

Service Quality Performance amid ISO Certification in Public Universities in Kenya: Students Perspective using Service Quality Models

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-----ABSTRACT-----

The current study assessed students' perception on quality of services received in Kenyan public universities amidst adoption of ISO standards. The study focused on six elements of ISO Standards assessable by students and key quality performance indicators adopted from SERVQUAL, Gap and Nordic service quality models. In addition, the study assessed student's perception on service quality using the elements of service quality proposed by Payne. The study involved a sample of 384 students as guided by Krejcie & Morgan (1970), drawn from the four faculties in the university through stratified sampling. Structured questionnaire was used with 5-points likert scale; 1-strongly disagree to 5-strongly agree to gather student's perception on service quality performance in the university. The study reported low confidence among students on compliance of the universities with key ISO certification elements; customer focus, leadership guidance, people involvement, process based approach, continuous improvement and rational management. In addition, the study reported low satisfaction with service quality offered by the university. The study recommends a comparative analysis between public and private universities with respect to quality performance. Similarly, the study recommends an analysis to examine the inconsistency between ISO certification and below average quality performance in the public universities.

Key Words: Service Quality Performance, ISO Certification, Service Quality Models

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I. Introduction

Service quality continues to attract attention on both organizations and their stakeholders. To the business managers, quality delivery can be used as a strategy to achieve competitive advantage. Superior quality attracts and retains customers, leads to increased sales and improved business image and may result in improved overall business performance (Hamzah, Lee, & Moghavvemi, 2018). To the customer, quality is an important deliverable in any product or service as it determines the ability of a product to satisfy customer needs (Abdul, 2012). In the university sector, quality is not only important to the students but also to the industry and society in general. Quality of education translates into quality graduates with in turn translates into quality employers and employees and in return a productive and sustainable society. In realization of the importance of education, Kenyan Universities are largely guided by ISO standards. The current study examines the service quality performance in Kenyan university amidst ISO certification.

II. Literature Review

This section presents literature on service quality models, ISO certification and service quality performance.

2.1 Service Quality Models

The current study relies on propositions of SERVQUAL, Gap and Nordic service quality models to operationalize service quality performance. Review of these models is presented in this section.

2.1.1 American SERVQUAL Model

The SERVQUAL model determines service quality by comparing actual service performance and customer expectation. A service is considered of good quality if the actual service performance is higher than expected performance. The model proposes tangibles in the service environment, service delivery facility, equipment and process and communication mechanism in the service environment as dimensions of service

quality (Chingang & Lukong, 2010). Reliability dimension assesses the ability of the service to accurately deliver the promised quality. Responsiveness assesses willingness and promptness in offering service based on customer expectations. Assurance assesses the ability of service to inspire trust and confidence while empathy focuses on customized attention to customers. Assurance is an outcome of knowledge and courtesy (Naik, Gantasala, & Prabhakar, 2010; Siami & Gorji, 2012).

Similarly, modified SERVQUAL model operationalizes service quality as a function of reliability, responsiveness, empathy, assurance, accessibility, affordability and tangible factors within the quality environment. The model indicates that the outcome of service depends on internal judgment of customer on the service perceived (Siami & Gorji, 2012). Through SERVQUAL service quality model, the service quality dimensions can further be operationalized into; tangible factors, service reliability and access, service provider's responsiveness, competence, credibility, understanding, courtesy, and communication, service environment's security and the customer him or herself.

Empirical literature indicates that SERVQUAL model has been widely adopted in the service industry, including hotel and hospitality, higher education (Rotta, Usuga, & Clavijo, 2019), health, finance and construction (Chingang & Lukong, 2010), telecommunications and airline services (Rahman, Zaman, & Hossain, 2018). Despite the popularity of SERVQUAL model in quality measurement, Chingang and Lukong (2010) in their empirical review established that the model cannot be generalized in all service environments because it has overlapping dimensions. They argue that while the model measurement of service quality, it does not inform on what guides customer preference.

2.1.2 Gap Model

Gap model was developed by Parasuraman, Zeithaml, and Berry (1985) and is very similar to SERVQUAL model (Chingang & Lukong, 2010). Gap model considers service quality as subjective concept with varying definition depending on ability of internal and external customer to contrast perceived quality and expected quality. Internal customer play important role in ensuring match between perceive quality and expected quality (Large & König, 2009). Just like SERVQUAL model, the Gap model conceptualizes service quality as the match between consumer expectations and perceived service outcome, the gap between expected service and perceived service, the gap between pre-service delivery expectations and post-service delivery perception (Siami & Gorji, 2012).

