems. Martin (2018) asserts that universities have been mainly focused on monitoring quality in three areas: teaching and learning, students' employability, and governance and management using limited tools. The tools for monitoring teaching and learning effectiveness are mainly student course evaluation and student satisfaction surveys, and mainly focus on the course, student experience, and academic staff performance. On the other hand, the tools used to measure students' employability skills are graduate tracer study and employer satisfaction surveys while external certification tools (mainly ISO) are used to assess whether the target- or service-level agreements of specified objectives have been achieved by the administrative units.

In line with Martin (2018), Pigozzi (2006) raises concerns that tools for measuring education performance are confined to intellectual development, leaving out other aspects of holistic education-the social, emotional and physical dimensions that are critical in developing learners with the skills for the 21st century. The need to design innovative tools to supplement the ones outlined above is needed to yield a more comprehensive data for improvement of quality management. In addition, universities should ensure that data collected using the instruments is disseminated to all stakeholders and the feedback is used to enhance improvement of quality in education.

2. Quality as a Concept

Quality is a difficult and confusing concept that is highly contested. It means different things to different people (Martin, 2018; Bornman, 2004; Tam, 2001). Mendes (in Quality Management Systems- Springer) confirms this, stating that quality is directly related to the perceptions of each individual. He further argues that factors such as culture, mental models, type of product or service, needs, and expectations directly influence the definition of quality. In addition, Mendes observes that people evaluate the quality of a product by its appearance, its price or the material it is made of. He recommends that the only objective and measurable aspect of quality is the "process," and also notes that based on the process, an organization can employ international methodologies and requirements such as ISO. Martin (2018) supports Mendes's on the subjective view of quality and also laments that although quality assurance activities in universities should focus on different functional areas including teaching and learning, graduate employability, governance and management, research, community outreach, income generation and community services and international cooperation, teaching and learning remains the primary focus. This is a very narrow approach to quality and a hindrance to realization of holistic quality education.

Also in line with the discussion, Bornman (2004) offers that it is difficult to arrive at a conclusive definition of quality because of the conflicting interpretations of quality education by actors in the field of education. Thus, he suggests that there should rather be reference to notions of quality instead of a definition. He identifies notions of quality as exceptionally high standards; learner transformation; fitness for purpose; zero defect; value for money and customer satisfaction. Realizing these notions of quality requires an organization to put in place quality systems needed to effectively drive each. These notions of quality resonate well with the views of the authorities cited in this this paper.

Commission for Higher Education (2008) asserts that in higher education, quality is perceived as consisting of a synthesis of conformity, adaptability and continuous improvement which amounts to a synthesis of a range of expectations of many stakeholders including parents, students, teachers and administrators, professionals and parents. These divergent views reflect underlying tensions in perceptions of what quality means. Synthesizing the varied expectations of the stakeholders' calls for continuous dialogue and flexibility among all in order to understand what a quality system entails in a higher learning institution and to also understand the concept in their context and also see how it is aligned with the institutional vision and strategic plan. In addition, it requires developing and implementing appropriate tools for measuring quality on a continuous basis to enhance continuous quality improvement in all the sectors of the organization. However, as noted above, universities have a tendency of relying on a few limited tools that were initially developed to enhance quality assurance. The need to diversify the tools to incorporate both qualitative and quantitative data to capture all the dimensions of education is critical if quality improvement is to be realized.

Juran (1981) cited in Quality Management Systems defines quality as "fitness for use," meaning that the users of products or services should be able to rely on that product or service 100 percent of the time without any worry of defects. He further observes that the quality of a product or service is only as good as its design and intention. Juran's approach to quality spanned a product or service's entire life cycle, from design to customer relations. He emphasized that an organization should dissect all processes and procedures from a quality perspective and analyse for a "fitness for use" and then use the results to make changes for quality improvement. Universities should borrow from this comprehensive approach in developing and implementing relevant Degree and Diploma programmes if the programmes are to effectively empower students with personal and professional skills for today's industry.

