



## A TQM-centered framework for improving student satisfaction in higher education institutions in Zambia

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### ABSTRACT

The study aimed to examine the application of Total Quality Management principles in selected Zambian higher education institutions and propose a framework for improving student satisfaction. The study employed a mixed-method study and used an explanatory sequential design. The population for quantitative data comprised 795 students and 16 participants for qualitative data, based on the principle of saturation. Quantitative data was collected through a questionnaire and qualitative data through semi-structured interview guides from 14 participants from higher education institutions, comprising quality assurance officers and one of the following: university leadership, administrative staff, and faculty members, and 2 representatives from the Higher Education Authority. For data analysis, quantitative data was analyzed using SPSS (Statistical Package for the Social Sciences) version 26.0, employing descriptive statistics, while qualitative data from the interviews was analyzed using thematic analysis. Findings show that proactive leadership, participatory decision-making, and student-centered approaches enhance satisfaction, while resistance to change, resource limitations, and inadequate training constrain implementation. The study concludes that a context-sensitive TQM framework can significantly improve academic quality, and this will lead to an improvement in student satisfaction in higher education institutions. The study recommends that regulatory bodies put quality standards that will guide institutions, while institutional leadership translates these requirements into internal strategies through resource allocation, policies, and a culture of quality. Effective implementation of core TQM pillars—stakeholder engagement, governance, quality assurance, continuous improvement, and adequate support systems—strengthens institutional performance and service delivery.

**Keywords:** Continuous Improvement, Higher Education, Leadership, Student Satisfaction, Total Quality Management, Zambia

### I. INTRODUCTION

According to Wong and Chapman (2022), student satisfaction is famously recognized as a fundamental indicator of institutional quality in higher education as it promotes student retention, learning outcomes, and institutional reputation. Further research by Wong and Chapman (2022) also shows that different forms of interaction (student-student, student-instructor) and service dimensions shape multiple facets of student satisfaction, including satisfaction with program, teaching, facilities, and support services, making a systemic approach to quality management necessary.

Meanwhile, Total Quality Management (TQM) is used in many service industries like education to improve quality and stakeholder satisfaction. And this is because it places a lot of emphasis on customer focus, leadership commitment, process orientation, staff involvement, and continuous improvement. Empirical studies of TQM in universities report a correlation between TQM implementation and improvements in institutional outcomes. For example, studies by Al-Zoubi et al. (2023) show that there is a positive association between TQM implementation and improvements in institutional outcomes such as greater staff engagement, better community service and improved processes. This implies that TQM principles can be adapted to higher education contexts to promote continuous quality improvement (Al-Zoubi et al., 2023).

According to Mwiya et al. (2017), in Zambia, concerns about service delivery in HEIs, such as limited learning resources, overcrowded lecture facilities, delayed administrative responses, and inconsistent student support, have been documented alongside national efforts to strengthen quality assurance through the Higher Education Authority (HEA). They further argued that these systemic and operational challenges call for the need for an integrated, context-sensitive quality-management framework that places students at the center of institutional processes.

Studies from different regions of the world show that student satisfaction is generally achieved when institutions provide good teaching, quality services, adequate infrastructure, and responsive administration (Butt & Rehman, 2010; Wong & Chapman, 2022). They further argue that in higher education institutions where Total Quality Management



(TQM) practices are weak or not applied consistently, coming up with a TQM framework that is structured well can help improve both academic and administrative services. This can be achieved by standardizing procedures, strengthening feedback systems, and promoting continuous improvement in service delivery (Wong & Chapman, 2022).

Since Zambia is striving to strengthen its quality assurance requirements and there is evidence that students are dissatisfied in some higher education institutions, this study sought to develop a Total Quality Management (TQM) framework that is suitable for Zambian HEIs. The framework will integrate TQM principles, local factors that influence student satisfaction, and Zambia's Quality Assurance Guidelines. It is designed to provide a practical guide for institutional leaders, quality assurance units, and policymakers to help improve students' learning experiences and overall institutional performance.