Gap model identifies five gaps that determine service quality outcomes. The first gap is the mismatch between customer expectation about service outcome and management perception about the expectations. The second gap is mismatch between management perception on consumer expectations and service quality specification. The third gap is mismatch between service quality specification and service delivery. The other two gaps are; mismatch between service delivered and communicated service and mismatch between service expected by consumer and service actually perceived by consumer (Nitin, Deshmukh, & Prem, 2005). The service quality gaps can be presented through gap analysis model presented in figure 1 below.

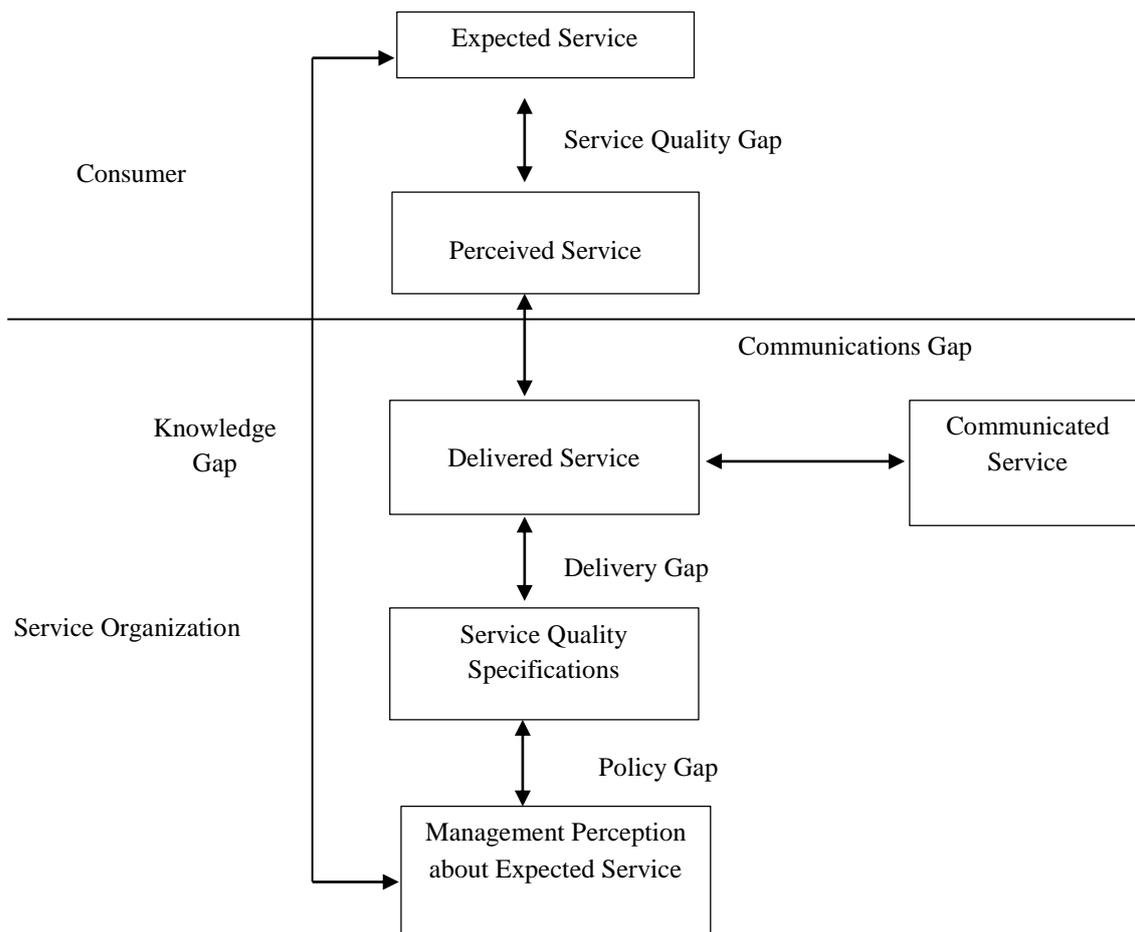


Figure 1 Gap Analysis Model

Source: Nitin, Deshmukh, & Prem (2005)

