

ESTABLISHMENT OF QUALITY OBJECTIVES AND ITS EFFECT ON POST-EXAMINATION SERVICES DELIVERY IN PUBLIC UNIVERSITIES IN KENYA

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Abstract

Institutions of higher education adopts ISO 9001 quality management systems to enhance the consistency of the services they provide, examination being one of the crucial services that calls for maintenance of quality. Several inconsistencies in post examination services delivery have been reported in Kenyan public universities which has raised questions on the extent to which the implementation of the ISO 9001 standard has led to quality service delivery. The study was guided by three objectives; to assess the existence of quality objectives in public universities, to determine the level of achievement of the quality objective on post examination services delivery and to determine the relationship between establishment of quality objectives and post examination services delivery in public universities in Kenya. A mixed methods research design was adopted. Purposive sampling was used to sample 6 Directors of Quality Assurance, 6 directors of Quality Management Systems and Performance Contracting and 6 deputy registrars (examinations) while 297 examination coordinators and 384 fourth year students were sampled using stratified sampling technique. Primary data was collected using semi-structured questionnaires and interview schedules. From the regression results obtained, it was evident that the establishment of quality objectives as per the ISO 9001:2015 QMS had a positive significant effect on post examination services delivery in Kenyan public universities given ($\beta = 0.723$, $p = .000$) and therefore, should be optimized. One of the recommendation was that university examination offices should devise and adopt integrated monitoring frameworks and systems to help track and communicate the realization of set targets defined in their quality objectives guiding post examination services delivery.

Key words: *Establishment of Quality Objectives, ISO 9001:2015 Quality Management System, Post-Examination Services Delivery, Public Universities, Quality Management*

1.0 INTRODUCTION

World over, the concept of quality is a key concern in university education. Such a concern is informed by the several stakeholders impacted by university services and the quest for institutions to maintain their positions in the industry. Accordingly, as pointed out by Nadim and Al-Hinai (2016), in several countries, the issue of quality management (QM) has always remained a key priority in the agendas of universities and other institutions of higher learning. Quality management as described in the International Organization for Standardization (ISO) 9000 standard refers to the harmonized activities that are meant to direct and control an organization in all issues relating to

quality. Sallis (2014) notes that in universities, the concept of quality management explains the processes involved in ensuring that suitable standards are sustained and the quality of education optimized.

In order to facilitate effective quality management, the management of different organizations have prioritized the development of quality management systems (QMSs). A quality management system can be viewed as the organizational structure, procedures, processes and resources required by an organization in implementing quality management (Krajcsák, 2019). It is a management system that directs and controls quality issues in an organization and the most renowned quality management systems as argued by Niedermeier (2017) are the ones established on the ISO 9000 series of quality standards, an example of the standard being ISO 9001:2015 QMS. When implementing the ISO 9001:2015 QMS, organizations do so on the basis of a series of requirements clauses that guarantee constancy of management processes linked to quality in a system (Anttila & Jussila, 2017).

Organizations are for instance required to establish precise, quantifiable, attainable, realistic and time-bound quality objectives and also plan to accomplish them. Quality objectives under ISO 9001: 2015 QMS requirements ought to be in line with quality policy, they should be relevant to product or service conformance and they must enhance the satisfaction of customers (Abuhav, 2017). The established quality objectives ought to be set for relevant processes, procedures and have to contain a description of the responsible persons, the target and when it is intended to be attained (Murray, 2016). A considerable number of universities across the globe have sought to win the confidence of their stakeholders by implementing their QMSs with reference to the ISO 9001 quality standard. Hussein et al. (2017) observes that the ISO 9001 QMS is applicable to many academic processes among them examination and it ensures that students benefit from high quality academic programs and services as promised by their affiliated institutions.