The American Society for Quality (2004, cited in Quality Management Systems), defines "quality" in three ways: 1. Based on customer's perceptions of a product's/service's design and how well the design matches the original specifications; 2. the ability of a product/service to satisfy stated or implied needs; and 3. conforming to established requirements within an organization (What is Quality Management System/ ASQ?). This definition implies that customers are very key in determining the quality of the product as consumers. It also brings out the notion of evaluation to determine whether the product satisfies the needs and whether it conforms to the vision of the organization. Although universities involve students in determining the quality of education they receive through course evaluation and student surveys, more innovative ways including use of student representatives to submit evaluation report on lecturers' performance on monthly basis, and use of regular systematic barazas where students talk about their experiences with lecturers without victimization should be incorporated to solicit information on the quality of the programmes and student satisfaction.

Green (1994) offers a comprehensive definition of quality using five approaches: 1. Quality as the conformance to standards; 2. quality as fitness for purpose; 3. quality as effectiveness in achieving institutional goals; 4. quality as meeting customers' stated needs; and 5. Quality as excellence/exceptionality. Each approach is briefly described below.

a. Quality as the conformance to standards

This approach measures the quality of a product in terms of its conformance to the specifications, to see if it meets the standards set. According to the Commission for Higher Education (2008), an institution that meets the pre-determined standards is considered a quality institution, fit for a particular status. Regulatory bodies including CUE follow this approach to ensure that programmes meet required threshold levels such as the number of full-time professors and number of articles published per full-time academic staff. However, although this approach makes assessment fairly easy, it may also make it irrelevant. For instance, a university may comply with formal requirements without paying attention to the substantive issues they are meant to safeguard. It may also hinder innovation (Commission for Higher Education, 2008).

Thus, universities should establish innovative and systematic quality systems that safeguard them from such weaknesses.

b) Quality as fitness for purpose

In this approach, quality has no meaning except in relation to the purpose of the product or service. However, Green (1994) maintains that fitness for purpose approach does not easily define what the purposes of higher education should be (as their purposes differ greatly depending on who defines these purposes). As such, to achieve quality education through this approach requires individual universities to align their programmes with their internal quality assurance (IQA) standards while at the same time they are responsive to the external quality assurance (EQA) standards at national, regional and international levels. Responding to EQA standards is crucial if universities are to maintain high standards and best practices in education with a global perspective.

Fitness-for-purpose is seen by many quality assurance experts as a meaningful way of defining quality because it includes all other definitions, and embraces all types of institutions, and is flexible (Commission for Higher Education, 2008). However, critics of this approach raise concerns on whether students are in a position to determine what their needs are (Green, 1994, p. 16). The author refutes this criticism on the reason that involving students in curriculum decisions at higher levels of education is important because they have had a reasonably long exposure to the content of the programmes they are pursuing, thus they can make sensible suggestions that can enrich curriculum programmes which could help to remove content overlaps in a specific programme or beef up content scope in shallow areas of a programme. Involving students in decisions concerning their learning also helps them to get the full benefit of education as it trains them to own the learning process and to take full responsibility of their learning. However, at lower levels of learning, teachers should advocate for learners' needs because they are not mature enough to be meaningfully involved in curriculum decisions.

c) Quality as effectiveness in achieving institutional goals

This approach considers a high-quality institution as one that has a clear mission and knows how to meet its goals (Green, 1994, p. 15). The Commission for Higher Education (2008) observes that the concept is focused on efficiency and effectiveness and measures outputs against inputs. Thus, something has quality when it meets the expectations of the consumers in relation to the amount they pay for it. Quality therefore corresponds to the satisfaction of the customers, which in turn requires an organization to enhance a positive influence of the hidden curriculum. Hidden curriculum is the unwritten, unofficial, and often unintended lessons, values, and perspectives that students learn in school (Hidden Curriculum Definition-The Glossary of Education Reform, 2015). Enhancing the hidden curriculum helps to create an organization culture that embraces total quality management (TQM). Teklemariam (2009) observes that TQM helps to meet the needs of students as customers and exceed their expectations.

d) Quality as meeting customers' stated needs

This approach highlights the importance of knowing who the customers are, what their needs are and how to satisfy them. Quality corresponds to the satisfaction of the customers. However, in higher education there are many customers with different needs including students, direct consumers who invest their active time in learning; parents, payers for the educational services for their children; and the government which sets national policies and invests public money for educational purposes). The needs of all the stakeholders must be considered as noted above.

e) Quality as excellence/exceptionality

This approach considers quality as the provision of a product or service that is distinctive and confers special status on the owner or user. It sees quality as excellence/exceptionality in terms of the special student experiences that universities provide-placing emphasis on attaining high-level standards. According to the Commission for Higher Education (2008) an institution that demonstrates exceptionally high standards is seen as a quality institution. However, this traditional notion of quality led to challenge such as unhealthy competition that tends to narrow down quality to comparison without proper criteria, thus disadvantaging some universities. The notion of self-improvement should be embraced in order to allow individual universities to progress towards high stands through continuous improvement. The following section discusses selected standards for quality.

