

Rethinking Higher Education Quality in Tanzania through Total Quality Management (TQM): Spatial Qualities and Writing Culture Dimensions

Juma Ahmed Mpangule¹ and Arnold Kashula²

^{1,2}*Mbeya University of Science and Technology*

¹*jumaahmedmpangule@gmail.com*

²*akashulag@gmail.com*

Abstract

This paper explores the potential of Total Quality Management (TQM) philosophy in enhancing the quality of higher education in Tanzania. Using Ardh University as the primary case and supported by contextual insights from informal settlements near Mbeya University of Science and Technology (MUST) and Teofilo Kisanji University (TEKU), the paper examines how TQM principles can be used to interpret and strengthen the spatial learning environments and writing culture that underpin educational quality in Tanzanian universities. Writing culture is positioned as a core dimension of educational quality whose development is constrained when TQM principles are weakly integrated into institutional practices. The paper is based on a review-driven, qualitative interpretive synthesis of two postgraduate dissertations, complemented by practitioner reflections from the 2019 OUTASA Young Scholars Symposium and a small supplementary questionnaire. This triangulated evidence shows that while awareness of quality issues is increasing, fragmented and compliance-oriented approaches to quality assurance, together with inadequate attention to student spatial environments, limit the formation of a robust quality culture. Spatial deficiencies such as overcrowding, insufficient lighting, and lack of dedicated paper areas are shown to weaken writing culture, especially where TQM practices are not fully institutionalized. The paper concludes that adopting TQM holistically anchored in continuous improvement, stakeholder participation, and a shared quality culture, offers a practical pathway for improving both spatial learning conditions and writing culture development. The paper contributes an integrated framework demonstrating how TQM can be operationalized to support these interrelated dimensions of higher education quality in resource-constrained contexts.

Keywords: Total Quality Management, Writing Culture, Higher Education, Spatial Quality, and Informal Settlements.

INTRODUCTION

Tanzanian universities face persistent concerns about the quality of learning experiences despite rising enrolment. National statistics show that growth in student numbers continues to outpace investments in staffing, facilities, and research capacity, contributing to gaps in learning quality and academic support systems (Tanzania Commission for Universities, 2023). Total Quality Management (TQM) offers a lens for interpreting these challenges through its emphasis on continuous improvement and stakeholder engagement. Yet implementation remains fragmented, and quality assurance functions as procedural compliance. Two overlooked dimensions, spatial learning environments and writing culture illustrate this gap. Writing culture signals institutional commitment to intellectual rigor, while students' physical study environments shape concentration and productivity. Acharya et al. (2025) argue that without aligning spaces, processes, and culture, TQM becomes symbolic rather than transformative.

This paper synthesizes evidence from Mpangule (2009), Kashula (2018), the 2019 OUTASA Symposium, and supplementary stakeholder feedback to show how partial TQM adoption constrains both spatial learning quality and writing development. The integrated analysis reframes existing findings through a unified TQM perspective, exposing systemic quality weaknesses and identifying opportunities for more coherent institutional improvement. To guide this analysis, the paper addresses the following overarching research question:

To what extent do Tanzanian higher learning institutions apply Total Quality Management (TQM) principles to improve spatial learning environments and cultivate a writing culture that reflects higher education quality standards?

The Problem

Despite expanded access to higher education in Tanzania, concerns persist about weak graduate competencies in critical thinking, academic writing, and independent inquiry, reflecting systemic shortcomings in institutional quality cultures (Mpangule, 2009; Acharya et al., 2025). Research on student accommodation near MUST and TEKU shows that many dwellings, often converted into Houses in Multiple Occupation (HMOs), meaning single-family houses subdivided to host multiple unrelated tenants, lack adequate design features such as privacy, ventilation, lighting, and organised study space (Kashula, 2018). These spatial deficits intersect with weak institutional strategies for cultivating a

writing culture. Although internal quality assurance mechanisms exist, mentorship, writing support, and feedback structures remain fragmented (Mpangule, 2009). Broader analyses of TQM adoption similarly reveal inconsistent implementation of core principles such as continuous improvement, stakeholder engagement, and process integration (Acharya et al., 2025; Bachynski et al., 2024). This misalignment between institutional systems and students lived learning conditions contributes to uneven writing performance and academic readiness.

This paper therefore investigates the extent to which TQM principles are applied to improve spatial learning environments and writing culture within Tanzanian higher learning institutions. Specifically, the paper is guided by the following research questions: How do spatial learning environments and key TQM components influence educational quality in Tanzanian universities? What challenges affect the implementation of TQM in managing spatial quality, and how do these challenges shape writing culture among students? What institutional barriers limit the integration of TQM principles in improving learning spaces and writing development within higher education institutions?

This paper is interpretive and context-specific, drawing on purposively selected revelatory cases rather than representative samples. As such, the findings are not intended for statistical generalization but for analytical and diagnostic insight into how TQM-related processes manifest in Tanzanian higher education. The synthesis relies on existing empirical materials and practitioner reflections, which may reflect institutional perspectives at moments in time. Nevertheless, triangulation across multiple sources strengthens the credibility of the patterns identified and supports their relevance for understanding systemic quality dynamics within similar resource-constrained higher education contexts.

LITERATURE REVIEW AND THEORETICAL ORIENTATION

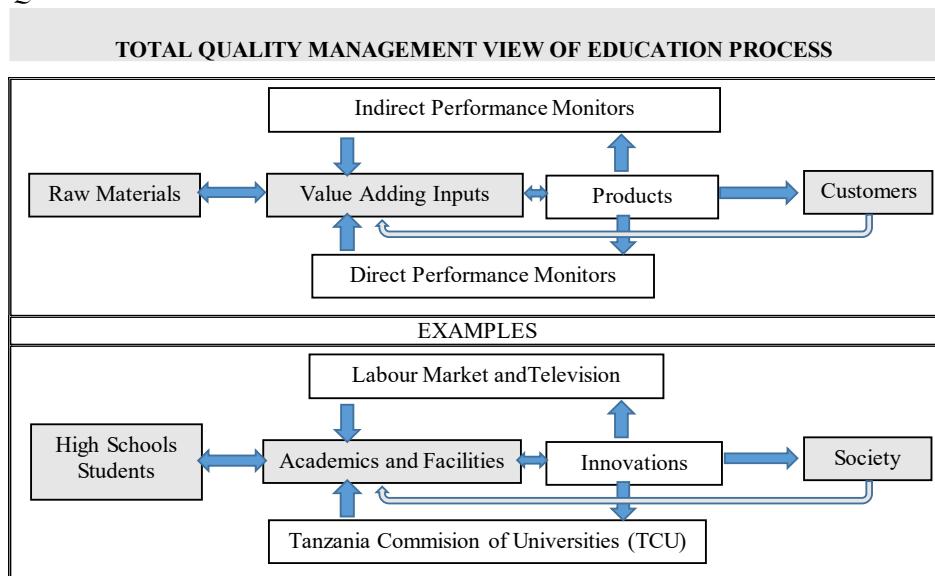
This paper employs a multidimensional theoretical framework integrating Total Quality Management (TQM), Quality Culture, and Educational Space Theory. These frameworks collectively inform the interpretation of quality challenges and the potential pathways for systemic improvement in higher education.

Total Quality Management (TQM)

Figure 1 presents TQM in the higher education context is understood in this paper as a systemic, institution-wide commitment to continuous

improvement, stakeholder participation, and process integration. Rather than viewing quality as a compliance function, the TQM lens positions quality as a cultural and operational process that must permeate physical environments, academic delivery, and support systems. Moreover, TQM views performance evaluation as a collective responsibility. Under this approach, both direct actors (such as regulatory bodies and university authorities) and indirect stakeholders (such as employers, parents, and the broader community) contribute to defining, measuring, and sustaining educational quality.

Figure 1
TQM view on Education Process



Source: (Cox, (1996) and (Mansor, Mahmood, Haron, & Yusof, 2007))⁷

Mpangule (2009) observed that weak integration of TQM principles at Ardhi University hindered the institution from developing a strong *quality culture*. A quality culture extends beyond procedural quality assurance; it embodies shared values, beliefs, and institutional behaviors that prioritize excellence. According to the European University Association (EUA, 2006), quality culture reflects “a shared value system, beliefs, expectations, and commitment toward quality,” requiring institution-wide ownership. Similarly, Sursock and Smidt (2010) emphasize that quality must be viewed as a collective mindset rather than an administrative

⁷ The idea and lesson learnt from the dissertation work (Mpangule,2009)

responsibility. In this paper, writing culture is understood as a manifestation of quality culture, an outcome of institutional practices that encourage continuous learning, research engagement, and intellectual expression. Weak writing culture signals a fragmented quality culture. Therefore, embedding writing and research activities across curricula and student services is crucial for sustaining academic excellence.

Building upon Kashula (2018), the concept of *educational space* is used to link the physical learning environment with academic outcomes. Spatial quality encompasses access to quiet and private study areas, adequate lighting, furniture, and proximity to learning resources. Poor spatial conditions, particularly in off-campus housing, function as a “hidden curriculum of disadvantage,” reducing concentration, creativity, and academic performance. From a TQM perspective, spatial environments must be treated as integral components of the educational process, subject to continuous monitoring, stakeholder collaboration, and improvement. Inadequate student housing not only compromises learning outcomes but also undermines institutional reputation and social equity.