### 1.1 Statement of the Problem

While the Higher Education Authority has set minimum standards for all HEIs, the implementation of comprehensive quality management systems like TQM remains inconsistent across institutions. Recent local studies indicate uneven adoption of quality management systems such as TQM. For example, Bwalya (2023) observed that QA units often focus more on accreditation requirements than on internal QA functions. Additionally, a study by Mushumba et al. (2024) highlighted that the HEA's regulatory and quality efforts have had an impact on teaching and learning. However, progress remains slow and uneven. This inconsistent adoption of QAMS can negatively affect student satisfaction in HEIs. A lack of research in this area may hinder evidence-based policymaking, potentially leading to ineffective regulations and misallocated resources in higher education.

### 1.2 Research Objective

The objective of this study is to propose a TQM-centred framework for improving student satisfaction in Zambian Higher Education Institutions.

## II. LITERATURE REVIEW

### 2.1 Theoretical Review

This study is informed by the integrated framework, which combines Total Quality Management (TQM), the SERVQUAL model, and Stakeholder Theory to explain how student satisfaction can be improved in Higher Education Institutions (HEIs). TQM is used as the main management approach. It explains that quality improves when leadership is committed, staff are involved, processes are well managed, and the institution focuses on students' needs (Kemenade et al., 2020). In HEIs, TQM encourages institutions to redesign academic and administrative processes, use feedback, and keep improving their services so they can meet student expectations (Taroreh et al., 2022). For this study, TQM acts as the set of independent variables: leadership, continuous improvement, customer focus, staff involvement, and process management.

The SERVQUAL model then interprets how students assess service quality through five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Recent studies show that SERVQUAL is still effective for measuring student perceptions of teaching, facilities, administration, and support services, and that higher scores in these dimensions lead to higher student satisfaction (Sibai et al., 2021; Magasi et al., 2022). This means that good TQM practices should improve internal processes, which students will experience as better service quality across the SERVQUAL dimensions.

Stakeholder Theory supports why student satisfaction should be a priority. It states that HEIs ought to create value for their primary stakeholders, especially students, to maintain legitimacy, reputation, and strong performance (Langrafe et al., 2020). Studies also show that institutions that involve stakeholders, share information, and consider their needs tend to create better outcomes and better student experiences (Camilleri, 2021; Langrafe et al., 2020). Therefore, Stakeholder Theory explains why student satisfaction is an important result of TQM efforts.

### 2.2 Empirical Review

#### 2.2.1 TQM Framework for Improving Student Satisfaction in Higher Education Institutions in HEIs

From the global perspective, it has been found that higher-education institutions apply quality-management approaches, particularly Total Quality Management (TQM), in order to improve service delivery and student satisfaction. Scholars emphasize that TQM principles such as leadership commitment, customer focus, process orientation, continuous improvement, and staff involvement must be aligned with academic processes and student-support systems to generate meaningful quality gains (Kemenade et al., 2020). Studies that utilize service-quality models like SERVQUAL show that factors such as reliability, responsiveness, and assurance play a major role in shaping student satisfaction and retention in competitive higher-education environments (Kemenade et al., 2020). Within this global body of work, some studies give relevant insights into how TQM-related practices influence educational quality. For



example, BazmAmoon and Hejazi (2021) examined the implementation of TQM in an educational organization and found that TQM principles significantly improved staff job satisfaction, especially through leadership involvement, employee participation, and continuous improvement. Although the study focused on staff rather than students, it demonstrates how TQM shapes institutional culture and internal quality systems, conditions that indirectly support better student experiences.

A study by Nikkah et al. (2018) explored the influence of service quality and relationship-marketing practices on student satisfaction and retention at Payame Noor University. The study found that service-quality dimensions such as responsiveness, reliability, empathy, and assurance were strong predictors of student satisfaction, which subsequently enhanced retention. Although not explicitly framed as a TQM model, the findings closely align with TQM principles, stressing customer (student) focus and continuous improvement.