Student examination is a key distinct function that is capable of impacting a university's reputation (Tremblay, Lalancette & Roseveare, 2012). The quality of education in these universities is determined by the way examinations are conducted. There are some notable challenges facing the post-examination processes in universities as highlighted in available literature which include the misplacement of examination answer scripts, miscalculation of scores/marks, late exam marking and results submission, lack of proper instruments for moderation, errors in recoding marks, missing marks as well as delayed issuance of results transcripts and degree certificates (Mwangi, 2018; Geraldo, 2019). These challenges have been cited as key threats to quality, reliable and valid examination processes in several universities.

In their research work, Abdi Rahman, Rahim and Mahyuddin (2006) reported that prior to certification, student examination processes in Malaysia HEIs were highly disorganized. However, with the transition to ISO 9001 (2000) quality management systems, different departments/faculties were able to maintain proper students' examination records including the continuous assessment grades and answer scripts. This made their retrieval easier in cases where students had queries. With reference to Turkish universities, Eryilmaz et al. (2016) noted that after ISO 9001 QMS certification, the number of examination related complaints and petitions among students declined significantly. Moreover, students could take their student certificates within same day.

In Kenya, however, Gudo, Ongachi and Olel (2011) provided proof that things did not change on account of new procedures, regulations or documentation that came with the adoption of ISO 9001 QMSs. Data provided by the Kenya Bureau of Standards (KEBS) in 2015 showed that between 2012 and 2015, about 25,390 cases of non-conformities relating to examination processing procedures were reported in 14 ISO 9001:2008 certified public universities (KEBS, 2015). This scenario confirmed the argument by Ongaki and Nyamiobo (2014) that implementing QMS was not free from challenges and realizing its pledged advantages was not easy. On this basis, this study

sought to assess the effect of establishment of quality objectives as per the ISO 9001:2015 QMS on post examination services delivery in Kenyan public universities. This study area has remained highly unexplored in existing literature as available literature mostly focuses on service delivery in general in these universities. Delineating the effect of the establishment of quality objectives as per the ISO 9001:2015 QMS on examination services is crucial since it has been noted that the implementation of this QMS in nonacademic services is much easier compared to academic services.

1.1 Statement of the Problem

In recent years, there has been a rapid growth in the number of universities in Kenya. The expansion of university education has led to the question on the quality of education being offered in these universities. In several occasions, various stakeholders in the higher education sector have raised a number of complaints regarding the quality of examination services delivery in public universities (Bisieri & Ondego, 2017). A quality audit report produced by the Commission for University Education (CUE) in 2017 revealed that some universities had a chronic problem of missing student marks leading to delayed graduation for students at all levels, lengthy procedures for obtaining examination results and transcripts and validity of degrees awarded (CUE, 2017; CUE, 2019). There has been reports on errors in recording marks and loss of students' examination data which has led to frustration when students miss to graduate (Mwangi, 2018; Ondari, 2019). These inefficiencies occurred in public universities that have adopted ISO 9001:2015 QMS and has resulted in stakeholders doubting the extent to which ISO QMSs translate to quality service delivery in public universities.

1.2 Research Objective

The study was guided by three objectives; to assess the existence of quality objectives in public universities in Kenya, to determine the level of achievement of established quality objective as required in ISO 9001:2015 QMS, to determine the relationship between quality objectives and post-examination services delivery in public universities in Kenya.

1.2.1 Research Hypothesis

H₀: Establishment of quality objectives as per the ISO 9001:2015 QMS does not significantly affect post-examination services delivery in public universities in Kenya.