In Tanzania, higher education is legally defined under the *Education Act of 2002 (2)(1)* as the instruction and training of people in various fields of learning aimed at promoting spiritual, moral, mental, and physical development to achieve national goals. According to Manneke (1998), education should cultivate both intellectual and moral dimensions to ensure holistic societal development. Higher education institutions (HEIs) serve as critical spaces for integrating diverse disciplines and advancing knowledge (World Bank, 2000). However, while Tanzania has made considerable progress in expanding access, concerns about the *quality* of education persist (Mosha, 2007). The rapid growth of universities has not been matched with corresponding investments in infrastructure, pedagogical innovation, or institutional quality systems.

The global discourse on quality management in higher education identifies Total Quality Management (TQM) as an effective framework for continuous improvement and stakeholder involvement (Douglas, 2010; Ali & Gibbs, 2016). Unlike traditional *Quality Assurance (QA)* or *Quality Control (QC)* mechanisms that focus on compliance, TQM emphasizes *system-wide improvement, stakeholder engagement, and customer satisfaction*. In the context of higher education, “customers” include students, employers, and the wider community who benefit from the institution’s outputs. Mpangule (2009) demonstrated that Tanzanian

universities often apply fragmented QA systems with limited feedback loops or stakeholder participation. Consequently, institutional processes fail to translate into sustained quality enhancement. Transitioning from QA to TQM requires developing a culture of quality that encompasses both tangible (e.g., infrastructure) and intangible (e.g., intellectual engagement, student satisfaction) aspects of learning.

Ultimately, quality in higher education extends beyond regulatory compliance to include the *relevance, inclusiveness, and transformative impact* of learning environments on students' personal and professional growth (Materu, 2007; Pike, 1994). Last but not the least, is the findings from the TQM meta-analysis, which revealed that quality culture, infrastructure, communication and academic processes are among the least developed TQM dimensions in HEIs, reinforcing the relevance of examining how such gaps affect writing culture and spatial learning environments (Acharya et al., 2025).

Writing Culture in this context

According to (Coulmas, 2002) writing is not merely a skill but a reflection of institutional commitment to intellectual rigor. Universities that fail to integrate writing across curricula risk producing graduates with inadequate professional competencies (Mpangule, 2009). The European University Association (EUA, 2006) defines quality culture as shared values that prioritize excellence, where writing must be embedded in teaching, research, and assessment. Effective TQM requires writing-intensive curricula, faculty training, and student support systems to foster critical thinking and communication (Lea & Street, 2006). Additionally, spatial quality impacts writing culture; poor housing conditions near campuses, as seen in Mbeya University of Science and Technology (MUST), disrupt study habits and academic performance (Kashula, 2018). Writing culture, in this paper, refers to the habitual and institutionalized practices that encourage intellectual writing, critical thinking, and communication skills among students and graduates. It goes beyond academic writing as a skill to encompass the broader societal expectation that graduates contribute productively to knowledge creation, professional development, and civic engagement. Writing culture is intricately linked to quality culture in universities, requiring supportive environments, policies, mentorship, and regular engagement with writing and research. Without a strong writing culture, the broader goals of education quality and graduate readiness remain unattainable.

Writing Culture as an Educational Output

Writing culture in higher education refers to the institutionalized practices and values that promote intellectual writing, critical thinking, and effective communication (Coulmas, 2002; Lea & Street, 2006). It is both a skill and a reflection of an institution's academic ethos. A strong writing culture enhances students' capacity to engage with knowledge critically, document ideas, and communicate in academic and professional settings. Mpangule (2009) emphasized that writing culture is an essential indicator of educational quality, yet it is often overlooked in quality assurance frameworks. Without deliberate institutional investments such as writing centers, mentorship programs, and publication opportunities, graduates risk remaining passive consumers rather than active producers of knowledge.

Coulmas (2002) describes writing as a “technology of the mind,” underscoring its role in structuring thought and expression. Universities that integrate writing across curricula and research training foster a stronger sense of intellectual independence among students. The absence of such integration weakens the institutional “quality culture,” resulting in graduates who lack analytical rigor and communication skills. Spatial quality directly influences writing culture. As Kashula (2018) observed, poor living and learning conditions near campuses particularly in informal student housing, undermine concentration and academic performance. Therefore, writing culture should not be treated as an isolated academic issue, but as a reflection of how well universities manage their overall learning environments under TQM principles.

Spatial Quality and Student Housing in Higher Education

Spatial quality refers to the functionality, comfort, and social inclusiveness of built environments (Nguluma, 2003; Tibesigwa, Karumuna, & Hao, 2017). In higher education, the quality of student housing significantly affects academic success, social integration, and well-being (Yunus et al., 2018; Zasina & Antczak, 2023).

In Tanzania, the rapid expansion of university enrolments has outpaced on campus student housing (Mtani & Nuhu, 2019). Consequently, many students reside off campus in informal settlements where conversion of single-family houses into Houses of Multiple Occupation (HMOs) has become a common strategy (Kashula, 2018). These unregulated housing transformations result in noisy and overcrowded accommodations with inadequate lighting, ventilation, security, and privacy (Kashula, 2018;

Mtani & Nuhu, 2019; Sundkvist, 2010). Research indicates that such spatial deficiencies together with long commuting distances, create deprived study and learning environments and negatively impact learning outcomes and diminish writing productivity (Ogendo et al., 2020; Adeyemi et al., 2024). Moreover, the absence of institutional oversight in these informal spaces undermines accountability and safety.

Contrary to developed countries, Tanzanian policies, institutional and legal frameworks are less involved in regulating or monitoring quality of off-campus student housing (Kashula, 2018; Jones & Blakey, 2020). This gap highlights the need for a TQM-based approach that links spatial quality with academic performance indicators, ensuring that environmental conditions become integral to institutional quality management systems.

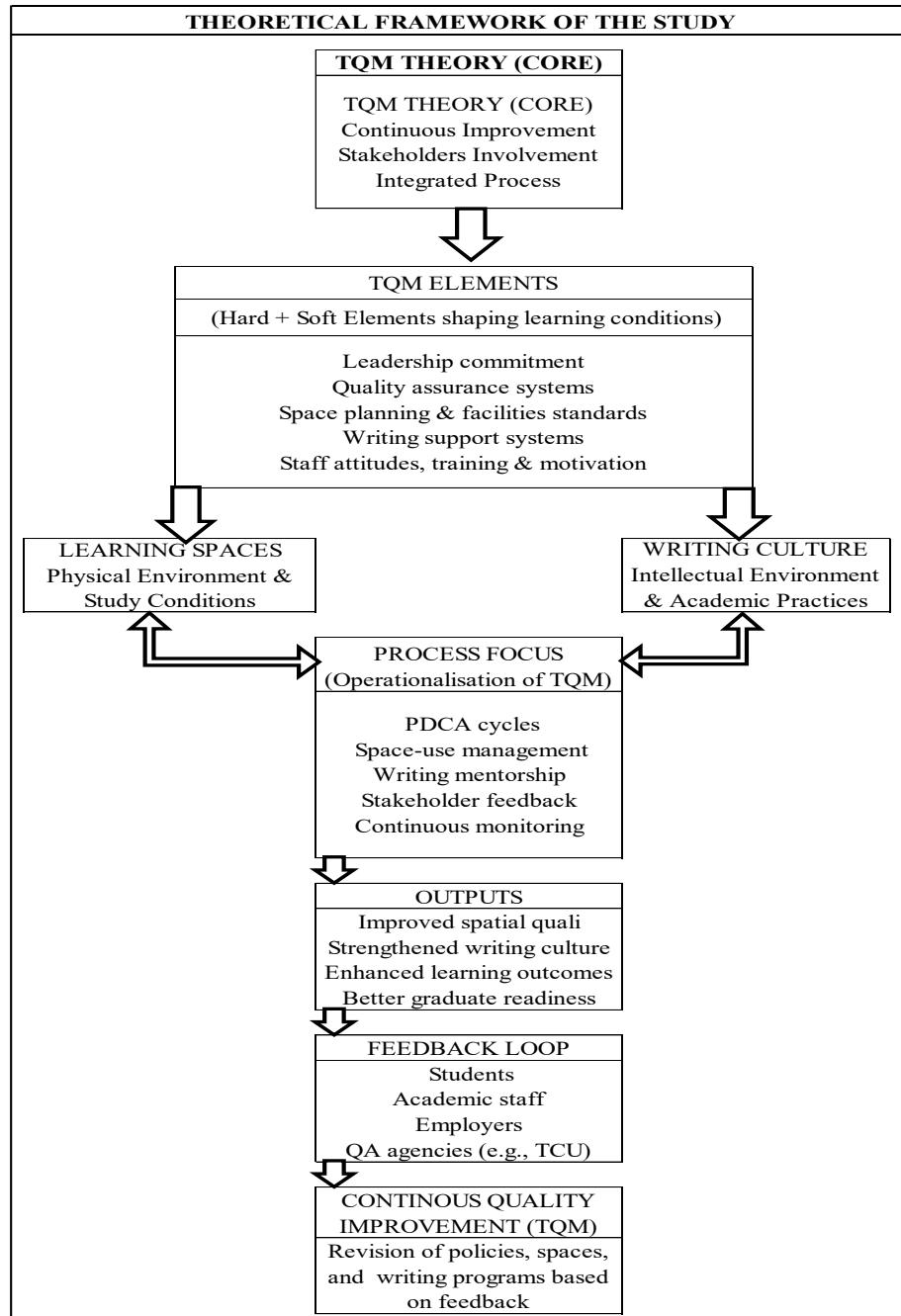
Theoretical Framework

Theoretical framework is presented in Figure 2 where it highlights that Total Quality Management (TQM) provides a systems-based approach to institutional improvement rooted in continuous enhancement, stakeholder participation, and process integration. Evidence from Tanzanian and regional higher education indicates that while universities such as Ardh University adopted elements of TQM, implementation remains fragmented and weakly institutionalized (Mpangule, 2009; Acharya et al., 2025). Scholars argue that effective TQM requires integrated, evidence-driven quality systems and stronger stakeholder engagement, components still underdeveloped across East African institutions (Bachynska et al., 2024; Ali & Gibbs, 2016).