Around African HEIs, research studies apply SERVQUAL or SERVPERF to evaluate service quality and its effects on student satisfaction. Studies from countries like South Africa, Ghana, Ethiopia, Tanzania, and other countries have revealed gaps between student expectations and actual service delivery, especially regarding infrastructure, ICT resources, timely feedback, and the availability of academic support (Amoako & Asamoah-Gyimah, 2020; Lodesso et al., 2021; Mashenene, 2019; Minja et al., 2024). These gaps contribute to reduced satisfaction levels and stress the need for institutionalizing stronger quality-management practices. African scholars frequently recommend adopting continuous-improvement mechanisms, strengthening institutional leadership, and formalizing quality-assurance structures and approaches that align closely with TQM principles (Lodesso et al., 2021; Mashenene, 2019). However, the African literature consistently notes that the success of quality-management interventions is influenced by contextual factors such as resource constraints, organizational culture, and administrative capacity.

In Zambia, in as much as there are few studies with a focus on Total Quality Management (TQM), there is some robust evidence on service quality and student satisfaction. A study by Mwiya et al. (2019) revealed that all five SERVQUAL dimensions tangibility, reliability, responsiveness, assurance, and empathy have a very significant effect on the overall student satisfaction, with differences observed across modes of study. For instance, distance-learning students reported higher satisfaction than full-time students, implying that the way services are delivered influences how students perceive quality. Some other studies done in Zambia also point out challenges related to inadequate facilities, not enough library resources, slow administrative response, and weak student support services (Mwiya et al., 2019).

### III. METHODOLOGY

#### 3.1 Research Design

The study utilized a mixed-method study, and the design used was an explanatory sequential design to investigate how TQM principles are applied in Higher Education Institutions (HEIs) in Zambia and how they influence student satisfaction. First, quantitative data was collected to measure the levels of TQM implementation and determine the statistical relationship between TQM components and student satisfaction. After analyzing these results, qualitative follow-up data were gathered to help explain the quantitative findings in more depth, particularly why certain TQM practices were effective or not. Together, the two phases provided a stronger and clearer understanding of TQM's role in improving student satisfaction and supported the development of a TQM-based framework for HEIs.

#### 3.2 Study Sites

The study was conducted in seven Higher Education Institutions in Lusaka, representing both public and private institutions, where TQM application varied. These included: University of Zambia (UNZA), National Institute of Public Administration (NIPA), ZCAS University, Cavendish University Zambia, Zambian Open University, Lusaka Apex Medical University, and University of Lusaka. This diversity strengthened the study, making sure that the resulting TQM-based framework is relevant and applicable across Zambia's HEI sector.

#### 3.3 Sample Size and Sampling Procedures

The target population consisted of students, as their perceptions are central to measuring satisfaction and informing the TQM-based improvement framework. Sample size was calculated using Yamane's 1967 formula:

$$n = \frac{N}{1 + N(e)^2}$$

Using a confidence level of 95% and a 5% margin of error:

Public HEIs (population 36,700) n = 429

Private HEIs (population 35,700) n = 366

Total sample size = 795 students



For the qualitative phase, which utilized in-depth interviews. A total of 16 participants were interviewed, including 14 individuals from the HEIs comprising quality assurance officers and one of the following: leadership, administrative staff, and faculty members, with 2 participants from each institution and two representatives from the Higher Education Authority (HEA). Stratified random sampling was used across public and private institutions to ensure all HEI types were proportionately represented in developing the framework.

### 3.4 Data Collection Instruments

This study employed two primary data collection tools to capture both quantitative and qualitative information. Quantitative data were collected using a Student Satisfaction Questionnaire, which measured students' perceptions of service quality and overall satisfaction. For qualitative data, two semi-structured interview guides were used, one for HEA representatives and another for key stakeholders, including academic staff, administrative officers, and university leaders.

### 3.5 Data Analysis

The quantitative data collected from students through the questionnaire were analyzed using SPSS (Statistical Package for the Social Sciences) version 26.0, employing descriptive statistics. Microsoft Excel was used to create graphs for data presentation. Descriptive statistics were first applied to summarize the sample characteristics and provide an overview of the responses. Meanwhile, qualitative data from the semi-structured interviews were analyzed using thematic analysis.

## IV. FINDINGS & DISCUSSION

### 4.1 Quantitative Findings

#### 4.1.1 Demographic Characteristics

In terms of institutional affiliation, 89 (12.3%) were from Cavendish University, 90 (12.4%) from Lusaka Apex Medical University, 102 (14.1%) from NIPA, 90 (12.4%) from University of Lusaka (UNILUS), 193 (26.7%) from University of Zambia (UNZA), 63 (8.7%) from Zambia Open University (ZAOU), and 97 (13.4%) from ZCAS. The results are summarised in Table 1 below.

