Journal of Pedagogy, Andragogy and Heutagogy in Academic Practice (JPAHAP)
ISSN: 2708-261X, *Vol 2, No 2. (2021) pp 34-48* http://uonjournals.uonbi.ac.ke/ojs/index.php/pedagogy

INFLUENCE OF ISO 9001 STANDARDS ON QUALITY OF ACADEMIC PROGRAMMES IN UNIVERSITIES IN KENYA: A CASE OF BACHELOR OF EDUCATION PROGRAMME OF THE UNIVERSITY OF NAIROBI

[1]Michael Mwareri Wangai, [2] Justus O. Inyega, [3]Mercy Mugambi, [4]Jeremiah Kalai
[1,2,3&4] University of Nairobi
E-mail: [1]mwareri.wangai@uonbi.ac.ke [2]justus.inyega@uonbi.ac.ke [3]mercy.mugambi@uonbi.ac.ke 4jeremykalai@uonbi.ac.ke

ABSTRACT

The study investigated the influence of ISO 9001 Standards on the quality of academic programmes in universities in Kenya; A case of Bachelor of Education programme in the University of Nairobi and premised on Deming's theory of quality management. A descriptive survey design was used targeting heads of academic units, lecturers and alumni. The analysis yielded both qualitative and quantitative data. The findings established that adopting ISO 9001 standards significantly influence the quality of academic programmes. The study recommends that universities maintain a Quality Management System and seek ISO certification to enhance their teaching and learning standards.

Key Words: ISO 9001 Standards, Quality management system, Quality of academic programmes

INTRODUCTION

Institutions of Higher Education impact significantly on economic, political, and social transformation of nations through continuous development of human capital, research, and technological advancement (Machumu & Kisanga, 2014; Elken & Stensaker, 2018). Since higher education (HE) is the backbone of the global economy, the quality of education in higher education institutions (HEIs) has become an obvious necessity (Haseena & Mohammed, 2015).The foremost purpose of these institutions is to produce graduates who meet needs of the human resource for society and heighten the knowledge frontiers through research (Green, 1994; Haseena & Mohammed, 2015). According to Matei and Iwinska (2016), quality is one of the significant and critical issues affecting the performance of HEIs. However, the concept of quality has been interpreted differently based on diverse approaches and mechanisms used to measure quality.

For instance, according to Mishra (2010) quality in HE is expressed as a high assessment bestowed on an educative process, grounded on a particular criterion that prescribes minimum standards and values by which performance is determined.

Since its inception, quality improvement has been a major concern in education. However, for the past two decades, there has been a shift towards promoting quality assurance (QA) especially the quality enhancement approaches in HE (Cardoso, S., Rosa, M., J., Videira, P., & Amaral, A. (2017). The HE landscape continues to experience speedy changes such as the massification of education, internationalization, student and programmes diversities, labour market demands for quality graduates, scarcity of resources, accountability and governance (Dill,2007; Seyfried & Pohlenz, 2018). Hence it has become an obligation to institutionalize and articulate quality in HE.

The most prevalent mechanism of QA is the evaluation of the quality and standards of the academic programme, which determines the overall corporate image of an institution. Globally, there are numerous QA practices and models that the institutions embrace for evaluating the quality of education in HEIs. For instance, in the UK, several QA mechanisms exist, such as professional programme accreditation, the quality audit of teaching and learning processes, academic programme assessment and other contemporary developments (Harvey, 2005).

The rapid expansion of educational systems has accelerated people's concerns about the quality of education, which has led many nations to put frameworks and policies in place to improve the quality of HE (Dill, 2011).

Across the world, particularly in the developed nations, there has been a continuous improvement in various aspects of education including curriculum, student assessment, student-lecturer ratio, academic resources and faculty qualifications (Cheng & Tam, 1997 ; Cheung & Man Wong, 2012). Moreover, Quality Assurance Agency (QAA) of Higher Education was set up to safeguard quality standards of education offered by the colleges and universities in United Kingdom (Ryan, 2013; QAA, 2014). Similarly, the Council for Higher Education Accreditation (CHEA) through its quality awards, has immensely benefited the quality improvement of higher education in the USA. Additionally, the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), an international quality assurance agency, work closely with national accreditation bodies and education experts to enhance higher education quality. Although the HE reforms aim at augmenting the quality of education, the complexity of the education environment and lack of consistent education standards and quality indicators have increased the uncertainty and ambiguity of educational systems (Teichler, 2004).