Spatial learning environments are an important but often overlooked aspect of educational quality. Studies around MUST and TEKU show that many students live in informal, poorly designed HMOs that hinder concentration and learning. Writing culture reflects institutional quality, but weak mentorship, limited writing support, and inconsistent feedback systems undermine students' scholarly development. These patterns show that TQM provides a useful lens for understanding how institutional processes, learning spaces, and writing practices interact, positioning spatial quality and writing development as core components of an integrated quality culture.

Figure 2

Theoretical Framework Linking Total Quality Management, Spatial Learning Quality, and Writing Culture



METHODOLOGICAL AND METHODS FRAMEWORK

This paper adopts a qualitative interpretive design and employs a revelatory case study approach to re-examine how TQM principles influence spatial learning environments and writing culture in Tanzanian higher education. A revelatory case design is appropriate where the researcher gains access to forms of evidence that have not previously been examined collectively (Yin, 2014). In line with interpretivist traditions (Merriam & Tisdell, 2016), the goal is not to test variables through statistical generalization but to interrogate how institutional processes, spatial environments, and writing practices are experienced and understood by stakeholders.

Three forms of data were synthesized: postgraduate dissertations containing empirical material from ARU, MUST and TEKU; twelve peer-reviewed presentations delivered at the 2019 OUTASA Young Scholars Symposium; and a questionnaire completed by twenty-two purposively selected university stakeholders. To minimize selection bias, the questionnaire was disseminated repeatedly via Google Forms to targeted universities and stakeholder groups directly involved in teaching, learning environments, and quality assurance processes. Distribution focused on academic staff, postgraduate students, quality assurance personnel, and academic administrators at ARU, MUST, and TEKU. Although a wider circulation was attempted, only twenty-two completed questionnaires were returned and met the paper's inclusion criteria. In keeping with qualitative interpretive and revelatory case study principles, the emphasis was placed on information-rich responses rather than sample size, with the questionnaire serving as a supplementary triangulation tool rather than a basis for statistical generalization (Patton, 2015; Creswell & Poth, 2018). The use of these multiple sources follows the logic of methodological triangulation (Denzin, 1978; Patton, 2015), allowing patterns to emerge that would not be visible within any single dataset. The integration of these materials is justified by the interpretive purpose of the study, which seeks to draw meaning across contexts rather than to measure discrete variables.

Research Orientation

This paper is informed by a critical realist orientation, which recognizes that learning environments, spatial conditions, and institutional structures exist materially but acquire educational significance through lived experience. This orientation guided the analysis toward understanding how stakeholders interpret the adequacy of study spaces, the nature of

writing support, and the functioning of institutional quality systems. Accordingly, evidence drawn from dissertations, symposium reflections, and questionnaire responses was analyzed as situated accounts of how Total Quality Management (TQM) principles are enacted or neglected in everyday academic practice.

This interpretive stance shifts the analytical focus from statistical generalizability to the identification of recurring patterns of meaning across cases. For example, when a university administrator noted that “universities like ours comprise students from diverse backgrounds and ages, yet facilities remain inadequate and are not planned with these differences in mind,” this testimony echoed similar concerns expressed across the three cases. Such patterned accounts enabled the paper to illuminate systemic gaps in TQM implementation rather than to quantify institutional performance.

Sampling and Participants

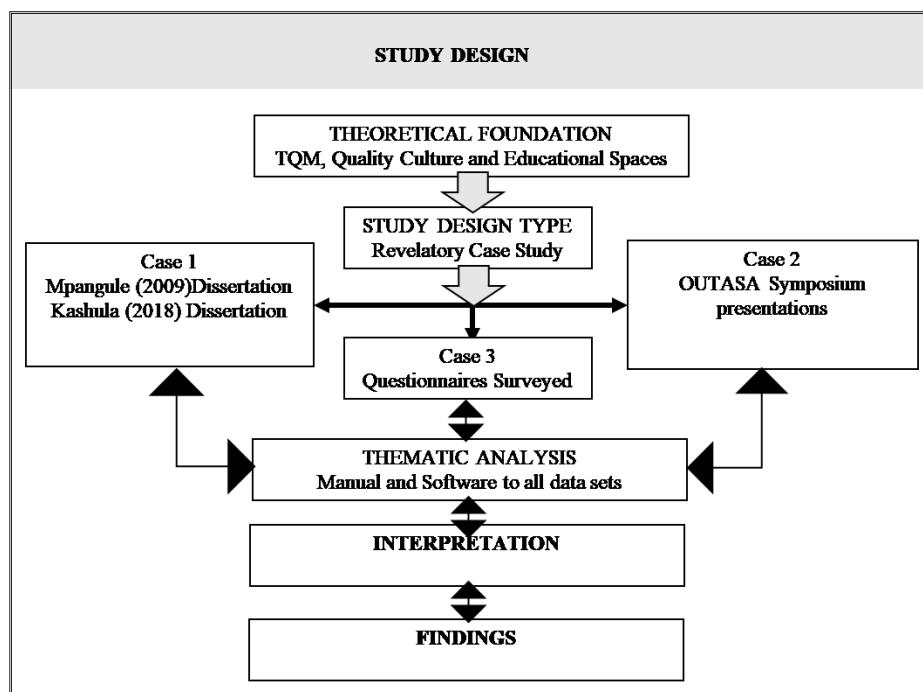
Sampling followed purposive and snowball logics to identify information-rich data sources relevant to TQM, spatial quality, and writing culture. The two dissertations were selected because they contain detailed empirical examinations of TQM practices and spatial learning conditions in Tanzanian universities. The OUTASA Young Scholars Symposium is an institutional academic forum organised by the Open University of Tanzania, in which submitted abstracts and papers undergo internal peer review before acceptance for presentation.

The symposium proceedings therefore represent vetted scholarly and practitioner reflections rather than informal opinion. In this study, OUTASA materials are treated as a complementary qualitative data source, used to triangulate and enrich interpretations drawn from primary case studies rather than to generate independent empirical claims. This approach aligns with established qualitative and revelatory case study traditions, which recognize peer-reviewed professional forums as legitimate sources of contextual and experiential evidence (Yin, 2014; Patton, 2015). The questionnaire respondents, drawn from ARU, MUST, TEKU, and Mbeya-based institutions, included students, academic staff, and administrators familiar with quality assurance practices. Their responses served to validate and contextualize patterns emerging from the document review rather than to generate statistically representative findings.

Research Design: Revelatory Case Approach

Figure 3 presents a revelatory case design as defined by Yin (2014) employed for this paper. The design is most appropriate when the researcher has access to data not widely available to the scholarly community. In this paper, the dissertations and the OUTASA symposium papers constitute rare institutional and practitioner materials that collectively illuminate aspects of TQM implementation, spatial learning environments, and writing culture that remain underexplored in Tanzanian higher education research. Treating the symposium output as an analytically equivalent third case strengthens the revelatory nature of the design, since these presentations offer empirical reflections on student learning, writing behaviour, and institutional quality practices that are not formally documented elsewhere. The design is further supported by the researchers' embedded knowledge of the institutional contexts, which provides interpretive depth. This insider perspective is not used for advocacy but rather to enhance understanding of how institutional processes and spatial conditions intersect with TQM principles in lived academic environments.