4. Quality Standards

Quality standards are approaches used to measure the quality of a product or service. Organizations for setting standards for quality include standardized systems, total quality management (TQM), continuous quality improvement (CQI) and six sigma (Quality Management Systems). Each standard is briefly described below.

4.1 Standardized Systems

The most popular QMS is the International Organization for Standardization (ISO) whose standards are used by manufacturing and service industries across the globe. While in some industries ISO certification is a necessity, it is worth noting that it is possible to reach the desired quality level within an organization with a well-planned quality system without going through ISO certification. Universities use this tool to evaluate performance on administrative staff as noted above.

4.2 Total Quality Management (TQM)

TQM is a management approach which emphasizes quality in all aspect of the organization. It breaks down every process or activity and emphasizes that each contributes or detracts from the quality and productivity of the organization as a whole. TQM requires the management to develop a quality strategy that is flexible enough to be adapted to every department, aligned with the organizational objectives, and based on customer and stakeholder needs. However, to be effective, the strategy should be

deployed and communicated at all levels of the organization as observed above. In addition, all employees and stakeholders should be educated and trained on quality management to enable them develop strategies to solve quality problems and make suggestions for improvement.

4.3 Continuous Quality Improvement (CQI)

Continuous quality improvement does not focus on creating a corporate quality culture, it is more concerned with the process of quality improvement by the deployment of teams or groups who are rewarded when goals and quality levels are reached. CQI allows individuals to change the day-to-day operations and improve processes and work flows as they see fit. It attempts to develop a quality system that is never satisfied. It strives for constant innovation to improve work processes and systems by reducing time-consuming, low value-added activities so as to devote the time and resource savings to planning and coordination. Today's dynamic society demands that education embraces CQI in order to respond to the numerous changes and ever emerging issues.

4.4 Six Sigma

Six Sigma is a is a statistically oriented approach to process improvement that uses a variety of tools including statistical process control (SPC), total quality management (TQM), and design of experiments (DOE). The approach was developed at Motorola in the 1980s as a method to measure and improve high-volume production processes by eliminating waste in attempting to achieve near perfect results. Its statistical measure has no more than 3.4 defects per million. Six sigma follows seven steps as follows: breaking down business process flow into individual steps, defining any defects, measuring the number of defects, probing for the root cause, implementing changes for improvement, re-measuring, and taking a long-term view of goals. It is effective in analysing processes that are not standard and repetitive and flexible to suit any process (Quality Management Systems). Learning institutions in Kenya should borrow from this approach in order to optimize resources and also minimize wastage in education at various levels. This could further improve transition rates from one level of education to the next (primary, secondary and tertiary levels).

The following section briefly describes the key elements of a quality system.

4.5 Key Elements of a Quality System

The key elements of a quality system include participative management, quality system design, customers, purchasing, education and training, statistics, auditing, and technology (Quality Management Systems). Each element is briefly explained below.

4.5.1 Participative Management

The success of the implementation and management of a quality system involves many different aspects that must be addressed on a continuous basis. In a university for instance, it involves all the departments, staff, students, parents and other stakeholders, whose participation is critical if they are to effectively implement and manage quality

process. Inclusivity encourages stakeholders' participation within their context as they also align with the central system that is embedded with the university mission. However, as noted earlier, only a limited number of actors in certain managerial positions in universities are involved in key quality issues such as the design and revision of quality assurance tools and receiving feedback on evaluation data from quality tools (Martin, 2018). This shows that quality systems do not enhance an all-inclusive participation by employees yet this is a key success factor in creating an organization quality culture. As noted above, it is crucial that all stakeholders are involved if an organization is to succeed in quality management.

4.6 Vision and Values

As observed above, formulation of a well-defined vision and value statement is critical in establishing the significance of the quality system and building motivation for the changes that need to take place. The vision and values should be articulated and communicated to all employees and stakeholders by the management as noted above. This is crucial because the vision and value statement drive quality and help to mould the desired organization culture. They also set agendas for all other processes used to manage the quality system. However, as Tam (2001) emphasizes, quality assurance structures and mechanisms should be established in the context of the vision and mission of the institution to enhance improvement of quality in education.