**Table 1**

*Demographic Summary of Institution*

		Frequency (n)	Percent (%)
Institution	Cavendish	89	12.3
	Lusaka Apex Medical University	90	12.4
	NIPA	102	14.1
	UNILUS	90	12.4
	UNZA	193	26.7
	ZAOU	63	8.7
	ZCAS	97	13.4

#### 4.1.2 TQM-Centred Framework for Improving Student Satisfaction

Descriptive statistics from Table 2 below show notable differences in how institutions perceive the potential of a TQM-centred framework to enhance satisfaction with academic services. UNZA recorded the highest mean score of 3.21, followed by ZAOU at 3.08, showing that respondents from these institutions see greater potential benefits. In contrast, Apex (2.59) and NIPA (2.57) had the lowest means, with median and mode values of 2 and 1, respectively, indicating more scepticism among their respondents. Meanwhile, most other institutions had a mode of 4 and medians of 4, showing a shared tendency toward optimistic expectations. The consistently negative kurtosis values suggest relatively flat distributions, pointing to less consensus and a broader spread of opinions across all institutions. Lastly, Standard deviations ranged from 1.29 (UNZA) to 1.51 (NIPA), reflecting moderate variability in responses.

**Table 2***Perception of TQM Framework*

	Mean	Mode	Median	Std. Dev.	Kurtosis
Cavendish	2.89	4	4	1.32	-1.61
UNILUS	2.84	4	3	1.31	-1.52
UNZA	3.21	4	4	1.29	-1.04
ZCAS	2.92	4	4	1.32	-1.54
ZAOU	3.08	4	4	1.41	-1.34
Apex	2.59	1	2	1.48	-1.64
NIPA	2.57	1	2	1.51	-0.88

When asked about the potential benefits of implementing a TQM-centered framework at their institution, respondents highlighted several key expectations. Most participants (37.3%) anticipated improved academic quality, while 25% expected increased engagement. Additionally, 18.6% of respondents believed that better support services would result, and 18.5% saw enhanced communication as a significant benefit. Some responses also indicated a desire for a more conducive environment, though these were less frequent. The distribution is shown in Table 3

**Table 3***Potential Benefits of Implementing a TQM-Centered Framework*

Variable	Response	Frequency (n)	Percent (%)
Potential benefits from implementing TQM framework	Improved academic quality	270	37.3
	Enhanced communication	134	18.5
	Improved academic quality	270	37.3
	Increased engagement	181	25.0
	Conducive environment	4	0.6

The frequency table 4 shows that concerns surrounding the implementation of a new TQM-centred framework varied among respondents, with the most significant issue being resistance from staff, cited by 34.0% of participants. Additionally, 23.9% expressed worries about disruptions to existing processes, while 20.6% and 20.2% were concerned about inadequate training and lack of resources, respectively. Although less common, some respondents (=1.4%) noted issues like slow transitions, resistance from students, and the challenge of aligning with global standards.

**Table 4***Concerns Regarding the Implementation of a TQM-Centered Framework*

Variable	Response	Frequency (n)	Percent (%)
Concerns about implementing a new TQM-centered framework	Disruption to current processes	173	23.9
	Inadequate training	149	20.6
	Lack of resources	146	20.2
	Resistance from staff	246	34.0
	Other	10	1.4

When respondents were asked how they would like the success of a new TQM-centred framework to be measured, the majority emphasized student-centred methods. About 35.5% preferred using feedback from students, while 33.1% supported measurement through student satisfaction surveys. Additionally, 20.3% suggested monitoring academic performance, and 10.4% recommended comparing institutional benchmarks. A few others (=0.7%) proposed a combination of these methods. The distribution is shown in Table 5.