3.0 Research Methodology

The study employed a mixed methods research design. Both qualitative and quantitative methods were applied concurrently where they were equally prioritized but the data emanating from them was analyzed separately. At the interpretation stage however, the findings from the two methods were combined. By employing this research design, the research problem was better understood as the data obtained was different but complementary. Moreover, the validity of the study findings was enhanced as it was possible to maximize the strengths of each of these methods while at the same time minimizing their weakness. The study was carried out in the main campuses of all the 26 ISO 9001:2015 certified public universities in Kenya. These campuses were spread out across different counties in the country. Their choice was informed by the fact that it was easier and convenient to access them. Also, it was possible to get study participants from different faculties in one place. The target population of the study consisted of 26 directors of quality assurance, 26 directors of QMS and PC, 26 deputy registrars (examinations), 1229 examination coordinators and 368100 fourth year students (CUE, 2017; Universities' Academic Divisions, 2020). A census of all the 26 Kenyan

public universities that had been ISO 9001:2015 certified was taken. Purposive sampling was used to select 6 directors of quality assurance, 6 directors of QMS and PC and 6 deputy registrars (examinations), 3 from established universities (established before 2010) and 3 from the young public universities (established after 2010) respectively. Stratified sampling method was used in selecting 297 examination coordinators and 384 fourth year students. The samples in this case were determined using the Krejcie and Morgan (1970) statistical table. The universities were classified as either established or young. The primary data used was collected using semi-structured questionnaires and interview schedules. Questionnaires were administered to the examination coordinators and students while the rest of the targeted examination process stakeholders were interviewed. Validity of the Research Instruments was gauged based on the expert opinion of two officials from the Commission of University Education and the thesis supervisors. Inter-item consistency analysis through the use of Cronbach's alpha coefficients was adopted to determine the reliability of the research instruments. The reliability test results after deleting redundant items revealed that all the constructs were reliable as the Cronbach Alpha coefficients obtained were > 0.7 . Qualitative reliability was ensured through the documentation of all procedures and communications and also setting up a detailed official interview protocol. Comparing the study findings with those of other independent studies was also undertaken. The questionnaires were self-administered through the drop and pick later method and through online platforms. Face to face interviews were conducted with the selected key informants. Both descriptive analysis and inferential analysis were conducted.

4.0 Results and Discussions

4.1 Existence of Quality Objectives in Public Universities in Kenya

From the descriptive analysis conducted, the majority of the examination coordinators, 210 (93.8%) stated that their universities had in place quality objectives that specifically guided the post examination process. This was a demonstration that quality was a pertinent goal that Kenyan public universities strived to institutionalize and achieve in their post examination services delivery. Hence, in order to realize this goal, these universities defined and pursued various quality objectives in the long term. Similar findings were reported by Osumba (2014) who found that both public and private universities in Kenya recognized the significance of quality objectives in meeting their quality needs/requirements in the delivery of core services. Abuhav (2017) also argued that in the course of implementing their QMSs, ISO 9001: 2015 certified organizations were required to establish quality objectives for all their relevant processes and progress in their achievement monitored. Table 1 outlines some of the quality objectives guiding the post examination processes in Kenyan public universities.

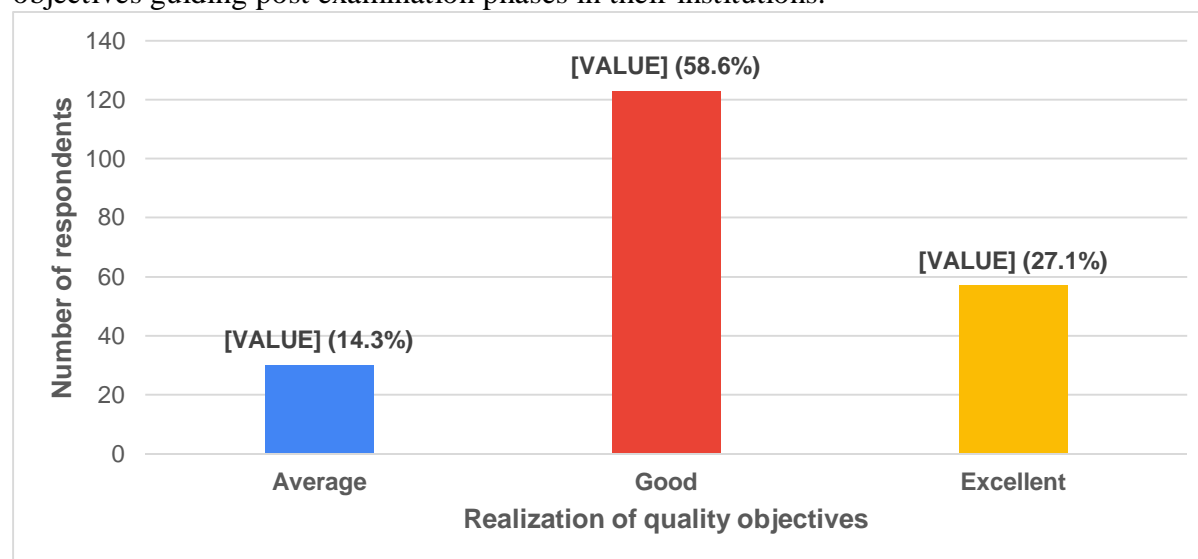
The findings outlined in Table 1 demonstrated that there were several common quality objectives that public universities in Kenya had set out to guide post examination services delivery. However, there were slight variations in the specifications of these objectives across the universities. From the responses given, some universities for instance, specified the duration of examination marking to be 3 weeks, others 4 weeks while others set the duration at 5 weeks after the last day of examinations.