Figure 3:
Study design illustration (Source: Authors generated)

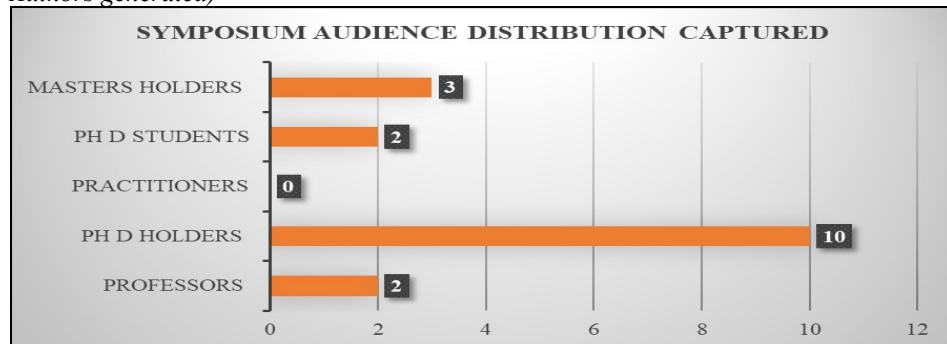


Data analysis followed a qualitative, interpretive strategy consistent with a revelatory case study design. The purpose of the analysis was to synthesize evidence from multiple sources to identify recurring patterns related to Total Quality Management (TQM) elements implementation, specifically the spatial learning quality, and writing culture in Tanzanian higher education institutions. The emphasis was on interpretive pattern recognition rather than statistical generalization.

Data preparation involved compiling and organizing three complementary datasets. First, Two completed postgraduate dissertations containing empirical findings from ARU, MUST, and TEKU. Second, twelve peer-reviewed papers and presentations from the OUTASA Young Scholars Symposium (Figure 4). Third, responses from a questionnaire administered to twenty-two purposively selected higher education stakeholders.

Figure 4

Population Distribution in The OUTASA Symposium Potential OUTASA (Source: Authors generated)

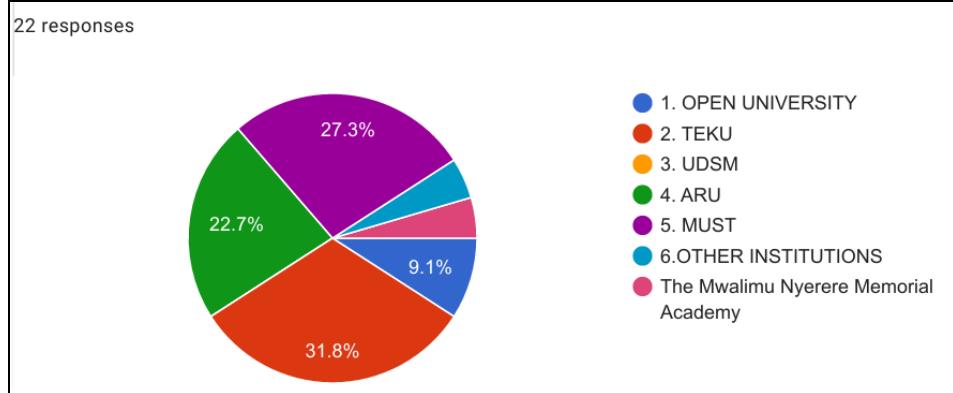


Questionnaire data were collected using Google Forms and initially organised through the platform's built-in analytics to generate descriptive summaries and response frequencies. The data were then exported to Microsoft Excel for cleaning, tabulation, and comparison across variables (Figure 5). Textual materials from dissertations, symposium outputs, and open-ended questionnaire responses were anonymized where necessary and organised by data source and institutional context to enable systematic comparison.

The analytical approach combined thematic analysis with cross-case synthesis. Thematic analysis was used to identify recurrent patterns within and across datasets, while cross-case synthesis enabled comparison

between the three revelatory cases. This approach aligns with interpretive qualitative traditions that prioritize meaning-making, contextual explanation, and pattern matching over statistical inference.

Figure 5
Distribution of respondents from the Questionnaire



The respondents were purposively selected university stakeholders with direct experiential knowledge of institutional quality processes, consistent with interpretive and revelatory case study conventions.

Coding and theme development proceeded in three stages. First, open inductive coding was applied to each dataset to identify recurring issues related to institutional processes, learning environments, and academic practices. Second, initial codes were reviewed and clustered into higher-order categories aligned with key TQM-related dimensions, including institutional commitment, continuous improvement, stakeholder engagement, spatial learning conditions, and writing support practices. Third, codes were refined through iterative comparison across cases, resulting in a set of consolidated themes that captured systemic patterns rather than isolated observations. Qualitative coding and thematic organization were supported using NVivo software, which enabled systematic management of coded excerpts, development of thematic nodes, and comparison across data sources. Figure 6 presents NVivo outputs, including coding matrices and word-frequency visualizations which supported pattern recognition and cross-case synthesis.

Following thematic coding, cross-case synthesis and pattern matching were conducted to examine how similar themes manifested across

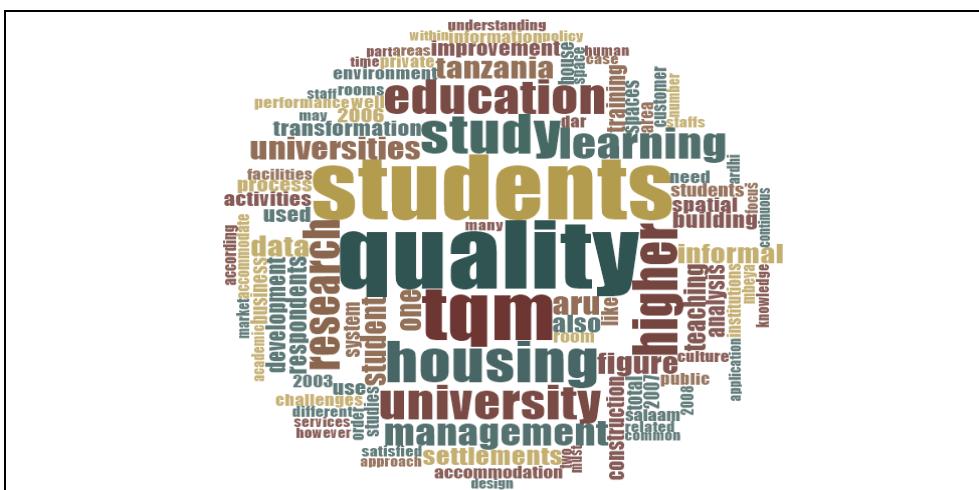
institutional and practitioner contexts. This process enabled the identification of convergent and divergent patterns and helped determine whether observed deficiencies reflected systemic rather than institution-specific issues. An interpretive benchmark of approximately 20 percent was used as a heuristic indicator to flag recurring deficiencies across themes. This benchmark functioned as an analytical guide derived from coding frequency patterns rather than as a statistical threshold.

Several strategies were employed to enhance trustworthiness and analytical rigour. Data triangulation was achieved by integrating evidence from dissertations, symposium materials, and stakeholder questionnaires. Cross-case pattern matching strengthened analytical consistency, while the use of explicit coding frameworks, thematic matrices, and software-supported audit trails linked raw data to synthesized themes. Reflexive review was applied throughout the analysis to ensure interpretations remained grounded in the data and aligned with the paper's critical realist orientation.

All analytical interpretations and substantive results derived from these procedures are presented in the Findings section, ensuring a clear separation between methodological processes and empirical outcomes.

Figure 6

Thematic density visualization from coded dissertation texts (Source: Authors' analysis). The figure illustrates the relative prominence of recurrent concepts identified through coding and thematic synthesis.



FINDINGS AND INTERPRETIVE SYNTHESIS

The findings presented here integrate three revelatory evidence sources, two postgraduate dissertations (Mpangule, 2009; Kashula, 2018), practitioner reflections from the OUTASA Young Scholars Symposium (2019), and a supplementary stakeholder questionnaire. The analysis followed an interpretive, pattern-matching logic, guided by the soft heuristic that deficiencies approaching or exceeding 20% within any core TQM pillar indicate systemic rather than isolated quality weaknesses. The findings are organised around four TQM dimensions: institutional commitment, spatial learning environments, writing culture, and stakeholder engagement.

Evidence from Mpangule (2009) and triangulated questionnaire responses show that institutional commitment to quality remains inconsistently enacted across units. While universities have formal Quality Assurance (QA) policies, their operationalization is narrow, compliance-driven, and often disconnected from daily academic practice. Staff and student involvement in quality processes was perceived as limited or symbolic. The integrated analysis revealed a 24% deficiency level in indicators linked to institutional commitment surpassing the 20% threshold, signaling systemic weakness. This fragmentation prevents the alignment of processes needed to support academic behaviours such as sustained study, reflective inquiry, and writing development.

Kashula (2018) study demonstrates that many students at MUST and TEKU reside in informal settlements where family houses are converted into HMOs lacking adequate lighting, ventilation, privacy, and furniture conducive to academic work. OUTASA reflections and questionnaire inputs corroborated these concerns, highlighting persistent constraints in both physical and digital learning spaces. The analysis identified a 19% deficiency level in spatial quality, reaching the interpretive 20% threshold for systemic concern. Although spatial factors directly influence concentration and cognitive engagement, they remain outside institutional quality assurance frameworks, revealing a gap between policy focus and students lived learning conditions.