According to the gap model, superior service quality is realized when perceived service quality is greater than the expected quality. Therefore, in order to offer satisfactory or superior service quality, management must try to minimize the gaps between customer expectation standard and service level standard given by $Q = P - E$ **Equation 1** where Q is service quality, P is perceived quality, and E is expected quality. Gap model can be used in service quality environment to detect faults that may lead to customer dissatisfaction. According to Siami and Gorji (2012), the gaps can be assessed using the factors of service quality operationalized from the gaps identified in the gap model. The factors include tangibles in the service environment, service reliability, service provider responsiveness, competence and courtesy and service credibility and complementary such as security, ease of competence and understanding, quality access and assurance and effective communication.

2.1.3 Nordic Model

Nordic model conceptualized service quality into technical dimension and functional dimension. Technical quality is concerned with the actual service consumers receive from the service organization (Munthiu, Velicu, Tuta, & Zara, 2014). Functional quality on is on the other hand concerned with how the service is delivered to consumers. Interaction of technical functional dimensions brings forth the third dimension, organizational image (Polyakova & Mirza, 2015). According to this model, an organization must understand market perception of service quality and match delivered service with perceived service (Nitin et al., 2004). The Nordic model is presented in Figure 2 below.

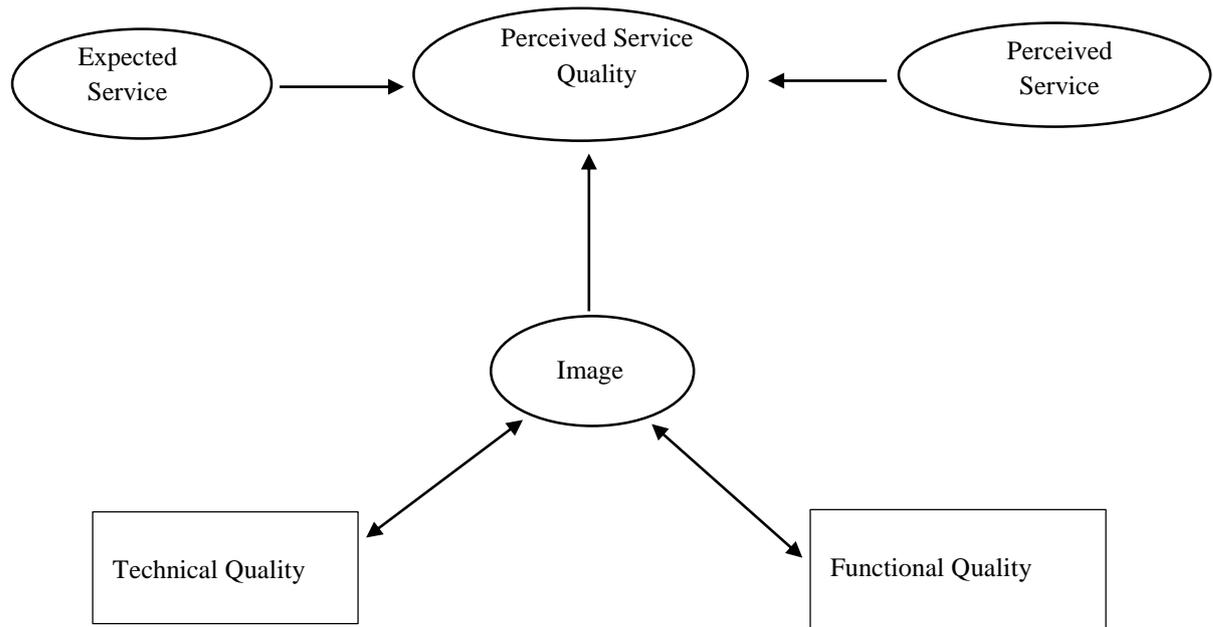


Figure 2. Nordic Model

Source: Nitin et al. (2004)

2.2 Service Quality

Service quality is one of the focal points in literally all service environments. Consequently, study on service quality is gaining momentum in various sectors. Study by Prakash (2019) reveals that more than 60 models have been developed by researchers to conceptualize and actualize optimum service quality. The increased focus on service quality is attributed to empirical evidence of direct association between service quality (Khudri & Sultana, 2015) and operational benefits relating to customer satisfaction, business sustainability and organizational performance in general (Hirtz et al., 2015).