Table 1: Quality Objectives Guiding the Post Examination Phase in Public Universities

Quality objectives	Frequency	Percentage
1. Verification of examination marks or results before release.	203	96.7
2. Have a set period for entry of students marks in to the system	200	95.2
3. Strict adherence to set deadlines for processing of marks	192	91.4
4. Reduce the incidence of missing marks and other examination results related complaints.	185	88.1
5. Ensure that examination results issues and queries are resolved within the set timelines.	177	84.3
6. Ensure that the examination marks are approved by the university senate before release.	162	77.1
7. Allow students who have failed examinations to sit for supplementary examinations before the official release of results.	150	71.4
8. Consideration and close scrutiny of school results, cases of appeals and remarking by the University Board of Examiners	146	69.5
9. Timely issuance of results transcripts after the completion of academic year upon request	134	63.8
10. Ensure efficiency, consistency, transparency and integrity in marking, results' processing and issuance of results slips.	103	49

Source: Field Data (2021)

Figure 1 below reveals the extent to which public universities in Kenya had realized the quality objectives guiding post examination phases in their institutions.



Source: Field Data (2021)

Figure 1: Realization of Quality Objectives Guiding the Post Examination Phase

The results displayed in Figure 1 revealed that 30 (14.3%) of the examination coordinators rated the realization of these quality objectives as average, 123 (58.6%) rated their realization as good while 57 (27.1%) noted that the achievement of these quality objectives was excellent. It was thus concluded that in most of the Kenyan public universities, the set quality objectives guiding post examination processes had not been fully realized. This observation can be backed up by the various complaints related to post examination services delivery stated by the students, for example, unsettled cases of missing marks and delayed processing and release of results (Table 4), issues that

were also identified by a large number of the examination coordinators. Similar observations were made in the study conducted by Mutuku and Kisimbii (2017) on service delivery in Kenya's ISO 9001 certified public universities. The study revealed that though these institutions had in place quality objectives that guided daily activities, several gaps had limited their achievement. ISO 9001:2015 standard calls for organizations to constantly pursue improvement in their processes so that they can realize their defined quality objectives across board.

The examination coordinators also reacted to some statements that reflected the level of establishment of quality objectives as per the ISO 9001:2015 quality management systems in their institutions. Their responses are as captured in Table 2.