**Table 5***Preferred Methods for Measuring the Success of a TQM-Centered Framework*

Variable	Response	Frequency (n)	Percent (%)
How the new TQM-centered framework to be measured	By comparing institution benchmarks	75	10.4
	By monitoring academic performance	147	20.3
	Through feedback from students	257	35.5
	Through student satisfaction surveys	240	33.1
	Other	5	0.7



To effectively implement and sustain a new TQM-centred framework, respondents identified training and development as the most critical resource, with 39.9% selecting it. This was followed by the need for strong leadership (22.4%) and financial resources (18.6%). Additionally, technological support was noted by 18.4% of respondents as essential. Notably, a few respondents (=0.7%) also highlighted factors like better communication, transparency, and a combination of leadership and training. The results are shown in Table 6 below.

**Table 6***Resources for Effective TQM Implementation*

Variable	Response	Frequency (n)	Percent (%)
Support necessary to effectively implement and sustain a TQM-centered framework	Financial resources	135	18.6
	Strong leadership	162	22.4
	Technological support	133	18.4
	Training and development	289	39.9
	Other	5	0.7

**4.2 Qualitative findings****4.2.1 Leadership Support and Involvement in TQM**

Across most institutions, the study revealed that leadership is consistently emphasized as an important tool that facilitates TQM implementation. Most institutions reported that leadership plays a proactive role in promoting quality assurance by creating enabling structures, resources, and policies. For example, UNZA staff affirmed that,

*“Leadership supports quality assurance initiatives; the office reports to the Vice-Chancellor.”*

At UNILUS, results were similar in nature, as a member of staff also outlined that management promotes quality assurance across all staff members and provides necessary resources.

A common practice reported across institutions such as ZAOU, APEX Medical University, and Cavendish University is senior leaders participating in policymaking or serving on quality assurance committees, signaling strong involvement from top-level management. This practice signifies that leadership does not operate at a distance but instead engages closely with the systems, ensuring quality. However, a minority view from Cavendish University administrative staff indicated that while leadership may be present, their decision-making process might lack inclusivity. They stated that,

*“Employees are not totally involved in decision-making.”*

This entails that leadership might not fully leverage participatory TQM practices in all instances. This also shows that leadership support, though widespread, may not always be executed through inclusive approaches. On the other hand, the HEA in Zambia shows a clear familiarity with the application of TQM principles in the quality management systems of higher education institutions. According to HEA, these principles, such as leadership, customer focus, continuous improvement, total employee involvement, and a system approach to management, are embedded in their regulatory tools and frameworks. As one representative stated,

*“Some of these principles are there in our tools,”*

indicating that HEA has institutionalized TQM elements into its evaluation mechanisms.

HEA identifies customer focus as a very significant TQM principle to promote and improve student satisfaction. The authority prioritizes the needs of the students by requiring institutions to conduct student satisfaction surveys and tracer studies, which give insights into learners' experiences and outcomes after graduation. HEA notes that many accredited institutions have begun to implement these and other TQM principles effectively. To support this, HEA plays a facilitative role by guiding institutions in the development and application of standards that incorporate TQM elements. This support makes sure that institutions not only meet compliance requirements but also strive toward continuous improvement in academic and administrative performance.

In all, all respondents pointed out that leadership is the best tool for effective quality assurance and TQM systems. Its visibility, commitment to quality, and willingness to resource initiatives helped create environments conducive to the other TQM principles to flourish.

**4.2.2 Customer Focus and Student-Centered Approaches**

According to the findings, customer focus was found to be a core principle underpinning their quality management practices as indicated by most of the institutions. There is a notable emphasis on student satisfaction, responsiveness to feedback, and placing students at the center of academic and administrative decisions. For example, ZCAS University Management declared, “

*We prioritize the needs of the students at all times.”*



Most institutions, including Cavendish University, UNZA, UNILUS, and APEX Medical University, use open-door policies, student surveys, and feedback platforms to engage students and gather input. At Cavendish University, this approach was articulated as,

*“Students even go to the office of the Executive Director when they have complaints, and this pushes employees to deliver.”*

From a quality assurance perspective, institutions such as UNILUS and Zambia Open University stressed that these various platforms are in place to allow students to air their concerns.