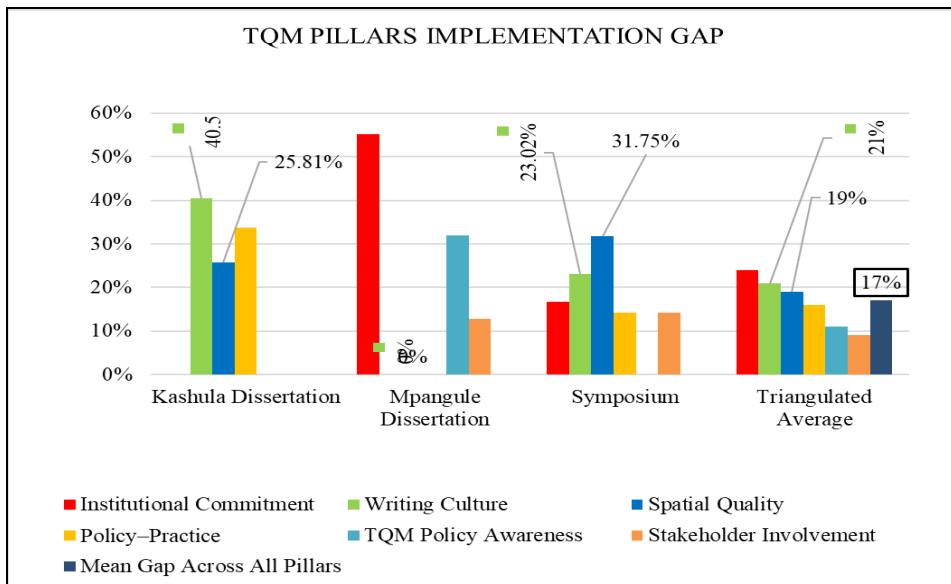
Across all evidence sources, writing culture emerged as a major area of concern. OUTASA presentations consistently highlighted difficulties of students in structuring arguments, synthesizing literature, and producing coherent written work. These weaknesses were linked to limited mentorship, inadequate structured writing practice, and inconsistent

feedback within academic programs. This thematic cluster registered a 21% deficiency level, again exceeding the 20% heuristic threshold. The results show that writing culture is not simply an individual competency issue but a reflection of institutional processes that do not adequately reinforce scholarly writing as a core component of academic development.

Synthesized together, the three revelatory cases demonstrate that spatial quality, writing development, and TQM implementation are deeply interconnected. Weak stakeholder participation and fragmented process integration central, TQM pillars mean that deficiencies in physical environments and writing support systems accumulate rather than resolve. For instance, the neglect of off campus learning spaces contradicts TQM's principle of providing an enabling environment, while the absence of structured writing mentorship contradicts the principle of continuous improvement. The findings show that deficiencies across these domains reinforce one another, resulting in uneven student learning experiences and inconsistent graduate outcomes.

The interpretive synthesis confirms that Tanzanian higher education institutions face systemic, not isolated, quality challenges. Figure 7 shows that near-or-above-threshold deficiencies in institutional commitment (24%), writing culture (21%), and spatial quality (19%) collectively indicate that current quality assurance systems do not operate as integrated, improvement-driven frameworks. Instead, they function in fragmented silos, insufficiently aligned with TQM principles and disconnected from the everyday environments where students study, write, and learn. Enhancing writing culture and spatial quality requires coordinated institutional processes, stakeholder involvement, and continuous improvement cycles, conditions that are currently only partially implemented.

Figure 7
Overall TQM Pillars Implementation Gap Support



Percentages in Figure 7 are coding-derived interpretive indicators used for qualitative pattern identification and do not represent statistical prevalence.

DISCUSSION

TQM, Spatial Quality, and Writing Culture in Higher Education Quality in Tanzania

The findings confirm that Total Quality Management (TQM) principles are present in Tanzanian higher education institutions but remain unevenly embedded in everyday academic and administrative practice. Quality assurance activities continue to emphasize procedural compliance rather than continuous improvement, limiting their transformative potential. This pattern echoes earlier observations by Mpangule (2009) and aligns with recent regional analyses showing that quality systems are often weakly institutionalized within university cultures (Acharya et al., 2025; Bachynska et al., 2024).

The identified institutional commitment deficit, estimated at 24 percent, reflects a structural challenge rather than an isolated failure. Policies and quality frameworks exist, yet they are insufficiently translated into routine practices that shape teaching, learning, and student support. From a TQM

standpoint, this gap indicates a disconnect between formal quality intentions and the operational processes required to sustain a shared quality culture.

The analysis highlights spatial learning environments as a persistently under-recognized component of educational quality. Evidence from Kashula (2018), reinforced by OUTASA practitioner reflections and questionnaire responses, shows that many students living in informal off-campus housing experience inadequate lighting, limited privacy, poor ventilation, and insufficient study space. These conditions constrain concentration and reflective learning, particularly for academically demanding tasks such as writing.

The spatial quality deficiency, estimated at about 19 percent and close to the study's interpretive benchmark, suggests that environmental limitations are systemic rather than incidental. These findings extend existing quality debates by demonstrating that spatial conditions function as part of the educational process itself, not merely as welfare concerns. Within a TQM framework, neglecting learning environments undermines the principle of fitness for purpose and weakens the overall quality system.

Writing culture emerged as one of the most consistently underdeveloped dimensions across all three revelatory cases. The estimated 21 percent deficiency reflects widespread challenges related to limited writing practice, inconsistent feedback, weak mentorship structures, and inadequate institutional support for scholarly communication. These challenges point to systemic issues rather than individual student deficiencies.

From a TQM perspective, writing culture reflects the effectiveness of core academic inputs, including curriculum design, assessment practices, faculty engagement, and learning support systems. When these inputs are poorly aligned or weakly coordinated, writing development deteriorates. This interpretation is consistent with the academic literacy's literature (Lea & Street, 2006) and earlier findings by Mpangule (2009), which emphasize that writing competence develops within institutional cultures that value inquiry, reflection, and continuous improvement.

A key contribution of this paper lies in demonstrating how institutional processes, spatial environments, and writing practices interact within a

single quality ecosystem. The triangulated evidence shows that weaknesses in one domain tend to reinforce deficiencies in others. Limited institutional commitment constrains investment in and monitoring of learning spaces. Poor spatial conditions reduce students' capacity for sustained cognitive engagement. An underdeveloped writing culture, in turn, signals the absence of coordinated feedback mechanisms, mentorship, and improvement cycles.

Viewed through a TQM lens, these interactions illustrate why fragmented quality initiatives produce uneven outcomes. When TQM principles are only partially applied, institutions address quality issues in isolation rather than as interconnected processes. This integrated interpretation extends TQM discourse in African higher education by showing how environmental, academic, and organizational dimensions jointly shape educational quality.

The findings suggest that Tanzanian universities face systemic quality challenges rooted in fragmented institutional processes rather than isolated deficits in infrastructure or pedagogy. Deficiencies at or near the interpretive benchmark in institutional commitment, writing culture, and spatial quality indicate that current quality assurance mechanisms are insufficiently integrated to sustain meaningful improvement.

Strengthening graduate competencies therefore requires a shift from compliance-oriented quality assurance toward a holistic TQM culture. Such an approach recognizes learning spaces, both on- and off-campus, as core academic environments; embeds writing development within curricula and assessment; and actively engages students, staff, and external stakeholders in continuous feedback and improvement processes. Aligning institutional policies with students lived academic realities is essential for producing intellectually competent and professionally prepared graduates.

Results and emergent conceptual framework

Figure 8 presents the integrated analysis of the three revelatory cases, TQM implementation at Ardhi University, spatial learning environments around MUST and TEKU, and practitioner insights from the OUTASA symposium, supports a context-sensitive conceptual interpretation of educational quality. Rather than proposing a new theory, the paper adapts established TQM principles to illustrate how institutional processes,