Amid numerous challenges facing HEIs in the world today, QA practices and approaches have become critical to ensure education relevance (Dill, 2007; Haseena & Mohammed, 2015; Materu, 2007). In Africa for instance , most countries have increasingly become conscious of the need for effective quality enhancement and improvement in HEIs due to increased student enrolment numbers, shrinking budgets, and increased demand from different stakeholders (Nabaho & Turyasingura, 2019). Hence it remains indispensable to reassure the public that the educational provisions from HEIs meet both the local and international minimum standards. Likewise, the Association of AfricanUniversities (AAU) founded the African Quality Assurance Network (AfriQAN) to improve academic programmes' quality in the region.

In HE, the common QA standards focus on several key aspects; institutional mission and vision, academic programs, academic resources (e.g. library, technology, facilities and infrastructure), faculty members qualifications, student numbers and their entry qualifications, and financial capacity (Materu, 2007). Equally, (Harvey& William 2010) described QA in HE as a combination of multiple instruments including audits, assessments, accreditation, performance indicators, student surveys, graduate employability, capability and work-readiness, and other monitoring and evaluation instruments that focus on assuring educational quality.

With rapid changes in the business world, the standard of curricula is constantly needed to meet the evolving society needs. According to UNESCO (2013), the commercialization of university education has persistently degraded the academic programmes' quality globally and particularly in the East African region. As a result, the Inter-University Council of East Africa (IUCEA) founded East Africa Quality Assurance Network (EAQAN) to coordinate the enhancement of quality in the Eastern Africa region. The network provides a platform for QA coordinators and other stakeholders to explore and share perspectives in quality assurance, teaching and learning as well as related topics in higher education management.

There have been concerns, in Kenya about degradation of education quality due to shortage of academic staff and other academic resources necessary to support the academic programmes on offer (Kinyanjui (2013); Nganga, 2019). The Kenya Universities Quality Assurance Network (KuQAN) was founded to unify the QA experts and professionals in order to address the hurdles facing the sector of higher education in the country. Likewise, by means of routine institutional and program quality audits to ensure sustainable and high-quality education standards, the Commission for University Education (CUE) and other

regulatory agencies in Kenya safeguards the quality of higher education. For example, CUE outlines minimum criteria for the academic programme, including delivery mode, requirements of entry, management of the courses, and resources to facilitate the effective delivery of the programme. Though there exists literature on quality and academic programme standards, there is limited information on the particular approaches that HEIs put in place to improve the quality of academic programmes and how these practices influence the standards of an academic programme.

PROBLEM STATEMENT

The ever-increasing student enrolment has steered an increase of population of students in the colleges and universities. Consequently, majority of academic resources in universities are extended to undermine the quality of academic programmes. Additionally, World Bank report entitled "Kenya Education Achievement and Challenges" criticizes university practices in Kenya for having failed to provide graduates with the necessary skills, knowledge and competencies in implementing the 2030 vision (Kagondu &Marwa, 2017). `

Notwithstanding the efforts by the government of Kenya to spend huge sums of money on higher education, education quality remains a major concern. In addition, limited research have tried to establish the level at which the Kenyan universities advance in the implementation of quality assurance practices. The researcher undertook this study to establish best practices in University of Nairobi in quality assurance of curricula. Hence, this study focused on examining the influence of ISO 9001 Standards adoption on the academic programmes' quality in universities in Kenya.

Most institutions have adopted ISO in their operations. The study will determine whether these standards had any effect on curriculum quality. The quality of teachers that deliver curriculum in secondary schools could be determined by the quality of the B.Ed. programs they undergo in Universities. Education and training is one of the key mandate in relation to gaining relevant, inclusive and Quality Education and pedagogy towards long-lasting development. (Government of Kenya Sessional paper No. 1 2019). The quality of an academic program training will determine the quality of a teacher, weighed in the beams of ISO 9001 standards. A teacher will shape careers of professionals who will push the economic development of a nation. The study seeks to establish the influence of ISO standards adoption on quality of academic programs.

OBJECTIVES OF THE STUDY

This study aimed at determining the influence of ISO 9001 Standards on the quality of B.Ed. academic programme in Kenyan universities a case for the University of Nairobi. It had the following specific objectives.