4.7 Developing the Plan

An organization is expected to develop a unique plan characterized by clear and measurable goals; financial resources; and consistency of quality plan with the organization's vision and values. Planning is imperative if an organization is to succeed in quality management. The plan should set up small quality pilot projects within the organization to help management understand how well the quality system is accepted, learn from mistakes, and have greater confidence in launching an organization-wide quality system. The plan should incorporate flexible staff professional development on quality management to enable them provide input at their level of service/department. This empowerment is important because the most successful quality systems allow participation of all stakeholders.

4.8 Communication

Success in quality management depends on the commitment and support of the management in the effective and appropriate communication of quality management at all levels of the organization to create awareness about its goals and objectives. In a university for instance, communicating information about the university's academic project, the role of quality assurance in relation to it, the tools and policies supporting it and any change of policy among the stakeholders is crucial in enhancing their participation and ownership of the quality management process. This is crucial if the management is to enhance continuous improvement of quality and standards of education and also foster a culture that values communication. Communication is the

vital link between management, employees, consumers, and stakeholders which promotes a sense of camaraderie between all individuals involved. It also helps to sustain the drive for the successful completion of long-term quality goals. To achieve success in quality management, communication systems should allow for employees to give feedback and provide possible solutions to issues the organization faces. The management should therefore set up the system for feedback from the employees through employee feedback slips and feedback roundtable meetings (Quality Management Systems) and other innovative strategies. As observed elsewhere in this paper, feedback should be effectively utilized to enhance corrective measures and interventions if continuous quality improvement is to be realized.

4.9 Rewards and Acknowledgment

Rewards, compensation, and acknowledgment for achievements are some of the methods used by the management as incentives to motivate employees to strive toward pre-defined goals and also let them know that quality is important. They also help them to know exactly what management is trying to accomplish. However, to serve the purpose, rewards, compensation, and acknowledgment should be in line with the goals and objectives of both the quality system and the organization. They should also be cost-effective and geared to meeting specific criteria. Universities should devise innovative cost-effective methods of motivating staff and students for accomplishments made in achieving their targets and objectives. For instance, students should be rewarded for excelling in scholarship, research and community service. Progress awards should also be given for improvement in academic performance. Notably, learning institutions have a tendency of attaching more value to academic rewards. Universities should set the pace in acknowledging student performance in the other aspects of education-the social, emotional and physical dimensions (outlined above), in order to enhance holistic development of students.

The following section briefly discusses quality system design.

4.9.1 Quality System Design

A quality system is composed of the standards and procedures that are developed to ensure that the level of quality desired is repeated in every unit of a product or service. An organization should establish a core team to carry the performance system design process forward. In this regard, a university should establish a Quality Assurance Department with a person responsible for quality assurance or committees to run IQA at institutional level. The department should be assigned the responsibility of developing institutional policies on quality assurance, quality handbooks, and IQA instruments for data collection. However, developing quality management systems (QMS) requires a paradigm shift from focusing on inspection to training employees on quality management in order to enhance continuous improvement. It also requires management to support it by communicating policies and information on quality management to all levels of the organization for the purpose of ensuring that all necessary requirements are defined and met, and improvements are made. The system

involves a design process of eight steps (What is Quality Management System, and how is ISO 9001 related?)

The following section briefly discusses the processes:

a. Understand and map all business structures and processes

This requires employees to design a performance measurement system to help them understand the entire organization's competitive position, the environment in which it operates, and its business processes. It also requires understanding customer touch points and how the different operations in the organization affect the customer's perception of quality. This helps them to establish a quality culture throughout the organization that enhances meeting customers' needs. Meeting the customers' needs is a crucial key success factor in growing and sustaining an organization. This requires the organization to put the customer at the centre of focus. It is however doubtful that universities in Kenya have the capacity to satisfy the needs of students, given challenges outlined above including huge student-teacher ratios, shortage of teaching staff and lack of facilities and resources.

b. Develop business performance priorities

This entails putting priorities in place before the process enters the actual design phase. The performance measurement system should support the stakeholders' requirements from the organization's strategy to enhance quality in their specific areas of operation.