Service is highly intangible, heterogeneous and perishable (Fragoso & Espinoza, 2017). Similarly, service quality is influenced by customer perception, expectations and service environment (White, 2018). Consequently, perceived service quality is highly dependent on perceptions of customer of the service itself, service provider and service environment (Agus, 2019). According to Narteh (2018), service quality should be assessed in terms of customer's perception of the service dimensions as delivered by the organization. Service quality can be assessed in terms of quality delivery processes, quality outcomes (Patyal & Koilakuntla, 2017).

Various definitions have been put forward to service quality. Service quality is concerned with consistency, completeness, availability of the service itself (Kaura, Prasad, & Sharma, 2015) and competency of the service providers (Gregory, 2019). Service quality can be operationalized in terms of; reliability, credibility, responsiveness of the service itself, courtesy, communications and knowledge of service provider and security and tangibles of the service environment. Service quality can be defined in terms of discrepancies between customer expectations and organizational service delivery (Narteh, 2018). It is the discrepancy between customer's perception and quality dimensions such as tangibles, responsiveness and empathy (Ramanathan, Win, & Wien, 2018).

Study on service quality is not new among scholars. Much research on service quality measurement, service quality and customer satisfaction have been significantly studied even in the late 1990s (Taylor & Baker, 1994). With dynamics in the service environment, advancements in technology and changes in customer's perception and expectations, there has always been an opportunity for new insights on the concept of service quality (Uzunboylu, 2016). Consequently, with changes in the market environment, organizations put into place measures to ensure service quality (Payne, 2018). Organizations can measure the level of service delivery by measuring service quality performance (Ghotbabadi, Feiz, & Baharum, 2015).

2.3 Service Quality Performance

Service quality performance can be assessed through the service quality dimensions such as; tangible service environment factors, reliability of the service, responsiveness of service providers, competency, courtesy and credibility environment (Agus, 2019). In addition to the dimensions identified above, SERVQUAL model

introduces assurance and empathy (Gregory, 2019; Kaura, Prasad, & Sharma, 2015). Munthiu, Velicu, Tuta and Zara (2014) have a completely different angle in operationalization of service quality. They adopt the thinking of Gronroos (1990) that quality has technical and functional dimensions. Technical dimension covers machines, processes, systems and human capital involved in offering quality. Technical dimension assesses nature of quality offered. Functional dimension on the other hand is concerned with appearance, attitudes and behaviors portrayed during service delivery and service accessibility. A functional dimension is concerned with how the service is offered.

Perez- Arostegui et al. (2020) identified number of complaints registered by customers, service delivery time, customer satisfaction and customer loyalty as the major construct of SQP. Continuous improvements in quality outcomes and satisfactory post-sale attention are key indicators of quality performance (Soares, Soltani, & Liao, 2017). Organization can achieve continuous improvement through involvement of people and application of appropriate tools and processes (Anttila & Jussila, 2017). Teoman and Ulengin (2018) argue that superior quality performance requires management commitment, customer focus, teamwork, continuous improvement and cooperative relationship between quality management.

According to SERVQUAL model, service quality is a product of tangibles, reliability, empathy assurance and reassurance (Srivastava, 2015). Quality and Standards Directorate (2020) argue that public service quality can be measured through consistency of the service, competence and responsiveness of service providers, ready availability of the service, effective communication and feedback, competence and understanding of the service providers and credibility, security and tangibles of the service system. It is therefore important that service providers understand service quality from all dimensions that customers regard as important and provide a package that suits the customer expectations (Prakash, 2019).

It is the desire of service organizations to deliver satisfactory, if not superior quality to customer. Many organizations formulate quality management strategies to deliver sustainable quality. This is not only to satisfy customers, but also to achieve competitive edge (Peffer, Tuunanen, Rothenberger, & Chatterjee, 2008). For an organization to successfully manage quality, quality strategy must be aligned to the overall organizational strategy and directions provided by organizational leadership (Chang, Chou, Miao, & Liou, 2019). Empirical literature provides some evidence of association between leadership and SQP. Leadership provides direction, common goal and motivation required for quality management (Breevaart, Arnold, Demerouti, & Derks, 2016). Schaubroeck, Lam and Peng (2016) presents that transactional and transformational leadership positively influence service performance. Notgrass (2014) reported that follower/leader relationships and leadership styles are determinants of quality outcomes.