Table 2: Establishment of Quality Objectives in Public Universities

Statement	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Mean	Std. Dev.
Well-defined quality objectives	1.80%	4.00%	7.10%	48.70%	38.40%	4.179	0.865
Quality objectives are highly consistent with quality policy.	1.80%	1.80%	19.60%	41.50%	35.30%	4.067	0.883
Quality objectives comply with requirements.	0.00%	8.00%	22.80%	39.30%	29.90%	3.911	0.919
Staff aware of the established quality objectives and their contribution to their realization.	0.00%	10.30%	19.20%	43.80%	26.80%	3.871	0.926
Adequate plans developed to achieve quality objectives and evaluate results.	4.50%	9.40%	15.20%	46.90%	24.10%	3.768	1.059
Achievement of target constantly monitored and communicated.	1.80%	18.30%	25.00%	41.10%	13.80%	3.469	1.002
Top management provides leadership, organization and resources needed to achieve planned quality objectives.	1.80%	13.80%	34.40%	37.90%	12.10%	3.446	0.936
Composite mean and standard deviation						3.816	0.601
Valid n=224							

Source: Field Data (2021)

The findings presented in Table 2 showed an overall mean score value for the construct (3.816) suggested that on average, public universities in Kenya had to a large extent established quality objectives as required under the ISO 9001:2015 quality management system. The universities had, for instance, largely prioritized having well-defined quality objectives that were highly consistent with their quality policies. Nonetheless, other aspects such as constantly monitoring and communicating the progress made in achieving the targets and also their top managements always providing the leadership, organization and resources needed to achieve the planned quality objectives in all their relevant functions were prioritized only to a moderate extent, on average. The above findings supported the argument by Ongaki and Nyamiobo (2014) that implementing QMS was not without challenges and realizing their pledged advantages was not simple.

Regarding the perceived relationship between the establishments of quality objectives as mandated under ISO 9001:2015 quality management system and post-examination services delivery in public universities, the findings indicated that such objectives improved post examination services delivery in these institutions. According to one of the directors QMS and PC, examination management systems were continually improved as universities strived to achieve set quality objectives. Quality

objectives as underlined by another director, QMS and PC, ensured that university staff efforts were directed towards delivering services as per students' expectations. One of the directors, quality assurance emphasizes that having in place quality objectives ensured that staff discharged their duties in compliance with set guidelines, procedures and standards and this resulted to quality post examination services. Nonetheless, two of the deputy registrars (examinations) argued that even though there were quality objectives in place, nothing much was done to achieve them. Consequently, examination related anomalies such as missing marks and incomplete results continued to persist in these institutions.

From the findings, it was concluded that for post examination services to improve, established quality objectives must be fully realized and that relevant staff should efficiently perform their duties. Magutu et al. (2010) argued that educational institutions should have in place quality objectives that can be applied in guarding against any flawed outputs from its services and activities. Osumba (2014) also emphasized that quality objectives were a key determinant of quality service delivery in Kenyan universities, their achievement boosting their standing in the world rankings. Mutuku and Kisimbii (2017) also noted that improved service delivery in ISO 9001 certified public universities in Kenya was contingent on the extent to which university staff were supported to achieve the set quality objectives.

4.2 Post-examination services delivery in Kenyan Public Universities

The results provided in Table 3 shows the reaction of examination coordinators to various statements presented as a reflection of post examination services delivery in their universities.

In Table 3 below, the composite mean value is 3.546 for the construct and its associated standard deviation 0.676. It was therefore argued that post examination services delivery in public universities in Kenya was largely satisfactory from the perspective of the examination coordinators expect for a few areas that pertained to the speed and accuracy in the production of reports, graduation lists, transcripts and degree certificates as well as the reported cases of missing marks. The views held by the examination coordinators were largely supported by the interviewed deputy registrars (examinations), directors of QMS and PC and directors, quality assurance. Nonetheless, they contradicted the views held by the sampled students who seemed to complain about the post examination services delivered by their departments/faculties.