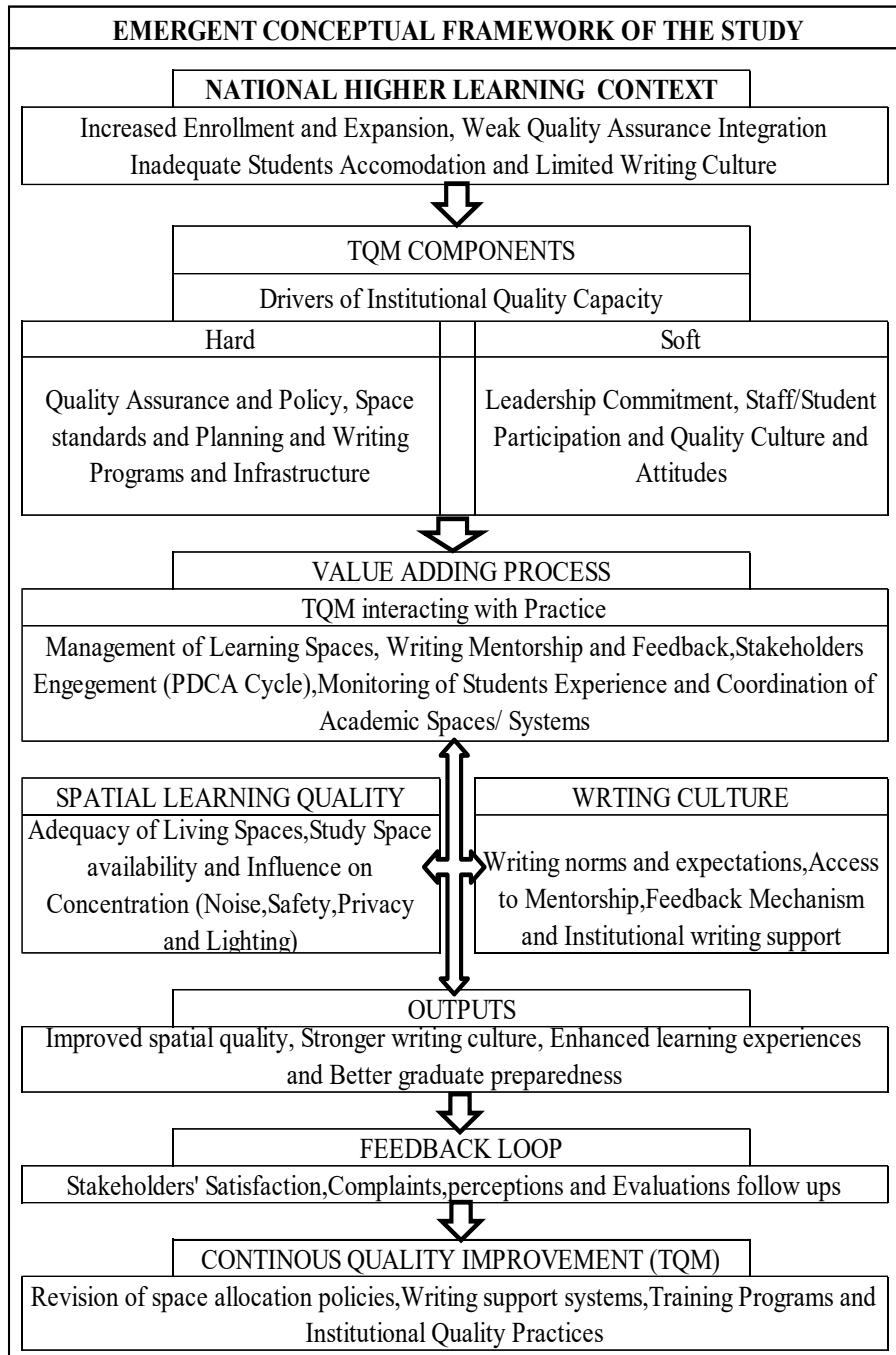
learning environments, and academic practices interact in resource-constrained settings.

The recurring deficiencies in institutional commitment, spatial learning quality, and writing culture function as interpretive indicators of systemic misalignment. Triangulated evidence shows that limited commitment restricts the development and oversight of learning spaces, inadequate environments constrain academic engagement, and weak writing culture reflects gaps in mentorship and continuous improvement mechanisms.

Within this interpretation, TQM principles provide an enabling framework through which quality culture can be strengthened. Spatial learning environments form the physical foundation that supports academic engagement, while writing culture emerges as both an academic outcome and a sensitive indicator of institutional quality. When TQM processes are fragmented, both spatial quality and writing development remain constrained. By contrast, the more coherent application of TQM principles, by contrast, has the potential to reinforce improvements across these domains simultaneously. The contribution of this framework is therefore diagnostic and contextual, offering a grounded lens for understanding quality challenges in Tanzanian higher education rather than a universal model.

Figure 8

Emergent Conceptual Framework for TQM-Driven Improvements in Spatial Learning Quality and Writing Culture



CONCLUSION AND RECOMMENDATIONS

Final Synthesis and Conclusion

This paper sets out to reinterpret existing evidence from three revelatory cases, TQM implementation at ARU, spatial learning environments around MUST and TEKU, and practitioner insights from the OUTASA symposium through an integrated TQM lens. The triangulated analysis revealed consistent deficiencies across institutional commitment, spatial learning quality, and writing culture, each registering indicative weakness at or above the interpretive benchmark of this paper of approximately 20%. Although not statistical measures, these patterns signal systemic misalignment rather than isolated shortcomings. The synthesis shows that partial or compliance-oriented implementation of TQM principles limits institutional capacity to sustain supportive learning environments or cultivate robust academic practices.

The findings illustrate three mutually reinforcing challenges. Initially, Institutional Commitment Gaps reduce the coherence of quality processes and hinder continuous improvement cycles. Subsequently, Spatial Learning Deficits around off-campus housing weakens students' ability to sustain concentration, reflective thought, and writing productivity. Furthermore, underdeveloped Writing Culture reflects fragmented mentorship, inconsistent feedback processes, and weakly embedded academic support structures.

Collectively, these challenges point to the need for institution-wide cultural strengthening rather than isolated technical interventions. A more holistic application of TQM principles emphasizing stakeholder engagement, alignment of processes, and iterative improvement, offers a practical pathway for addressing these interconnected deficiencies.

Recommendations

Drawing from the cross-case synthesis, the following recommendations aim to enhance spatial learning quality, writing development, and institutional quality culture:

Integrate Off-Campus Housing into Quality Management Systems: Universities should extend TQM-based monitoring beyond campus boundaries by establishing minimum spatial standards and collaborating with municipal authorities and private landlords to improve student accommodation environments.

Strengthen Writing Culture Institutionally: Writing support should be embedded across the curriculum through writing centers, structured mentorship programs, student-led journals, and faculty development initiatives that reinforce academic writing as a developmental process.

Enhance Stakeholder Participation in Quality Processes: Quality assurance structures should adopt transparent, closed-loop feedback systems, ensuring visible responses to student and staff input. Students should have formal representation in QA committees to reinforce shared responsibility.

Build TQM Competence Across the Institution: Continuous development programs for staff and student leaders should promote understanding of TQM principles, helping institutions transition from procedural compliance to sustained continuous improvement; and

Embed Student Welfare within Quality Metrics: Counselling, health services, academic advising, and prevention of harassment should be recognized as essential elements of the quality environment and incorporated into institutional monitoring frameworks.

Contribution and Future Research

This paper contributes an integrative reinterpretation of TQM in Tanzanian higher education by demonstrating how spatial learning environments and writing culture function as practical sites where institutional quality processes, and their gaps become visible. Rather than proposing a new theory, the paper adapts established TQM principles to a context characterized by informal housing markets, resource constraints, and exam-oriented academic traditions. The findings offer a diagnostic lens that can guide universities in identifying where institutional commitment, environmental conditions, and academic practices require coordinated improvement.

Future research should design and evaluate interventions arising from this paper, such as off-campus housing standards or structured writing mentorship models and assess their impacts on academic performance, writing competence, and graduate preparedness.

Given the unique environmental and cultural conditions of Tanzanian and East African higher education, further work is needed to adapt TQM models more fully to contexts shaped by infrastructural limitations, informal student housing, and large class sizes.

REFERENCES

Adeyemi, B., Ugochukwu, P., & Hassan, L. (2024). Student housing and academic performance in sub-Saharan Africa. *Journal of Higher Education Development*, *19*(2), 45–59.

Ali, N., & Gibbs, G. (2016). Exploring the application of Total Quality Management in higher education institutions. *Quality in Higher Education*, *22*(3), 240–256.

Bachynska, N., Tverytnykova, O., Drozdova, T., Demidova, Y., & Salata, H. (2024). *Educational services quality monitoring system as a vital component of library and archive management*. Theory and Practice of Social Systems Management, 2, 43–55.

Bondinuba, F. K., Nimako, S. G., & Mensah, H. (2013). Housing satisfaction of university students in Ghana: Evidence from Kumasi. *Journal of Building and Road Research*, *15*(1), 23–35.

Coulmas, F. (2002). *Writing systems: An introduction to their linguistic analysis*. Cambridge University Press.

Cox, R.F. (1996). Addressing the paradox of implementing Total Quality Management in construction education. In *CIB W89 Beijing International Conference* (pp. 21-24). Beijing.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.

Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods* (2nd ed.). McGraw-Hill.

Dimas, G. A., Goula, A., & Pierrakos, G. (2011). Quality issues in higher education: A multicriteria framework of satisfaction measures. *Creative Education*, *2*(3), 305-312.

Douglas, J. (2010). The implementation of Total Quality Management in higher education institutions. *Quality Assurance Review*, *8*(1), 1–14.

European University Association (EUA). (2006). *Quality culture in higher education: A collective responsibility*. EUA Publications.

European University Association (EUA). (2007). *Embedding quality culture in higher education: A selection of papers from the 1st European Forum for Quality Assurance*. EUA Publications.

Fabula, S., Matamanda, A. R., & Mzileni, S. (2017). Studentification and housing market change in African cities. *African Geographical Review*, *36*(4), 312–330.

Gong, L. (2022). Spatial learning environments and student well-being: Comparative perspectives. *Built Environment Review*, *14*(2), 77–95.

Isabella, N. (2023). Psychological stress and academic writing performance among university students. *International Journal of Educational Psychology*, *11*(3), 221–237.

Jones, P., & Blakey, N. (2020). Regulating off-campus student housing: Lessons from the UK and Australia. *Journal of Urban Policy Studies*, *5*(4), 81–96.

Kashula, A. K. (2018). *Housing transformation in informal settlement as a supply strategy for higher learning students housing: Spatial quality analysis*. [Unpublished Master's dissertation]. Ardhi University.