Subjective nature of service quality coupled with globalization has led to enhanced attention on service quality standardization. Through standardization, service organizations are able to deliver somewhat internally acceptable service quality. In the public sector, adoption of international service quality standards is very evident across the world with the International Standards Organization (ISO) 9000 standard series being the mostly adopted service quality standards. In Kenya, in particular, adoption of ISO 9001: 2015, the latest version of the ISO 9000 series in public service organizations is on the rise (SGS, 2021).

Empirical literature indicates that adoption of international service quality standards positively influences service quality performance (Kaziliūnas, 2010). However, literature also indicates that not all organizations that are ISO 9001: 2015 certified achieve optimum service quality (Ilkay & Aslan, 2012). Chiarini, Castellani and Rossato (2019) identified e culture, training, awareness, digitized documentation and communication as key factors that should be present alongside adoption of ISO 9001:2015 in order to realize optimum service quality performance. Literature has also evidenced varying level of service quality performance among ISO 9001:2015 certified organizations (Pantouvakis, Psomas, & Kafetzopoulos, 2021). The inconsistency in available literature is an indication of need for further research on ISO 9001:2015 and service quality performance.

With advancement in technology, the use of information systems is evident in literally all organization whether manufacturing or service oriented. In service organizations, there is significant adoption of information systems (IS) in a bid to enhance service delivery and service quality performance. According to Perez-Arostegui, Benitez-Amado and Tamayo-Torres (2012), appropriate use of IS can significantly influence quality of service. They actually observe that service quality can serve as an indicator of effectiveness of an information system. Matsalia and Waithaka (2018) present that information system is one of the most effective tools towards enhanced service quality.

In this study, review of empirical literature on strategic leadership, quality standards, information systems and Service Quality Performance (SQP) is done with a view of understanding the relationship between the variables and identification of research gaps as well as formulation of research hypothesis for a study.

Payne (2018) argues that integration of technical and functional dimensions of service quality requires functional systems, appropriate processes and committed staff. Based on his argument, superior SQP is achieved through interaction of the three elements of service quality; processes, system and people. The elements of SQP are presented in Figure 3 below.

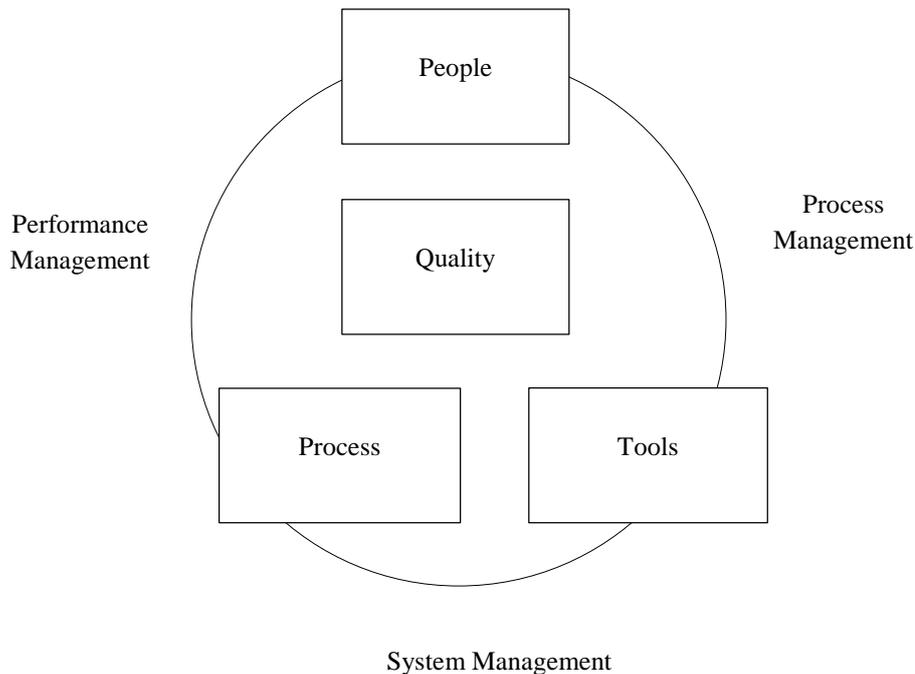


Figure 3. Elements of Service Quality Performance

Source: Payne (2018)