#### 4.2.3 Continuous Improvement Culture

One of the most commonly applied principles was found to be Continuous improvement. Most institutions reported that quality assurance frameworks are designed to ensure ongoing enhancement of services, teaching, and institutional systems. At APEX Medical University, it was noted that,

*“There is an office for continuous development programs.”*

Meanwhile, institutions like UNILUS and NIPA reported structured reviews of the processes and regular meetings as vehicles for improvement. A UNILUS staff member shared,

*“Every month, there are meetings to look at how we are performing. These meetings help us to improve in areas where we are not doing fine.”*

Similarly, NIPA offers tuition incentives for staff to pursue training and upskilling-demonstrating how investment in human capital contributes to overall quality enhancement. On the other hand, Cavendish University presented a unique cultural approach by linking continuous improvement to institutional values. Their practice of reflecting on “life experience books” reflects an embedded cultural mechanism supporting reflection and growth.

*“The unified culture where all members review life experience books promotes the culture of continuous improvement,”*

one staff member explained.

While the majority experience reflects positive use of this principle, a few institutions implied a need for more rigorous systems to monitor and sustain improvements. For example, Zambia Open University rated their overall TQM application as “average (5/10),” suggesting that although continuous improvement is valued, there may be operational or motivational challenges limiting its full realization. On the other hand, HEA indicated that the evaluation of quality assurance management systems in higher education institutions in Zambia is conducted through a combination of institutional audits, physical inspections, and incidental audits. These mechanisms serve to assess whether institutions comply with required internal processes and standards. One respondent noted,

*“We evaluate through institutional audits for internal processes, and also through inspections and incidental audits when something is reported to HEA.”*

It was stressed that the multi-pronged approach ensures both routine oversight and responsiveness to issues as they arise, thereby maintaining institutional accountability and promoting continuous quality improvement. The HEA emphasised that the quality assurance framework is anchored in a tool that outlines 11 specific criteria, each with defined standards that institutions are expected to meet. Monitoring is conducted to ensure full compliance with these benchmarks. As one participant explained,

*“The tool has 11 criteria, and each criterion has standards that need to be followed.”*

The enforcement of these standards is carried out through consistent engagement with institutions, allowing HEA to track progress and address any gaps in implementation. Significant changes have also been introduced under the HEA Amendment Act of 2021, which broadened the scope of higher education to include both universities and colleges. These updates were prompted by the need to realign higher education with current societal and developmental needs. Key reforms include the creation of two Deputy Vice Chancellor positions, one for academic affairs and another for research and innovation, as well as a focus on updating learning programs. These changes reflect a deliberate effort to strengthen leadership, foster innovation, and ensure that academic offerings remain relevant and responsive to the evolving landscape. In addition, HEA reported that the quality assurance practices of Zambian HEIs are largely comparable to international standards, with efforts being made to benchmark within the African continent. However, gaps still exist, particularly due to the relatively recent adoption of quality assurance systems in the country. As one HEA respondent pointed out,

*“Quality assurance is still new in Higher Education Institutions in Zambia.”*

Furthermore, it was stressed that there has been some resistance to change among stakeholders, which has hindered full acceptance and implementation. Respondents echoed that the resistance underscores the need for continued advocacy, capacity-building, and sensitization to foster a shared commitment to quality across the sector.



#### 4.2.4 Total Employee Involvement and Participatory Quality Assurance

Another theme that emerged relates to employee involvement and participatory assurance. The findings showed that Institutions like NIPA, ZCAS, and UNILUS highlighted that decision-making structures are inclusive and engage personnel across levels. For instance, a NIPA explained,

*“Each department must have at least 12 meetings in a year. Members of those departments make suggestions that are taken to high-level meetings.”*

At ZCAS, employee involvement is enabled through committees that handle specific quality areas. One staff member noted,

*“Through different committees that we have, different people are involved in decision-making, which reinforces collaborative decision-making and fosters ownership.”*

Most of the respondents noted that these structures often allow not only academic but also non-academic staff to be part of institutional improvements. Despite the general trend, a minority of respondents expressed that while structures exist, genuine involvement may be limited. For example, Cavendish University’s administrative staff shared that,

*“Employees are not totally involved in decision-making.”*

Similarly, Zambia Open University, despite reporting regular engagement, rated its implementation as only moderately effective. Nevertheless, across the board, the presence of departmental meetings, strategic plan consultations, and professional development opportunities reflects an understanding that involving employees enhances the success of TQM systems. Most of the respondents noted that the extent of that involvement largely depends on institutional leadership, resource allocation, and internal culture.