c. Understand the current performance measurement system

This helps an organization to either use the old or replace it with the new or use both. This is crucial today because there are many changes coming up in the dynamic society. Universities in Kenya should for instance embrace reforms including interdisciplinary education; technology integration in instruction; interactive, individualized and personalized learning and differentiated formative assessment in order to align education with the 21st century global education landscape that is skills based.

d. Develop performance indicators

This entails developing the performance measurement system with relevant and accurate performance indicators for measuring an organization's performance and business processes.

e. Decide how to collect the required data

This requires developing measurable performance indicators to enable collection of the data required to calculate the performance indicators. Universities should ensure that student evaluations are well aligned with the learning outcomes of the programme to enhance effectiveness of quality management. Similarly, other quality management tools including student evaluation and student programme survey should also be aligned with the learning outcomes.

f. Design reporting and performance data representation formats

This requires determining how the performance data will be presented to the users and how the users respond to the feedback for improvement. This is crucial if evaluation data are to enhance quality improvement.

g. Test and adjust the performance measurement system

This entails testing the system and adjusting the elements that do not work as planned eg performance indicators that do not work as intended, conflicting indicators, undesirable behavior, and problems with data availability. Adjustment of performance systems is imperative if an organization is to enhance relevance. For instance, universities have to continually review their curricula to align with the changes in the society. This entails adjusting content, learning outcomes and activities as well as resources. However, research indicates that universities to-date continue to use the formal model of education that has been rendered obsolete by the technological world. They have also not embraced technology in instruction (Scott, 2015).

h. Implement the performance measurement system

Implementation involves managing user access, training, and demonstrating the system. It also requires an organization to make adjustments to the process to suit its context in order to maximize the system's success. However, designing of the quality system requires the management to play its role in increasing motivation to make the elements and processes run smoothly through effective formal and informal communication with employees. It further requires that employees performing the quality system activities and processes are allowed to make recommendations and also motivated to improve quality. The following section briefly discusses other aspects of designing quality systems (Quality Management Systems). Interestingly, however, the management in most universities does not quite understand its role in institutionalizing quality management, directing it and influencing all employees to participate in it. This makes it difficult to manage quality. Ongoing training of the management is imperative if universities are to enhance quality management. The training should cascade downwards to all other levels.

4.9.2 Customers

As noted above, quality management's primary focus is to meet customer requirements beyond expectations. This is crucial because an organization which attracts and retains the confidence of customers and other interested parties achieves sustained success. Sustained success demands an organization to understand current and future needs of customers and other interested parties. Customer focus benefits an organization in many ways including increased customer value, increased customer satisfaction, improved customer loyalty and enhanced repeat business, enhanced reputation of the organization, expanded customer base and increased revenue and market share. However, achieving customer focus requires an organization to recognize direct and indirect customers as those who receive value from the organization; understand customers' current and future needs and expectations; link the organization's objectives to customer needs and expectations; communicate customer needs and expectations throughout the organization; plan, design, develop, produce, deliver and support goods and services to meet customer needs and expectations; measure and monitor customer satisfaction and take appropriate actions; determine and take actions on interested parties' needs and expectations that can affect customer satisfaction; and actively

manage relationships with customers to achieve sustained success (ISO Quality Management Systems).

University management should seek to understand students' needs and expectations through student evaluations, student programme surveys and other data collection methods including student referrals and class representative reports about lecturer performance in class. Further, the management should ensure that the needs are communicated to all departments so that all employees work towards meeting students' needs beyond their expectations. Customer focus in a quality programme is critical because quality is measured in customer retention rates and the cost of losing a customer. According to the *Harvard Business Review* (Reichheld, Fredrick F., and W. Earl Sasser Jr), companies can increase profits by almost 100 percent by retaining 5 percent more of their customers; and the longer customers stay with the same organization over time generate more profits. In addition, perceived quality by customers leads to referrals which could yield to more than 60 percent of new business. (Quality Management Systems).

The alarming cost of losing a customer should challenge managers to put in place the strategies needed to retain customers. Universities should for instance provide students with learner support services including guidance and counselling, mentorship and coaching, student academic advisory, clubs and societies, sports and games and financial support to the needy students. These services promote students' physical, social, emotional and academic wellbeing. However, if universities in Kenya are to meet the needs of students, teacher-student ratios and the challenges surrounding them should be resolved to enable lecturers to enjoy a close interaction with students so that they can know their individual needs and attend to them. Embracing the reforms outlined above is critical if universities are to minimize these challenges to be able develop students with personal and professional skills for their survival in the society and workplace.