2.4 ISO Certification

ISO 9000 family is one of the popularly adopted quality standards. The ISO 9000 standards strive to achieve enhanced business efficiency and customer satisfaction quality management systems and procedures that ensure quality delivery conforms to specification (Adjei & Mensah, 2015). ISO 9001, first published in 1987, is the mostly adopted quality standards. This is partly because it can be applied in any organization, irrespective of size and leads to certification. Globally, more than 1 million organizations in more than 170 nations have adopted ISO 9001 standards. ISO specifies requirements for a Quality Management System (QMS). The most current ISO 9001 version is the ISO 9001: 2015 (ISO, 2020).

The ISO 9001: 2015 has been designed to be implementable in organizations irrespective of size and operations. Organizations that had adopted ISO: 9001: 2008 are expected to upgrade to ISO 9001: 2015. The ISO 9001: 2015 focuses on developing organizational culture that initiates behaviors, attitudes, and culture and processes that create optimum value to the business while ensuring the expectations of internal and external customers are met and exceeded (Bahamas Bureau of Standards and Quality (BBSQ), 2015). The quality management system enables organizations identify quality objectives determine resources and processes required deliver the desired quality performance. Human capital plays critical role in implementation of ISO 9001: 2015. Competence, awareness and communication are essential human capital ingredients very key in achieving quality performance through ISO 9001: 2015 standards.

The ISO 9001: 2015 applies the seven quality management principles to achieve sustainable quality performance. These principles include; focus on the customer, leadership guidance, people involvement, process based approach, continuous improvement, information based decision making and rational management (BBSQ, 2015). While the quality management principles are all important, leadership plays a crucial role in ensuring all the other principles are in place. According to Wilson and Campbell (2016), optimal SQM requires that organizational management integrates strategic knowledge management principles with quality management principles to develop working quality management policies.

The ISO (2015) identified five key responsibilities of management in adoption of ISO quality standards. These are; setting direction through quality policy, defining expectations through quality objectives,

assessing quality performance through management reviews, developing quality management capacity and ensuring effective communication on quality management. Leadership provides unity of purpose and quality direction (Wilson & Campbell, 2016). Organizational management develops strategic quality plan and quality objectives, develop human capacity, build appropriate quality management environment and develop and influence employees towards achievement of organizational quality objectives (ISO 2020). Management has a role of developing quality management strategies and creating capacity to ensure the strategies are executed. In addition, management must continuously monitor and evaluate quality management processes and take corrective actions to ensure quality control initiatives are executed as planned (BBSQ, 2015). Organizational managers must therefore be purposeful and result oriented (ISO Requirements, 2011).

III. Methodology

This study evaluates students' perception on service quality performance in public universities in Kenya. Students' perception was examined on evidence of conformance by the public universities with ISO requirements on service quality. The study focused on six ISO elements that can be perceived by students during their interaction with university service providers such as; customer focus, leadership guidance, people involvement, process based approach, continuous improvement and rational management. The study further examined students' perception on service quality performance using quality performance metrics adopted from SERVQUAL Model, Gap Model and The Nordic Model. A sample of 384 students was proportionately drawn from the 34 public universities in Kenya. Structured questionnaire with 5 points likert scale (1-strongly disagree to 5-strongly agree) was used to gather students perception on the extent to which elements of ISO certification are evident in the universities as well as the extent to which quality of service delivered by the universities meet key service quality performance indicators identified from service quality models. Mean and standard deviation was used to summarize the study outcome. Prior to actual data collection, the study conducted a pilot analysis on the research constructs. Validity and reliability analyses were conducted on 10% of the research sample and the elements used in the pilot test were not involved in the actual study. The results of reliability gave Cronbach alpha greater than 0.7 for all the variables confirming that the research instruments were reliable. Expert opinion was sought in addition to adoption of contemporary indicators for research variables to ensure validity of research items.

IV. Research Findings

A response rate of 95% was achieved in this study giving green light for analysis. From research analysis, the findings presented in this section were obtained.

4.1 Students Perception on ISO Certification

The study examined students' perception on adoption of ISO certification of the universities. The study focused on six elements of ISO certification; customer focus, leadership guidance, people involvement, process based approach, continuous improvement and rational management. A likert scale of 5 - very evident to 1 - not evident at all was used. The research findings were as presented in table 1.