### 4.3 Discussion

#### 4.3.1 Perceptions of a TQM-Centered Framework and Student Satisfaction

The quantitative results in Table 2 show that institutions such as UNZA (Mean = 3.21) and ZAOU (Mean = 3.08) view strong potential for a TQM-centered framework to improve student satisfaction, whereas Apex (2.59) and NIPA (2.57) show more skepticism. The findings are reflective of the findings by Kemenade et al. (2020), whose findings proved that well-established institutions with structured QA systems exhibit higher confidence in TQM implementation. Similarly, Al-Zoubi et al. (2023) note that leadership commitment and process management are critical factors in institutional readiness for TQM.

The relatively flat distributions (negative kurtosis) entail diverse opinions, which resonate with some African studies reporting that the differences in student satisfaction perceptions are due to the differences in resources, institutional culture, and administrative capacity (Lodesso et al., 2021; Mashenene, 2019). These results indicate that while TQM is broadly seen as beneficial, the institutional context influences perceptions.

#### 4.3.2 Expected Benefits of Implementing TQM

Quantitative data in Table 3 shows that respondents expect benefits such as improved academic quality (37.3%), increased engagement (25%), enhanced communication (18.5%), and better support services (18.6%). The study findings present similar results to BazmAmoon and Hejazi (2021), who observed that TQM principles significantly improve internal quality and indirectly improve stakeholder satisfaction. Similarly, Nikkah et al. (2018) found that service-quality dimensions aligned with TQM (responsiveness, reliability, empathy, and assurance) positively influence student satisfaction and retention. The emphasis on improved academic quality and student engagement also resonates with Wong and Chapman (2022), who highlight that student-instructor and peer interactions, along with academic and administrative services, shape multiple facets of satisfaction.

In the Zambian context, the findings corroborate Mwiya et al. (2019), whose findings showed that tangible resources, reliable services, responsiveness, assurance, and empathy influence overall student satisfaction. The expectation of enhanced communication and support services shows the importance of student-centered processes, a key principle of TQM.

#### 4.3.3 Concerns about Implementing a TQM Framework

Concerns from Table 4, resistance from staff (34%), disruption of processes (23.9%), inadequate training (20.6%), and lack of resources (20.2%) reflect challenges highlighted in prior African studies. For instance, Amoako and Asamoah-Gyimah (2020) discovered that institutional culture and resistance, in most cases, limit the successful adoption of quality-management practices. Similarly, Mashenene (2019) emphasized that resource constraints and administrative limitations hinder continuous improvement in African HEIs. Qualitative findings reinforce these concerns. At Cavendish University, respondents noted limited employee participation, while Zambia Open University rated TQM implementation as average. These challenges are consistent with global TQM studies, which stress that leadership and staff engagement are crucial for overcoming resistance and sustaining quality initiatives (Kemenade et al., 2020; Al-Zoubi et al., 2023).



#### 4.3.4 Measuring the Success of TQM Implementation

On measuring the success of TQM implementation, the study revealed that respondents preferred student feedback (35.5%) and student satisfaction surveys (33.1%) to evaluate TQM success Table 5. The findings show similar traits with SERVQUAL-based studies (Sibai et al., 2021), which emphasize that student perceptions of service quality, tangibles, reliability, responsiveness, assurance, and empathy directly influence satisfaction. HEA's reliance on tracer studies and surveys further validates the use of student-centered evaluation methods, confirming that effective TQM implementation must incorporate continuous feedback mechanisms.

#### 4.3.5 Resources Needed for Effective TQM Implementation

The findings in Table 6 also show that respondents prioritized training and development (39.9%), leadership support (22.4%), financial resources (18.6%), and technological support (18.4%). Similarly, Kemenade et al. (2020) also put emphasis on staff involvement and capacity-building as a foundation for TQM success. Lodesso et al. (2021) stress that resource availability, leadership, and infrastructure influence quality-management outcomes in African HEIs. Qualitative evidence from UNILUS, NIPA, and HEA demonstrates that structured training programs, monthly reviews, and leadership engagement are critical for sustaining continuous improvement, confirming that TQM requires both human and material resources.