1. To assess the influence of ISO 9001 standards adoption on quality of academic programmes in Kenya universities.
2. To determine the influence of a formal QMS in enhancing quality of academic programmes in Kenyan Universities.

THEORETICAL FRAMEWORK

The study is based on Deming's theory of quality management that is linked to the phenomenon of constant quality improvement and cost reduction (Deming, 2012). According to the theory, tolerance limits degrade quality because management will be eased as long as a large number of services and products fall within those limits. Deming's Quality Management conceptual statements close in the creation of 14 levels of management, the system of deep understanding, and the Stewart Process Plan-Do-Check-Act (Frazer, 2013). The system of intense knowledge is composed of 4 components: system appreciation – a comprehension of how the firms systems and processes functions; knowledge of variation – a comprehension of changes and the factors that contribute to its occurrence in the organization; theory of knowledge – mastery of what could be established; as well as psychology knowledge – a nature of human understanding. The Deming's theory's fourteen points of full management of quality are the development of reliability of intention, acceptance of a new philosophy, cessation of reliance on mass inspection, not bestowing businesses founded on the price, the introduction of cutting-edge job training, initiation of cutting-edge management methods, removal of company concerns, deconstruction of departmental barriers, elimination of quantity-founded goals of work, elimination of quotas and requirements, promotion of pride in artistry, making sure that everybody is qualified and skilled, and ensuring that the senior managers system respects all the previous points (Davis & Goetsch, 2014).

LITERATURE REVIEW

The following subsections explore the empirical literature on the subject, which is ISO 9001 standards and quality academic programme. ISO 9000 are a group of internationally accepted quality standards, and approaches which guide firms to satisfy their customer requirements (Sohail *et al*., 2003). Although ISO standards were initially designed for the manufacturing sector, service organizations including educational institutions continue to adopt the ISO certification.

This set of quality standards is the most prevalent quality management approach and quality awards. The focus on QA aspects has prompted many HEIs to apply ISO 9001 quality standards to improve and enhance the quality of education. The outstanding aspect of ISO 9001 is the effort it places on customer contentment and company efficiency.

According to Dumond and Johnson (2013), organizations implementing the ISO 9001 series are required to plan, implement, and manage QMS, which should comprise documentation, training of staff, and conducting of quality audits to determine the QMS progress and effectiveness. The authors also established that an educational institution that adopts ISO 9001 QMS should first develop a QMS with responsibilities to the top management, design a learner-focused process approach, guarantee sufficient resources, create steps for education services and monitor learner fulfillment, and improve actions where possible. There are numerous benefits accrued from incorporating ISO 9001 standards in HE such as user-friendliness and reduced paperwork. Further, ISO 9001 provide a better understanding of an institution through clear roles, responsibilities, objectives, and accountability for everyone in the organization.

A study by Cruz *et al*. (2016) observed that while quality management approaches such as ISO should contribute significantly to the internal quality improvement including student performance, in most cases, the efforts do not yield positive results. The authors suggest that the quality systems should be implemented to guarantee student learning to ensure a high level of student performance rather than focusing only on the teaching quality. Besides, they proposed that quality systems should not foster bureaucratic changes and instead should promote changes in teaching and learning activities such as curricula reviews, teaching methodologies, assessment systems, and academic resources. Another study by Ali *et al*., (2018) investigated the quality of academic programmes by comparing various standards and found that the standards used differ from country-country and organization-organization.

Several scholars have criticized the implementation of ISO 9001 in HE. For instance, the ISO 9001 mechanism is particularly bureaucratic, costly, too general, and frustrating for faculty and staff (Dumond & Johnson, 2013). However, despite the critics, ISO 9001 is still effective when implemented well.

For instance, Dumond and Johnson (2013) reveal that the standard can be used to identify areas for improvement through undertaking self-assessment or quality audits and action points drawn for improvement.

RESEARCH METHODOLOGY

This is a collection of approaches that the researcher employs to logically incorporate different parts of the analysis to adequately address a research question (Creswell, 2014). This research adopted a descriptive survey design in order to elicit respondents' descriptions of the current state of affairs at the university. This design was chosen since it permits for very large populations, which ensures that the results are significant statistically even when different variables are evaluated.