Table 1: Students Perception on ISO Certification

Dimension	Mean	Standard Deviation
Customer focus	2.98	0.345
Leadership guidance	3.70	0.655
People involvement	3.97	0.549
Process based approach	3.08	0.790
Continuous improvement	4.07	0.785
Rational management	3.67	0.652

The low mean of 2.98 indicates that the respondents had a general feeling that the university's approach to quality is not customer oriented. The means between 3 and 4 indicates the students are unsure about the university's conformance with four elements of ISO certification; leadership guidance, people involvement, process based approach and rational management. Mean of 4.07 however confirmed that continuous improvement was evident in the university's service delivery system. The results generally indicate that the students feel that the universities are below average in adoption of ISO certification.

4.2 Perception on Service Quality

Students perception on quality of services offered by the university was assessed using the indicators proposed by the three service quality models; SERVQUAL Model, Nordic Model and Gap Model. The responses were as summarized in table 2.

Table 2: Perception on Service Quality

Model	Dimension of Service Quality	Mean	Standard Deviation
SERVQUAL Model	Reliability	2.96	0.556
	Responsiveness	2.99	0.561
	Empathy	3.75	0.371
	Assurance	3.88	0.658
	Accessibility	4.38	0.634
	Affordability	2.11	0.523
	Tangible Factors	2.44	0.558
Nordic Model	Technical Quality	3.09	0.517
	Functional Quality	3.73	0.526
	Organizational Image	4.50	0.836
Gap Model	Service Quality Gap	4.73	0.327
	Delivery Gap	4.52	0.654
	Policy Gap	4.22	0.559

From the findings in table 2, the low means below 3 indicate that the students feel that the universities offer unreliable and unresponsive services. There is low level of empathy and assurance. Similarly, the students feel that services offered by the universities are not affordable. Lastly, the students are not satisfied by the tangible factors the service delivery environment in general. Interestingly, the students felt that the university services were very accessible as confirmed by high mean of 4.38 and standard deviation of 0.634. The study reported gaps in all areas identified in the gap model with high means higher than 4. The first gap reported by respondents was mismatch between customer expectation about service outcome and management perception about the expectations. The second gap was mismatch between management perception on consumer expectations and actual perception. The respondents had general feelings that the universities are not in touch with the expectations of internal and external customers. The third gap is mismatch between service quality specification and service delivery. There was a perception that the existing policies and strategies are not able to deliver the promised quality outcomes by the universities. In addition, the study identified a mismatch between service delivered and communicated service and mismatch between service expected by consumer and service actually perceived by consumer

4.3 Perception on Quality Performance

The study further examined respondents' perception on quality performance of the universities using the elements of service quality performance proposed by Payne (2018). The study focused on process management, system management and performance management as realized through integration of people, tools and processes within the institutions. Using a 5 points likert scale (1-strongly disagree and 5-strongly agree), the responses were as summarized in table 3.

Table 3: Perception on Quality Performance

Elements	Mean	Standard Deviation
Process Management	2.86	0.672
Performance Management	2.69	0.663
System Management	2.80	0.548

Respondents had perception that the process management in the universities does not adequately guarantee service quality as evidenced by low mean of 2.86 and standard deviation of 0.672. While through ISO certification, the internal processes in the universities are expected to enable delivery services that meet international quality standards, it was evident to students that the processes within the university guarantees quality. According to the students, performance management by the university was inadequate. This is confirmed by mean of 2.69 and standard deviation of 0.663. Similarly, there was general perception that system management in the university is inadequate to guarantee acceptable service quality as revealed by low mean of 2.80 and standard deviation of 0.54.

4.4 Research Conclusions and Recommendations

The current study concludes that according to the students, elements of ISO certification; customer focus, leadership guidance, people involvement, process based approach; continuous improvement and rational management are not evident in the universities despite the universities being ISO certified. Similarly, the perceived service quality in Kenyan public universities is below average as assessed using the performance indicators identified by the service quality models and Payne's elements of service quality. The study recommends that further study be done to investigate the inconsistency reported in this study (students perception that service quality in the universities is below average despite the universities being ISO certified). Similarly, the study recommends a comparative analysis to compare quality performance in public and private universities.

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