Lea, M. R., & Street, B. V. (2006). The academic literacies model: Theory and applications. *Studies in Higher Education*, *31*(3), 377–393.

Manneke, C. (1998). *Education and moral development in Tanzania*. Tanzania Educational Publishers.

Materu, P. (2007). *Higher education quality assurance in sub-Saharan Africa: Status, challenges, and opportunities*. World Bank.

Mpangule, J. A. (2009). *Total Quality Management application at Ardhi University (ARU)*. [Unpublished Master's dissertation]. Ardhi University.

Mtani, I., & Nuhu, A. (2019). The influence of student housing quality on academic performance in Tanzania. *Journal of Built Environment Research*, *3*(1), 55–66.

Nguluma, H. (2003). *Housing development in Tanzania: The case of informal settlements*. University of Dar es Salaam Press.

Open University of Tanzania Academic Staff Association (OUTASA). (2019). *Proceedings of the OUTASA Young Scholars Symposium: Reviving the Grooming and Writing Culture in Academic Institutions (Looking Back, Looking Forward (6–7 August 2019, Mbeya Regional Centre, Mbeya, Tanzania))*. Open University of Tanzania.

Pike, R. (1994). TQM and quality assurance in education: Towards a model of educational excellence. *Education Management Review*, *2*(1), 17–28.

Sursock, A., & Smidt, H. (2010). *Trends 2010: A decade of change in European higher education*. EUA Publications.

Tanzania Commission for Universities. (2023, May). *VitalStats on University Education in Tanzania 2022*. https://tcu.go.tz/sites/default/files/file_uploads/2024-01/VitalStats%202022.pdf.

Tibesigwa, B., Karumuna, S., & Hao, W. (2017). Spatial planning and urban design in East Africa. *Urban Policy Review*, *12*(3), 199–212.

World Bank. (2000). *Higher education in developing countries: Peril and promise*. World Bank.

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Sage Publications.

Yunus, N., Rahman, M., & Musa, R. (2018). Student housing satisfaction and learning outcomes in Malaysia. *Journal of Education and Environment*, *9*(4), 42–58.

Zasina, J., & Antczak, A. (2023). Housing quality and student well-being: Lessons from European universities. *International Review of Housing Studies*, *18*(1), 102–121.

APPENDIX 1

Table 1

Research Strategy and Data Approach summary

Component	Study View	Supporting Description
Research Type	Qualitative Interpretive Review	Based on textual and contextual analysis
Case Orientation	Revelatory Case Strategy	Integrating ARU, MUST, and OUTASA data
Inquiry Lens	Total Quality Management (TQM)	Assessment of quality gaps through TQM pillars
Data Sources	Dissertations, symposium papers, questionnaires	Multi-source validation
Analysis Tool Validation	Thematic Content Analysis Triangulation and cross-case matching	Coding and theme generation Ensures trustworthiness and consistency

APPENDIX 2

Table 2
Operational Variables

Concepts	Operational Variables	Data Source(s)	TQM Pillar
Spatial Quality	Access to quiet/private study areas Quality of student housing Adequacy of study infrastructure (e.g., lighting, furniture)	Kashula (2018) Dissertation Questionnaire responses OUTASA Presentations	Enabling Environment (Facilities)
Writing Culture	Frequency of writing tasks Access to academic writing support Publication encouragement Student confidence in writing	Questionnaire OUTASA Presentations - Mpangule (2009) Dissertation	Core value adding Inputs (Academic Delivery)
Stakeholder Involvement	Student/staff awareness of quality practices Participation in quality assurance Feedback systems for students	Mpangule (2009) Dissertation Questionnaire Institutional Policies	People Involvement (Stakeholder Engagement)

APPENDIX 3

Table 3

Thematic Matrix for Academic Delivery Using TQM Philosophy (Mpangule, 2009)

Concepts	Operational Variables	Data Source(s)	TQM Pillar
Spatial Quality	Inadequate library space, lack of reading areas, complaints about access to materials and studio requirements Shortage of teaching materials and poor staff attitude in library	Questionnaire data; summary findings from Chapter 5 (pp. 85–97) Student/staff feedback in the findings and discussion	Enabling Environment (Facilities)
Writing Culture	Assignments undervalued compared to tests Student writing tasks not emphasized or supported Need to improve academic writing culture through structured assignments and project-based learning	Recommendations Section (e.g., point 5, p. 103) OUTASA presentation reference and comparison (external to dissertation)	Core Value Adding Inputs
Stakeholder Involvement	Weak student participation in curriculum review and teaching methodology Limited or no feedback mechanisms Use of end-semester assessments but with no feedback loop back to students Weak awareness of vision and mission among students	Findings (p. 86); Code 19 and 17; suggestions boxes not common practice Figure 10 and commentary (p. 87); interviews and observations 89 out of 112 respondents indicated low understanding (p. 86–87)	People Involvement (Stakeholder Engagement)

APPENDIX 4

Table 4

Thematic Matrix from Kashula (2018) Dissertation

Concepts	Operational Variables / Quotes to Code	Data Source(s)	TQM Pillar
Spatial Quality	<p>"There is no place where a student can comfortably study, possess his/her soul in quietude..."</p> <p>"Most of the rooms visited have more than one function including... studying..."</p> <p>"Most of the rooms have no adequate illuminance..."</p> <p>"Rooms lack privacy and daylight"</p> <p>"70% of students read or work with computers in rooms lacking daylight"</p> <p>"Lighting during day requires artificial light (60%)"</p> <p>"Rooms shared by 2–6 students; no reading zones."</p>	Field observation; pp. 76–79; 85–86	Enabling Environment (Facilities)
Writing Culture	<p>"There is no place... a student can comfortably study... and develop personality."</p> <p>"Rooms are used for multiple purposes including studying but lack study-specific infrastructure."</p> <p>"Students use bed and table simultaneously for sleeping, dressing, studying" (Figures 37 & 38)</p> <p>"Common areas used for group discussions, but are limited."</p>	Questionnaire analysis; p. 85	Core Value Adding Inputs
Stakeholder Involvement	<p>"The government through local councils has started issuing some permits."</p> <p>"Universities are concerned but lack clear accommodation strategies."</p> <p>- "Stakeholders not covered in regulations for informal student housing."</p>	Observation & respondent quotes; p. 76–79	People Involvement (Stakeholder Engagement)

APPENDIX 5

Table 5

Integrated Thematic Matrix for Case 1 (Mpangule 2009 + Kashula 2018 Dissertations)

TQM Pillar	Study Concept	Operational Variables	Mpangule (2009) Findings	Kashula (2018) Findings	Triangulation Insight
Enabling Environment (Facilities)	Spatial Quality	Library/study space adequacy Lighting/privacy multi-functional room use	Inadequate library space (p. 85) Shortage of teaching materials	70% study in poor daylight (p. 85) Rooms lack privacy (p. 76)	Both highlight physical infrastructure gaps as barriers to learning quality.
Core Value-Adding Inputs (Academic Delivery)	Writing Culture	Assignment weighting Study-specific infrastructure	Assignments undervalued vs. exams (p. 103) Weak writing support	No dedicated study areas (p. 76) Beds used for studying (Fig. 37)	Spatial-design exacerbates weak writing culture in both studies.
People Involvement (Stakeholder Engagement)	Governance & Participation	Student feedback mechanisms Policy awareness	No suggestion boxes (p. 86) 89/112 students unaware of mission (p. 87)	Unclear housing regulations (p. 86) Universities lack accommodation strategies	Top-down policy gaps and limited stakeholder consultation in both.
Continuous Improvement	Institutional Adaptation	Infrastructure upgrades Curriculum alignment	Recommendations for writing-intensive curricula (p. 103)	Calls for minimum housing standards (p. 86)	Proactive reforms proposed but not systematically implemented .
Evidence-Based Decisions	Data-Driven Solutions	Student satisfaction metrics Spatial audits	Questionnaire data on library access (p. 85)	Field observations of lighting (p. 76)	Both use mixed methods but lack longitudinal tracking .