This research targeted (25) heads of Academic Units, (370) lecturers and (4050) both ongoing and former students of B.Ed. programme. The target population is well-informed due to the important role they play in curriculum development, delivery, review, assessment and evaluation. The study sample size included a representative sample of both ongoing and former students of B.Ed. Programme (100), lecturers (50) and Heads of Academic units (18). The researcher also used purposeful sampling to select Heads of Academic Units of School of education and those servicing B.Ed. programme. The use of purposeful sampling was to delimit the study to the quality of Bachelor of Education programmes. A simple random sampling technique was applied to select lecturers servicing bachelor of Education programme and the alumni of school of education. This sampling technique gave an equal chance to alumnus and lectures to be selected.

A semi-structured questionnaire was used to collect data which included both open and closed-ended questions. Technology was applied through use of google suite for data collection, a paradigm shift from the traditional-physical data collection methods i.e. Printed data collection tools. The benefits of virtual data collection is its eco-friendliness and minimized physical conduct during the Covid-19 epidemic and convenience in its administration.

The questionnaires were customized for the four groups of respondents addressing the key research objective on ISO 9001 principles which comprise process approach, leadership, people's engagement, relationship, customer focus, evidence-based decision-making and improvement. Document analysis from relevant resources provided beneficial study's information.

To ensure that questionnaire's content was valid, the researcher administered it to just few heads of academic programs. Supervisor guideline on this point made sure of research tools' validity. Young (2006) indicated that the understanding and skills concealed by the test items would reflect the wider field of knowledge and skills.

The reliability analysis was then carried out with Cronbach Alpha, which weighs internal consistency by demonstrating whether certain elements measure similar items in the same scale. From the results of the pretesting of questionnaires, the quality of academic programmes questionnaire had a Cronbach alpha of 0.713 and while the questionnaire on adoption of ISO 9001 standards had a Cronbach alpha of 0.806. The Cronbach alpha were greater than 0.7 (Manerikar & Manerikar, 2015) showing that the tools were reliable.

Data collection tools were prepared and put in google forms to avoid physical contacts and handling hardcopy documents in compliance with Ministry of Health Containment measures during the research period. The questionnaires were administered though google forms.

The analysis generated qualitative and quantitative data where coding and data entry for analysis was done in Social Sciences Statistical Packages (SPSS Version 25.0). A simple linear regression analysis model was adopted for establishing association amongst independent variables (explanatory variables) and the dependent variable (response variable) by putting in a linear equation to the observed data. The simple linear regression formula is denoted as $U_y=\beta 0+\beta_1 X_1 +\varepsilon$. Uy represents the dependent variable

The study used descriptive statistics such as mean, frequencies and percentages whereas inferential statistics (regression analysis) was utilized to establish the strength of association linking dependent and independent variable. The analysis of qualitative data was done by use of Nvivo software based on the responses content, where responses having similar contents or patterns are grouped into comprehensible classes founded on objectives of the study. Data were shown in tables and graphs and described in paragraphs, specific statistics for each of the research questions shown and statistics for a set of research questions where they share common statistics indicated. A significant level of 0.05 was adopted in the analysis.

FINDINGS & DISCUSSION

The ISO 9001 standards require the execution of a quality management system (QMS) in all processes and procedures of the organization. The respondents were asked to show whether a formal QMS enhance the provision of quality products and services. Most respondents (80%) indicated that they believe a formal QMS enhance the provision of quality products and services. Besides, the respondents showed that the existing systems at their institution include ISO, ISO 9001: 2015, LMS and ERP - ISO 2015 certified and enterprise resource planning (ERP).

The respondents indicated that a formal QMS enhance the provision of quality products and services since the use of QMS ensures that the department adheres to the best practices in service delivery. Based on the QMS, the unit keeps service delivery on track in line with the standards and the fixed and common quality standard are monitored and this creates a sense of obligation. Besides, the respondents noted that curriculum implementation is focused and guided by the QMS requirements.

The respondents indicated the extent to which the system in use addresses various measures as shown in Table 1.