Table 3: Examination Coordinators' Response on Post Examination Services Delivery

Statement	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Mean	Std. Dev.
Grades and certifications awarded fair and unbiased.	1.80%	6.20%	15.60%	49.60%	26.80%	3.933	0.913
Quality of exam results rarely questioned.	1.80%	9.80%	21.90%	34.40%	32.10%	3.853	1.038
Number of petitions on faulty grades has declined immensely.	1.80%	8.00%	22.30%	42.40%	25.40%	3.817	0.965
Students able to promptly and easily access exam results once released.	1.80%	12.50%	18.80%	42.00%	25.00%	3.759	1.022
Exam results related complaints and anomalies addressed on time, in an objective and fair manner.	4.90%	7.60%	22.80%	45.10%	19.60%	3.670	1.032
Examination results released	5.80%	16.50%	12.10%	43.30%	22.30%	3.598	1.171

to students on time.

Production of reports,

graduation lists, transcripts

quick and devoid of errors.

No reported cases of missing

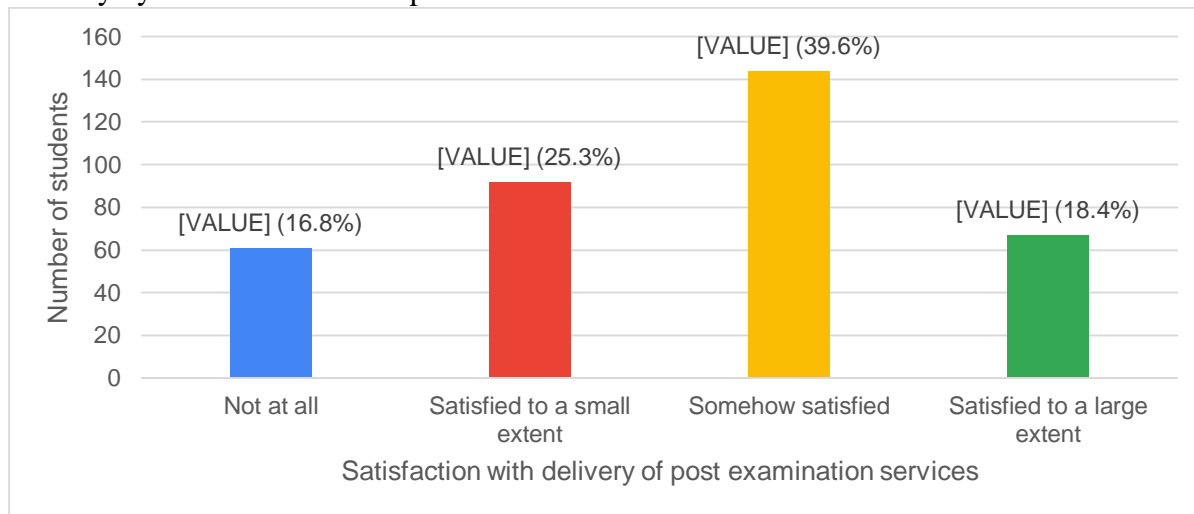
student marks.

5.40%	20.50%	25.90%	29.90%	18.30%	3.353	1.154
32.10%	26.80%	15.60%	21.40%	4.00%	2.384	1.247
Composite mean and standard deviation					3.546	0.676

Valid n=224

Source: Field Data (2021)

The results in Figure 2 showed the level of students' satisfaction with post-examination services delivery by their faculties or departments.



Source: Field Data (2021)

Figure 2: Students' Satisfaction with Post Examination Services Delivery

From the above findings, it was concluded that the post examination services delivered in public universities in Kenya were not considered entirely satisfactory by most of the students. This can be attributed to the various complaints the students had regarding these services for instance, the many unsettled cases of missing marks, delayed processing and release of results and unfair or inconsistent grades concerns also raised in several other studies such as Mwangi (2018) and Domeniter et al. (2018) which highlighted that there were several concerns or issues surrounding the delivery of post examination services in several universities. Table 4 summarizes the major concerns/complaints advanced by students pertaining to delivery of post examination services in public universities in Kenya.

Table 4: Major Students' Complaints on Post Examination Services Delivery

Complaints	Frequency	Percentage
Unsettled cases of missing marks	358	98.4
Delayed processing and release of results	353	97.0
Unfair or inconsistent grades	344	94.5
Poor handling of students with examination results related queries	340	93.4
Delayed release of results slips and transcript	316	86.8

Source: Field Data (2021)

4.3: The Relationship between Quality Objectives and Post-Examination Services Delivery in Public Universities in Kenya.