APPENDIX 6

Table 6

Case 2: OUTASA Symposium (6-7 August 2019) Thematic Matrix Case Analysis

Sn	Presenter & Title	Key Themes	TQM Pillar	Operational Variables	Relevant Quotes/Findings	Page/Slide
1	<i>Dr. A. Mwambene</i> “Writing for Publication”	Writing Culture	Core Value-Adding Inputs	Faculty publishing incentives Student mentorship gaps	“Only 12% of staff publish annually due to lack of institutional rewards”	Slide 5
2	<i>Prof. B. Kavishe</i> “Digital Literacy”	Spatial Quality	Enabling Environment	ICT infrastructure deficits E-resource access	“60% of students lack access to e-libraries; computer labs close at 5 PM”	Slide 8
3	<i>Dr. C. Ngowi</i> “Peer Review”	Stakeholder Involvement	People Involvement	Student feedback exclusion Top-down policies	“Curriculum reviews exclude student voices despite NACTE guidelines”	Handout p. 3
4	<i>Ms. D. Mboya</i> “Plagiarism”	Writing Culture	Evidence-Based Decisions	Detection tools Policy enforcement	“Turnitin usage remains optional; 41% of submissions show >20% similarity”	Slide 12
5	<i>Dr. E. Kisanga</i> “Staff Workload”	Continuous Improvement	Process Integration	Teaching-research balance Support systems	“80% of faculty report burnout from administrative tasks over research”	Slide 6
6	<i>Mr. F. Juma</i> “Student Housing”	Spatial Quality	Enabling Environment	Off-campus housing safety Cost-quality tradeoffs	“Private hostels charge 3x campus rates but lack study spaces (Fig. 3)”	Slide 9
7	<i>Dr. G. Mbunda</i> “TQM in HE”	Leadership Commitment	System Optimization	QA vs. TQM adoption Policy alignment	“Quality Assurance units focus on compliance, not continuous improvement (Table 4)”	Slide 15
8	<i>Ms. H. Ally</i> “Group Writing”	Writing Culture	Core Value-Adding Inputs	Collaborative writing Peer learning	“Group writing workshops increased student publication	Handout p. 7

Sn	Presenter & Title	Key Themes	TQM Pillar	Operational Variables	Relevant Quotes/Findings	Page/Slide
9	<i>Dr. I. Semfuko</i> “ICT Policies”	Stakeholder Involvement	People Involvement	Student input in ICT planning Implementation gaps	“2020 ICT policy drafted without student consultation” attempts by 33%”	Slide 11
10	<i>Prof. J. Luhende</i> “Mentorship”	Continuous Improvement	Process Integration	Faculty-student ratios Time allocation	“1:350 mentor-mentee ratio undermines writing support”	Slide 4
11	<i>Mr. K. Mwakyusa</i> “Library Access”	Spatial Quality	Enabling Environment	Opening hours Resource availability	“Postgraduate students demand 24/7 library access for thesis writing”	Slide 7
12	<i>Dr. L. Mwaipopo</i> “Funding”	Leadership Commitment	System Optimization	Research grants Priority misalignment	“Only 8% of budget supports writing culture initiatives”	Handout p. 9

APPENDIX 7

Table 7

Thematic Matrix for Case 3: Questionnaire

Theme	Coded Variables / Operational Indicators	TQM Pillar	Response Insights (From Frequency Table)
1. Spatial Quality	V10 (Residence Status) V37 (Space for relaxation) V39 (Internet infrastructure for writing) V45 (Lighting performance) V46, V47 (Venue design & layout user-friendliness) V49 (Unregulated private hostels)	Enabling Environment	54.5% live off-campus (V10) 45.5–59.1% find infrastructure like lighting, internet, space “Very Satisfying” (V37, V39, V45) 27% believe venues weren’t purpose-designed (V46)
2. Writing Culture	V38 (Tenant-room ratio & concentration) V40 (University media/publication support) V41 (TQM in curricula) V50 (Cross-college projects) V51 (Motivating landscape for academic activity)	Academic Delivery (Core Inputs)	50%+ agree that cross-college collaborations and media support exist (V40, V50) Many unsure if TQM is formally taught (V41) Landscape (V51) seen as moderately supportive
3. Stakeholder Involvement	V57–V77 (Perceived commitment to student welfare: accommodation, counseling, orientation, security, feedback) V55 (Orientation effectiveness) V42, V44 (Collaboration & student-lecturer rapport)	People Involvement	Majority rate institutions “Committed” or “Very Committed” on key support (V57–V77) 54.5%+ find orientation and student-teacher relationships effective (V42, V44) Minority “Uncommitted” on items like counseling and medical services
4. Institutional TQM Policy Awareness	V12–V36 (Knowledge of TQM terms: ISO, Quality Assurance, Accreditation, Crowding, Visual Privacy, Planning Conditions, etc.)	Quality Policy	Majority familiar with basic TQM and QA terms like “Quality Committee”, “ISO”, “Accreditation” (V12–V22) Lower familiarity with conceptual figures (e.g., Newton, Einstein, Deming – V33–V36)

Theme	Coded Variables / Operational Indicators	TQM Pillar	Response Insights (From Frequency Table)
5. Policy-Practice Gap	V52 (Academic timetable adequacy) V54 (Staff-student ratio) V56 (Graduate market competitiveness) V53 (Need for more innovation space) V74 (Commitment to teaching-learning environment)	Institutional Governance	Over 54% agree on need for infrastructure for innovation (V53) Academic scheduling and staff-student ratios seen as problematic (V52, V54) 54.5% say local competitiveness is better than international (V56)
6. Cross-cutting: Awareness of Spatial-Writing Link	V25, V28–V30 (Spatial concepts like spatial quality, privacy, crowding, informal hostels) V32 (Student accommodation knowledge)	Cross-cutting (TQM Culture)	“Spatial Quality”, “Privacy”, “Crowding”, and “Accommodation” are widely known (V25, V28–V32) Conceptual terms like “Visual Privacy” and “Informal Hostels” moderately familiar
7. Demographic Influence Context	V2–V9 (University, role, marital status, gender, education level, age, specialization)	Baseline Description	Majority respondents: male (77.3%), off-campus residents, aged 15–25, from TEKU and ARU Roles: students (45.5%) and academic staff (36.4%) Educational level: Mostly degree and above

APPENDIX 8

Table 8

Integrated Thematic Matrix of the Three Cases

Theme	TQM Pillar	Operational Variables	Case 1: Dissertations (Mpangule 2009 & Kashula 2018)	Case 2: OUTASA Symposium	Case 3: SPSS Questionnaire Data
1. Spatial Quality	Enabling Environment (Facilities)	Access to private/quiet study spaces Lighting, furniture adequacy Hostel/housing conditions Recreational space User-friendliness of learning venues	Mpangule noted institutional spatial deficits; Kashula highlighted off-campus housing problems (e.g., crowding, poor lighting, lack of privacy near MUST & TEKU)	Presenters emphasized the impact of informal housing on study conditions and academic discipline	54.5% live off-campus 60% say lighting, furniture, sound privacy are “Common” or better 27% report poor design of learning spaces (V46–V47)
2. Writing Culture	Core Inputs (Academic Delivery)	Frequency of writing tasks Writing support access Publication encouragement Cross-disciplinary engagement Confidence in academic writing	Mpangule noted weak student writing skills and institutional neglect of writing culture; Kashula linked poor environments to low writing productivity	Raised concerns about lack of academic writing mentorship, publishing encouragement, and cross-disciplinary writing projects	72.7% report writing support “Common/Very Common” Publication encouragement weak (36.4%) Writing confidence modest

Theme	TQM Pillar	Operational Variables	Case 1: Dissertations (Mpangule 2009 & Kashula 2018)	Case 2: OUTASA Symposium	Case 3: SPSS Questionnaire Data
3. Stakeholder Involvement	People Involvement (Engagement)	Student/staff participation in QA Quality committee visibility Feedback mechanisms Orientation/engagement	Mpangule acknowledged fragmented participation in quality processes; Kashula signified that landlords and non-academic actors affecting student life but left out of dialogue	Presenters acknowledged minimal student voice in QA feedback, with staff often unaware of TQM roles	Most rate university “Committed” on key support functions 20–30% remain unsure or report poor feedback mechanisms
4. TQM Policy Awareness	Quality Policy (Awareness & Integration)	Understanding of QA, TQM, ISO Knowledge of quality concepts (accreditation, benchmarking, mission, vision)	Both dissertations signified that QA policies exist but TQM philosophy is poorly integrated or understood by staff/students	Discussants signified a symbolic presence of QA frameworks without embedded continuous improvement culture	Familiarity with TQM-related terms strong (V12–V22) Low awareness of TQM thinkers (Deming, Juran: V33–V36) 90.9% agree TQM should be guiding philosophy
5. Policy–Practice Gap	Governance & Management	Perceived alignment between policy and lived reality Scheduling, staffing, infrastructure Competitiveness of graduates	Highlighted a mismatch between formal policies and students' lived academic and spatial experience	Highlighted failure of policies to translate into supportive teaching–learning environments or housing conditions	Gaps in schedule efficiency (V52), staff–student ratios (V54), and innovation infrastructure (V53) Strong demand for enabling spaces and time management

Theme	TQM Pillar	Operational Variables	Case 1: Dissertations (Mpangule 2009 & Kashula 2018)	Case 2: OUTASA Symposium	Case 3: SPSS Questionnaire Data
6. Space-Writing Link	Cross-Cutting (TQM Culture)	Impact of housing on writing Visual/acoustic privacy Informal hostels Learning concentration in private settings	Kashula uniquely pointed the direct impact of housing design on intellectual performance and writing focus	Presenters pointed this link, especially with overcrowding and noise in informal hostels	Terms like spatial privacy, crowding, hostel quality widely recognized (V25–V30) 59.1% agree internet infrastructure enhances writing productivity
7. Institutional Commitment	All Pillars (Performance, Policy, Environment)	Commitment to student welfare Infrastructure for innovation Support services (counseling, health, personal growth)	Mpangule noted that institutions met minimum compliance without long-term commitment; Kashula noted lack of proactive planning in off-campus housing and facilities	OUTASA participants noted that commitment as uneven across departments and functions	60–90% rate university commitment high in areas like accommodation, orientation, security Concerns exist over health, harassment, and sensitive services