Table 1: Extent to which System in Use Address various Measures

	0 (%)	1 (%)	2 (%)	3 (%)	4 (%)	Not Sure (%)
1. Engaging qualified staff	7.1	0.0	28.6	28.6	14.3	21.4
2. Design, development, review and delivery of a curriculum	7.1	0.0	35.7	28.6	14.3	14.3
3. Alignment of the curriculum with national and international priorities	7.1	7.1	14.3	28.6	21.4	21.4
4. Curriculum accreditation with regulatory authorities requirements	7.1	7.1	28.6	28.6	7.1	21.4
5. Attraction of qualified students	0.0	7.1	14.3	57.1	7.1	14.3
6. A variety of delivery modes for the curriculum	7.1	0.0	14.3	57.1	7.1	14.3
7. Mechanisms for curriculum assessment	0.0	7.1	14.3	57.1	7.1	14.3
8. Resources supporting teaching and learning	0.0	7.1	7.1	57.1	21.4	7.1

Table 1 reveals that most of the respondents demonstrated that QMS address engagement of qualified staff to a high extent (28.6%), design, development, review and delivery of a curriculum to a moderate extent (35.7%) and alignment of the curriculum with national and international priorities to a high extent (28.6%). The findings also showed that QMS addresses the attraction of qualified students to a high extent (57.1%), a variety of delivery modes for the curriculum to a high extent (57.1%), mechanisms for curriculum assessment to a high extent (57.1%) and resources supporting teaching and learning to a high extent (57.1%).

Respondents were also to specify the degree of change in various academic performance measures at the University of Nairobi for the last two (2) academic years as shown in Table 2.

Table 2: Perceived Change in Academic Performance Measures

	Significantly decreased (%)	Slightly decreased (%)	No change (%)	Slightly increased (%)	Significantly increased (%)
1. Student enrolment	20	20	0	60	0
2. Student dropout rates	20	40	20	20	0
3. Student completion rates	20	0	0	60	20
4. Graduate throughput	20	20	0	60	0
5. Lecturer-student ratio	0	20	80	0	0

From Table 2, the majority of the respondents (60%) indicated that for the last two academic years' student enrolment, student completion rates and graduate throughput slightly increased. However, most of the respondents indicated that student dropout rates slightly decreased as shown by 40% and that the lecturer-student ratio had not changed as shown by 80 per cent.

With the implementation of the ISO system in use, the respondents were tasked to indicate the extent of enhancement in various performance metrics over the last two (2) academic years as shown in Table 3.

Table 3: Perceived Level of Improvement in the various Performance Metrics

	Significantly decreased (%)	Slightly decreased (%)	No change (%)	Slightly increased (%)	Slightly increased (%)	Significantly increased (%)
1. Punctuality	12.5	0.0	12.5	31.3	43.8	0.0
2. Class attendance	12.5	0.0	12.5	12.5	62.5	0.0
3. Accidents during learning	56.3	0.0	6.3	0.0	25.0	12.5
4. Academic & technical staff competencies	6.3	18.8	12.5	6.3	31.3	12.5
5. Teamwork and cooperation	6.3	0.0	18.8	6.3	56.3	0.0
6. Communication between academic staff and students	6.3	0.0	12.5	6.3	62.5	0.0
7. Attitudes towards quality by academic staff and students	6.3	0.0	12.5	12.5	50.0	6.3
8. Number of visits by accreditation bodies	6.3	0.0	37.5	12.5	25.0	6.3

Table 3 shows, most of the respondents (43.8 per cent) indicated that punctuality significantly increased as shown by 43.8 per cent, class attendance significantly increased (62.5 %), academic and technical staff competencies significantly increased as shown by 31.3 per cent, that teamwork and cooperation significantly increased as shown by 56.3 per cent, that communication between academic staff and students significantly increased as shown by 62.5 per cent and that attitudes towards quality by academic staff and students significantly increased as shown by 50.0 per cent. However, most of the respondents noted that accidents during learning significantly decreased as shown by 56.3 per cent and that number of visits by accreditation bodies did not change as shown by 37.5 per cent.

The study conducted regression analysis at 95% level of confidence to establish the influence of ISO 9001 Standards adoption on academic programmes' quality in Kenya universities. From the model summary, the adjusted R square was 0.748 implying that 74.8 per cent of the variation in the quality of academic programmes in universities in Kenya is explained by adopting ISO 9001 Standards. The remaining 32.1 per cent of the variations in the quality of academic programmes in universities in Kenya is accounted for by other factors.

Table 4: Analysis of Variance (ANOVA)

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig**
1	Regression	389.029	1	389.029	1001.408	.000
	Residual	130.53	336	0.388		
	Total	**519.559**	**337**			

The ANOVA results show that the relationship between the quality of academic programmes in universities in Kenya and adopting ISO 9001 Standards was significant since the F value is significant with p=0.00 <0.05.