As shown in Table 5, the correlation between the establishment of quality objectives as per the ISO 9001:2015 QMS and post examination services delivery in public universities in Kenya was positive, strong and significant as illustrated by $r=.734$ and $p=0.000$. The findings were congruent with Mutuku and Kisimbii (2017) observation that improved service delivery in ISO 9001 certified public universities in Kenya relied on the extent to which the set quality objectives were achieved. The study argued that formulating guiding quality objectives was among the measures that improved service delivery in educational institutions.

Table 5: Establishment of Quality Objectives as per the ISO 9001:2015 QMS and Post Examination Services Delivery

		Post examination services delivery	Establishment of quality objectives
Post examination services delivery	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	224	
Establishment of quality objectives	Pearson Correlation	.734**	1
	Sig. (2-tailed)	0.000	
	N	224	224

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

Source: Field Data (2021)

To determine how the establishment of quality objectives as per the ISO 9001:2015 quality management system affected post-examination services delivery in public universities in Kenya, bivariate regression analysis was conducted.

From Table 6 below, the study found that establishment of quality objectives as per the ISO 9001:2015 QMS positively and significantly affected post-examination services delivery in public universities in Kenya. This finding was supported by ($\beta = 0.723$, $t = 16.105$, $p = .000$). These findings meant that a unit increase in the establishment of quality objectives as per the ISO 9001:2015 QMS would lead to enhanced post-examination services delivery in public universities in Kenya by 0.723 units. Since the calculated p value was less than 0.05, the null hypothesis was rejected and a conclusion made that the establishment of quality objectives as per the ISO 9001:2015 QMS significantly affected post-examination services delivery in Kenyan public universities.

Table 6: Significance of Regression Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.893	0.168		5.329	0.000
Establishment of quality objectives (X)	0.723	0.045	0.734	16.105	0.000

a Dependent Variable: Post-examination services delivery in public universities in Kenya

Source: Field Data (2021)

The following model was fitted based on the regression estimates obtained;

$$Y = 0.893 + 0.723 X$$

Where; **Y**= Post-examination services delivery in public universities in Kenya and **X**= Establishment of quality objectives as per the ISO 9001:2015 quality management system

According to Maputo et al. (2010) who found that quality objectives enabled educational institutions in Kenya to be centres of excellence by guarding against any flawed outputs from its services and activities. Osumba (2014) highlighted that chartered universities in Kenya took cognizance of the prominence of quality objectives in the delivery of quality standardized services across all their operations. Mutuku and Kisimbii (2017) also that improved service delivery in ISO 9001 certified public universities in Kenya was contingent on the extent university staff were supported to achieve the set quality objectives. The findings also affirmed Waweru, Odero and Buigutt (2020) observation that the formulation of guiding quality objectives was among the measures that academic institutions adopted to improve service delivery and student satisfaction as these quality objectives led to improved processes and set directions for continuous improvement.

5.0 Conclusions

The study concluded that public universities in Kenya had to a great extent implemented their ISO 9001: 2015 quality management systems by establishing quality objectives though several aspects still needed to be prioritized. The study also concluded that the establishment of quality objectives as per the ISO 9001: 2015 QMS requirements had significant positive effect on post-examination services delivery in these institutions and therefore, should be optimized.

6.0 Recommendations

The study recommended that: -

- 1) University examination offices should devise and adopt integrated monitoring frameworks and systems to help track and communicate the realization of set targets defined in their quality objectives guiding post examination services delivery. The feedback obtained from these systems can be used to hold the relevant offices and staff accountable for non-achievement of set targets.
- 2) University managements working closely with the Commission for University Education should ensure that the suitable leadership, organization and resources are deployed towards the achievement of set quality objectives on post examination services delivery.

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