#### 4.2.6 Leadership Support and Involvement

Studies by Al-Zoubi et al. (2023) and Kemenade et al. (2020) present that Leadership is key to successfully implementing TQM. Likewise, the study findings support this, as it was also revealed that leadership is a critical component that facilitates or enables TQM. Institutions like UNZA and ZAOU demonstrate proactive leadership engagement, aligning with findings by BazmAmoon & Hejazi (2021), which show that leadership involvement in QA committees improves institutional quality culture. Minority views from Cavendish University highlight that leadership effectiveness is contingent on inclusivity and participatory decision-making, echoing Amoako & Asamoah-Gyimah (2020) who noted similar constraints in African contexts.

#### 4.3.7 Customer Focus and Student-Centered Approaches

The strong emphasis on student-centeredness at ZCAS, UNZA, and Cavendish supports prior research showing that customer focus in TQM enhances satisfaction (Nikkah et al., 2018; Wong & Chapman, 2022). Mechanisms such as open-door policies, feedback platforms, and surveys reflect TQM principles of customer focus and continuous improvement. However, gaps such as non-incentivized QA circles at UNZA highlight the challenge of operationalizing these practices, aligning with Mwiya et al. (2019), who noted uneven student empowerment in Zambian HEIs.

#### 4.3.8 Continuous Improvement Culture

Continuous improvement is widely adopted across institutions, manifested through structured reviews, professional development, and cultural practices (e.g., Cavendish's life experience books). This confirms Al-Zoubi et al. (2023) and Kemenade et al. (2020), who report that TQM encourages iterative improvements to processes and services. Variability in implementation effectiveness, such as ZAOU rating TQM as "average," aligns with African studies noting resource constraints and limited monitoring as barriers to sustaining continuous improvement (Lodesso et al., 2021).

#### 4.3.9 Total Employee Involvement and Participatory Quality Assurance

Employee participation in decision-making enhances TQM effectiveness. Findings from NIPA, ZCAS, and UNILUS, where departmental meetings and committees encourage participation, align with BazmAmoon & Hejazi (2021), who found that staff involvement strengthens ownership and accountability. Conversely, limited participation at Cavendish and Zambia Open University explains why these institutions report more concerns about resistance to change, echoing African literature emphasizing organizational culture and leadership as moderators of TQM success (Amoako & Asamoah-Gyimah, 2020; Mashenene, 2019).

#### 4.3.10 Proposed TQM-Centered Framework

The proposed TQM-centered framework in Figure 1 below illustrates how quality improvement in Higher Education Institutions should flow from national oversight to enhanced student satisfaction. The Higher Education Authority (HEA) provides the regulatory standards and quality mandate that guide institutional operations. Institutional leadership then translates these requirements into internal strategies by allocating resources, shaping policies, and promoting a culture of quality. This facilitates effective implementation of core TQM pillars: stakeholder engagement, leadership and governance, quality assurance processes, continuous improvement, and adequate resources and support

systems. When these components work together, they strengthen institutional performance, improve service delivery, and ultimately lead to higher student satisfaction



**Figure 1**

*Shows the proposed TQM Centered Framework*

## V. CONCLUSION & RECOMMENDATION

### 5.1 Conclusion

The study has shown that implementing a TQM-centered framework has a positive influence on student satisfaction in *Zambian HEIs*. Leadership support, customer focus, continuous improvement, and employee involvement were identified as key enablers, while resistance to change, resource constraints, and limited training posed challenges. Institutions with proactive leadership and structured participatory mechanisms reported higher perceived benefits of TQM, confirming the applicability of TQM principles and student-centered approaches in improving academic quality.

### 5.2 Recommendation

The Study recommends that regulatory bodies put quality standards that will guide institutions, while institutional leadership translates these requirements into internal strategies through resource allocation, policies, and a culture of quality. Effective implementation of core TQM pillars, stakeholder engagement, governance, quality assurance, continuous improvement, and adequate support systems, strengthens institutional performance and service delivery.

### Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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