Table 5: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	0.917	.874		1.049	.029
Adopting ISO 9001 Standards	0.909	.054	.865	16.833	.000

The regression equation from the findings was: -

$$Y=0.917 + 0.909X_1$$

From the findings the study found that if adopting ISO 9001 standards was held constant at zero, then the quality of academic programmes in universities in Kenya will be 0.917 which is significant since p=0.000 is less than 0.05. This implies that a unit change in adopting ISO 9001 Standards changes would lead to 0.909 units change in the quality of academic programs in Kenya universities.

According to Dumond and Johnson (2013), organizations implementing the ISO 9001 series are required to plan, implement, and manage QMS, which should comprise documentation, training of staff, and conducting of quality audits to determine the QMS progress and effectiveness. A study by Cruz *et al*. (2016) observed that while quality management approaches such as ISO should contribute significantly to the internal quality improvement including student performance, in most cases, the efforts do not yield positive results. The authors suggest that the quality systems should be implemented to guarantee student learning to ensure a high level of student performance rather than focusing only on the quality of teaching.

Attraction of qualified students, a variety of delivery modes, mechanism for curriculum assessment and resources supporting teaching and learning, were the various elements which scored highly among indicators highly associated with the quality of academic programmes. The elements of ISO highly associated with quality of academic program include; increased class attendance, teamwork and cooperation, communication between staff and students and decrease of accidents during learning.

CONCLUSIONS

The study concludes that ISO 9001 standards adoption significantly influence the academic programmes' quality in universities in Kenya. A formal QMS enhances academic programmes' quality in terms of curriculum delivery and implementation through; punctuality of students and staff, class attendance, academic staff competencies, communication between students and staff and attitudes towards quality. At the University of Nairobi, the study established that a formal QMS enhance the provision of quality academic programs.

The use of a quality management system ensures that academic units in the university adheres to the best practices in service delivery and keeps service delivery on track and in line with the standards

RECOMMENDATIONS

Curriculum implementation should be focused and guided by the QMS requirements because QMS highly addresses the alignment of the curriculum with national and international priorities. With the rapid changes in the business environment, curriculum quality should be reviewed constantly to match with the changing needs of the society.

REFERENCES

1. Ali, S. A. B., Ahmad, M. N., Zakaria, N. H., Arbab, A. M., & Badr, K. B. A. (2018). Assessing quality of academic programmes: Comparing different sets of standards. *Quality Assurance in Education*, *26*(3), 318–332. https://doi.org/10.1108/QAE-09-2016-0051
2. Cardoso, S., Rosa, M., J., Videira, P., & Amaral, A. (2017a). Internal quality assurance systems: "Tailor-made" or "one size fits all" implementation? *Quality Assurance in Education*, *25*(3), 329–342. https://doi.org/DOI 10.1108/QAE-03-2017-0007
3. Cardoso, S., Rosa, M., J., Videira, P., & Amaral, A. (2017b). Internal quality assurance systems: "Tailor-made" or "one size fits all" implementation*?* *25*(3), 329–342. https://doi.org/10.1108/QAE-03-2017-0007
4. Cheng, Y. C., & Tam, W. M. (1997). Multi-models of quality in education. *Quality assurance in Education*.
5. Cheung, A. C. K., & Man Wong, P. (2012). Factors affecting the implementation of curriculum reform in Hong Kong: Key findings from a large- scale survey study. *International Journal of Educational Management*, *26*(1), 39–54. https://doi.org/10.1108/09513541211194374
6. Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE publications.
7. Cruz, F., J. F., Gálvez, I. E., & Santaolalla, R., C. (2016). Impact of quality management systems on teaching-learning processes. *Quality Assurance in Education*, *24*(3), 394–415. https://doi.org/DOI 10.1108/QAE-09-2013-0037
8. Deming, W. E. (2012). *The essential Deming: leadership principles from*

the father of quality. McGraw Hill Professional.Vol. 11 No.1, pp.30-4.