4.9.3 Purchasing

Suppliers should be partners in quality management because a company's products or services are only as good as the combination of all the inputs. An organization should ensure that the purchasing system collaborates with the entire quality system to meet all the standards developed for all incoming materials. This requires educating the purchasing personnel on the importance of standards to the process flows of the organization. Employees should also be educated on how to measure and communicate the required standards, process control on materials or statistics, cross-training the purchasing personnel so that they know exactly how the inputs fit into the organization and how the products are used and what problems can arise to enable them to procure inputs that meet all the quality specifications (Quality Management Systems).

4.9.4 Education and Training

Education on quality management should start at the management level because most quality problems emanate from lack of support from the top. Management should be

helped to understand the history of the quality movement, who the major players were, and how quality programmes have affected the business world and their organization in the past. They should also be made aware of the role quality programmes play in the future of their organization and of the need to keep abreast of new developments in quality. Further, management should be made to understand how employees view their actions or inactions, how their individual actions and jobs impact quality, the overall importance of dedication to quality by management, and the roles management plays in quality programmes(Quality Management Systems).

Managers should also be made to understand that without strong leadership and reinforcing dedication to quality, a quality programme is not meaningful. On the other hand, education of employees should in context help them understand how quality programmes affect their jobs on a daily basis, the quality tools to use to ensure outputs, and how their roles add to the overall quality goals of the organization (Quality Management Systems). This inclusive approach to quality education has the potential to entrench a culture of quality in an organization as all employees are made to understand what quality entails and their roles in managing it. It is also critical because participation of all stakeholders is a success factor in quality management as noted above.

4.9.5 Data Development and Statistics

Statistical analysis is the measurement portion of quality systems which allows it to be managed. Statistical analysis gives leaders the measurements necessary to make management sound decisions (evidence-based). Statistics is a key tool in distinguishing between systemic and special causes of quality problems. It is also considered to be a cornerstone of the quality improvement process which is closely tied to auditing a quality system. (Quality Management Systems). This notwithstanding, however, it is important to support statistical data with qualitative data to supplement crucial information that cannot be captured quantitatively for more comprehensive results. For instance, universities should devise qualitative tools to support the tools they use (outlined above).

4.10 Control Charts

Control charts are to communicate information on systemic and special errors. Their statistical measures adapt general characteristics (for example, they are driven by the customer; they reflect vision and values; they are benchmarked to the competition; and they are achievable) in the context of individual organizations. However, as emphasized in this paper, statistical data should be supported by qualitative data to capture any important information that is not quantifiable.

4.10.1 Auditing

Auditing is crucial in determining if the quality management system is working correctly and if the goals and objectives are being reached. It also motivates employees and allows for rewards and acknowledgment measures to be assessed as well as

possible compensation. Organizations should employ an auditing process that fits its unique system. For instance, customer surveys, new customer measures and quality in services serve the purpose of auditing forms. The following section describes selected forms of audit.

4.11 Customer Surveys

Customer surveys range from mail-in forms to short forms completed by the consumers at the time of purchase; a salesperson or clerk could also ask the customer to rate the product or service at the close of the purchase. The surveys help in getting direct input from the customers on how they view the business. Organizations should conduct customer surveys to get feedback from customers for the purpose of quality improvement. In a university for instance, students as customers should be given opportunities to evaluate lecturers' teaching, evaluate curricula programmes (in their specific areas of specialization) and student support services offered to them. However, as noted above, data on evaluation is not communicated to the relevant staff for action to serve the necessary purposes including correction and intervention.

4.12 New Customer Measures

Measurement of the number of new customers in an organization over time could be used to assess quality levels as customers who are very happy with service received from an organization tell others. Quality Management Systems assets that 60 percent of new customers in service organizations come from referrals. As service organizations, universities should carry out surveys on new students to establish how many came through referrals. Results from the data combined with data from other tools cited above could help in establishing student satisfaction status.