9. Dill, D. D. (2007). Quality assurance in higher education: practices and issues. *The 3rd International Encyclopedia of Education*.
10. Dumond, E. J., & Johnson, T. W. (2013). Managing university business educational quality: ISO or AACSB? *Quality Assurance in Education*, *21*(2), 127–144. https://doi.org/DOI 10.1108/09684881311310674
11. Elken, M., & Stensaker, B. (2018). Conceptualising 'quality work' in higher education. *Quality in Higher Education*, *24*(3), 189–202. https://doi.org/10.1080/13538322.2018.1554782
12. Green, D., Ed. (1994). What is Quality in Higher Education? Concepts, Policy and Practice. In *What is Quality in Higher Education?* Taylor & Francis.
13. Harvey, L. (2005). A history and critique of quality evaluation in the UK. *Quality Assurance in Education*, *13*(4), 263–276.
14. Harvey, L., & William, J. (2010). Editorial: fifteen years of quality in higher education. *Quality Assurance in Education*, *16*(1), 3–36.
15. Haseena, V. A., & Mohammed, A. (2015). Aspects of quality in education for the improvement of educational scenario. *Journal of Education and Practice*, *6*(4).
16. Kagondu, R., & Marwa, S. M. (2017). Quality Issues in Kenya's Universities. *Journal of Higher Education in Africa/Revue de l'enseignement supérieur en Afrique*, *15*(1), 23-42.
17. Kinyanjui, K. (2013). The transformation of higher education in Kenya: challenges and opportunities. Mijadala on social policy, governance and development in Kenya, 9 (2) 26-43
18. Koskela, Lauri & Tezel, Algan & Patel, Viranjkumar. (2019). Theory of Quality Management: Its Origins and History. 10.24928/2019/0259
19. Machumu, H. J., & Kisanga, S. H. (2014). Quality assurance practices in higher education institutions: lessons from Africa. *Journal of Education and Practice*, *5*(16).
20. Matei, L., & Iwinska, J. (2016). *Quality Assurance in Higher Education: A Practical Handbook*. Yehuda Elkana Center for Higher Education Budapest, Hungary. https://elkanacenter.ceu.edu
21. Materu, P., & Righetti, P. (2010). Quality Assurance in Sub-Saharan Africa. *Research in Comparative and International Education*, *5*(1), 3-17.
22. Mugenda, O. M., & Mugenda, A. B. (2009). I 999: Research Methods.
23. Mugenda, O., & Mugenda, A. (2003). Research methods: Quantitative and Qualitative Methods. Nairobi, Rev editions.
24. Nabaho, L., & Turyasingura, W. (2019). An exploration of the 'African (Union Commission's)perspective' of quality and quality assurance in higher education: Latent voices in the African Quality Rating Mechanism (AQRM). *Tuning Journal for Higher Education*, *6*(2), 73–95. http://dx.doi.org/10.18543/tjhe-6(2)-2019pp73-95
25. Nganga, G. (,2019). 26 universities face probe over unapproved courses. Retrieved from URL. https://www.universityworldnews.com/post.php?story=20190220151231306
26. Odhiambo, G. O. (2011). Higher education quality in Kenya: A critical reflection of key challenges. *Quality in Higher Education*, *17*(3), 299-315.

27. QAA. (2014). *Recognition scheme for subject benchmark statements*. The Quality Assurance Agency for Higher Education.

28. Ryan, A., & Tilbury, D. (2013). Uncharted waters: Voyages for Education for Sustainable Development in the higher education curriculum. *Curriculum Journal*. https://doi.org/DOI: http://dx.doi.org/10.1080/09585176.2013.779287

29. Sallis, E. (2014). *Total quality management in education*. Routledge.

30. Seyfried, M., & Pohlenz, P. (2018). Assessing quality assurance in higher education: quality managers' perception of effectiveness. *European Journal of Higher Education*, *8*(3), 258–271. https://doi.org/10.1080/21568235.2018.1474777

31. Sohail, M. S., Rajadurai, J., & Rahman, N. A. A. (2003). Managing quality in higher education: A Malaysian case study. *The International Journal of Educational Management*, *17*(4), 141–146. https://doi.org/10.1108/09513540310474365

32. Teichler, U. (2004). Changing structures of the higher education systems: the increasing complexity of underlying forces. In *Diversification of Higher Education and the Changing Role of Knowledge and Research*.

33. UNESCO (2013), Measuring Education Quality, Ministerial Round table on the Quality of Education, Paris, UNESCO Institute of Statistics

34. Wanza, L., Ntale, J. F., & Korir, M. K. (2017). Effects of quality management practices on performance of Kenyan Universities. International Journal of Business and Management Review 5, (8) 53-70.