4.13 Quality in Services

Quality services help organizations to proactively measure and manage the quality level of quality services using metrics such as the iceberg principle. This system entails that the average service company never hears from more than 90 percent of customers who are not happy with the level of service they received. Also, for every legitimate complaint received there will be more than 20 customers who feel they have had problems, and at least 25 percent of those problems could be considered serious enough to warrant investigation. Further, of the customers that make a complaint, more than half will do business again if the complaint is addressed and resolved; and if the complaint is resolved quickly, and the customer feels the organization cares about its customers, the number will rise to almost 100 percent. On the other hand, if a complaint is not resolved, the average customer will tell more than eight other individuals about the negative experience, but if the complaint is resolved, the customer will tell at least five others about the positive experience. Thus, on average, it costs six times more to gain a new customer than to keep an existing one (Quality Management Systems).

From the analysis of the percentages above, it is critical that an organization puts the customer at the centre of focus for its success and survival. To what extent do

universities in Kenya focus on students as customers given the challenges outlined in this paper? Addressing the challenges is imperative if universities are to enhance improvement of quality management.

5. Conclusion

Developing, implementing and sustaining quality management systems in universities are critical for their growth and success. It is also significant in satisfying students for their value for money. However, participation of all staff and other stakeholders in the quality management formulation and implementation processes is critical in achieving quality in education. Management support in offering guidance and communication to employees on quality activities is also crucial. In addition, management should influence all stakeholders to participate in quality management processes in the context of the nature of their services to the institution. Dialogue with all stakeholders on their perception of quality is also significant in helping them to focus on the vision and core values of the university in order to direct their energies towards the ultimate goal for which it exists. This requires the senior leadership to have proper understanding of the various functions of the organization, to ensure that each department implements the established quality systems in order to entrench total quality culture (TQC) in the organization.

6. Recommendations

6.1 Design and Manage Effective Quality Management Systems (QMS)

Universities should design and implement QMS if they are to facilitate students with relevant quality education. This is crucial because a QMS is the key to providing the quality of service desired in an organization.

6.2 Institutionalize Policy Manuals and Quality Related Documents

Quality related documents should be embedded with the university's strategic plan to ensure that all staff and students are aware of them and are also implementing quality. This entails mainstreaming QMS instruments with the other components of the university management including strategic plan, the operationalization of strategic goals through the development of plans and programmes, target agreements, and management control.

6.3 Provide Education and Training on Quality Management to All Employees

Organizations should educate and train all employees on quality education to ensure they all participate in implementing QMS in order to entrench a university culture of quality in all departments.

6.4 Create Administrative Structures for Improving and Assuring Quality

The organizational structure should create administrative structures for improving and assuring university quality standards at all levels of the university (including academic and administrative units, departments, collegial bodies, and committees) to support QMS processes and tools supporting the work of individuals responsible for quality assurance.

6.5 Make Quality Management Accountable to all Stakeholders through Participation

All stakeholders should be involved in quality management to make them own the process and thereby strengthen quality culture. This further ensures that the quality management system is institutionalized and cannot be easily changed even when leadership changes.

6.6 Align Resources with programme Goals

Universities should ensure efficiency and resources adequacy, responsiveness to academic and corporate needs and alignment with external requirements. For example, teaching infrastructure facilities and resources should be aligned to programme goals in order to enhance effectiveness in teaching and learning. This enhances quality in education

6.7 Create awareness of Quality Management to all Stakeholders

Senior leadership should communicate quality management agendas (policies, manuals and changes of policy) to all levels of the institution to ensure effective implementation of QMS. The leadership should also ensure that feedback from qualitative and quantitative quality management tools is integrated to avoid an information overload. For instance, in a university, student/course evaluation and student programme survey data should be integrated with students' reports about individual lecturer's adequacy in teaching and related aspects (such as availability to students, class commitment and enthusiasm) and information on students' referrals to the university.

6.8 Link Quality Management Systems with opportunities for staff development

Quality Management Systems should be linked with staff development. For instance, feedback from student evaluation of courses could be used to improve young teachers' performance by involving top-performing teachers to provide 'mentoring' for them.

6.9 Follow up Actions on Quality Management Feedback Processes

Universities should emphasize follow-up actions and feedback processes to enhance effective functioning of the formalized quality management system. They should also integrate perspectives of all stakeholders who are actively engaged in the provision of information from the quality management system (including students, alumni, academic and administrative staff, and employers) in order to use the feedback for improvement.

6.10 Network with the Industry

Universities should network with the industry to ensure that professionals are involved in the initial development of a programme, its implementation and periodic reviews to ensure the programmes are market driven.

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