Total Quality Management in Higher Education Institutions:

A Systematic Literature Review

Omar Dieb [1], Boumediene Youcef [2]

[1] University of Algiers 03, Laboratory Change Management in the Algerian Institution, Algeria, dieb.omar@univ-alger3.dz

[2] University of Algiers 03, Laboratory Change Management in the Algerian Institution, Algeria, boumediene.youcef@univ-alger3.dz

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Abstract:
This study examines studies on Total Quality Management (TQM) inside Higher Education Institutions (HEIs). This analysis, grounded in 10 Scopus-indexed papers, examines methodologies, theories, contexts, deficiencies, and prospective trajectories. The results indicate that the majority of studies employ quantitative survey methodologies, whereas qualitative and conceptual techniques are rather rare. TQM is mostly elucidated through quality management frameworks including CQI, PDCA, service quality, and organizational performance models. The examined research encompass multiple countries; however, the majority are confined to single-country or single-institution settings. Subsequent research ought to incorporate mixed techniques, longitudinal designs, and comparative studies that connect Total Quality Management with digital transformation, innovation, employability, and learning outcomes.
Keywords: Total Quality Management; Higher Education Institutions; Systematic Literature Review.
Jel Classification Codes: I23; M10; L15; M11

الملخص:
تدرس هذه الورقة الأبحاث المتعلقة بإدارة الجودة الشاملة **(TQM)** داخل مؤسسات التعليم العالي **(HEIs)** وبالاعتماد على عشر مقالات مفهرسة في قاعدة بياناتScopus ، تحلل الدراسة المناهج البحثية، والنظريات، والسياقات، وأوجه القصور، والاتجاهات المستقبلية. وتشير النتائج إلى أن أغلب الدراسات اعتمدت على المناهج الكمية، خاصة الدراسات القائمة على الاستبيان، في حين كانت المناهج النوعية و المفاهيمية أقل استخدامًا. كما تُفسَّر إدارة الجودة الشاملة غالبًا من خلال أطر إدارة الجودة، مثل التحسين المستمر للجودة **(CQI)** ، ودورة ديمنغ **PDCA** ، وجودة الخدمة، ونماذج الأداء التنظيمي .
و قد شملت الدراسات محل المراجعة عدة دول، غير أن معظمها اقتصر على سياقات بلد واحد أو مؤسسة واحدة. لذلك، ينبغي أن تعتمد الأبحاث المستقبلية على المناهج المختلطة، والتصاميم الطولية، والدراسات المقارنة التي تربط إدارة الجودة الشاملة بالتحول الرقمي، والابتكار، وقابلية التوظيف، ومخرجات التعلم.
الكلمات المفتاحية: إدارة الجودة الشاملة؛ مؤسسات التعليم العالي؛ مراجعة منهجية للأدبيات.
تصنيف جال: I23؛ M10؛ L15؛ M11

***Corresponding author**: dieb omar*

Total Quality Management in Higher Education Institutions: A Systematic Literature Review

1. INTRODUCTION

In recent decades, higher education institutions have encountered increasing pressure to enhance the quality of their academic, administrative, and service processes. The proliferation of higher education, the increase in private and transnational offerings, the emphasis on graduate employability, and the necessity for institutional accountability have rendered quality a paramount concern for universities and colleges. In this setting, quality encompasses not just teaching effectiveness and academic reputation but also governance, student support, research management, stakeholder satisfaction, internal evaluation, and ongoing institutional enhancement. International frameworks, including the Standards and Guidelines for Quality Assurance in the European Higher Education Area, have reinforced the significance of internal and external quality assurance within higher education systems (ENQA et al., 2015). Nevertheless, the definition of quality in higher education is challenging due to its reliance on the expectations of several stakeholders, including students, academic personnel, employers, governmental bodies, and society at large. Harvey and Green (1993) contend that quality in higher education can be interpreted through various dimensions, including excellence, appropriateness for purpose, value for money, and transformation. This indicates that quality is not merely a technical metric, but a whole institutional issue associated with educational objectives, social accountability, and organizational efficacy. Consequently, higher education institutions require quality methodologies that transcend mere inspection and certification, fostering ongoing enhancement in both academic and administrative processes.

Total Quality Management (TQM) has been extensively examined as a management strategy capable of addressing these requirements. Total Quality Management (TQM), initially conceived for industrial and commercial environments, is founded on principles like leadership dedication, customer or stakeholder orientation, process enhancement, employee engagement, collaboration, measurement, and ongoing improvement. Sallis (2002) characterizes Total Quality Management (TQM) in education as a concept and approach that aids educational institutions in managing change and enhancing their operations. In the context of higher education institutions, Total Quality Management (TQM) constitutes not merely a collection of administrative instruments, but also a culture of collective accountability for quality.

The implementation of Total Quality Management in higher education has garnered heightened academic interest due to universities being service-oriented, knowledge-generating entities with diverse objectives. In contrast to manufacturing businesses, higher education institutions engage in teaching, learning, research, community service, academic autonomy, and student growth. The application of TQM principles in universities is more challenging. Srikanthan and Dalrymple (2002) proposed that quality management in higher education should encompass both service and academic roles, rather than solely emphasizing administrative efficiency. Manatos, Sarrico, and Rosa (2017) demonstrated that research on quality management in higher education has shifted towards more cohesive methodologies that link quality systems with institutional governance and management.

Notwithstanding this interest, the execution of TQM at higher education institutions remains inconsistent. Certain studies indicate advantages including enhanced institutional planning, improved service provision, simpler procedures, increased engagement, and heightened focus on student requirements. Additional studies emphasize challenges such as resistance to change, inadequate leadership support, minimal staff engagement, bureaucratic application of quality standards, ambiguous definitions of the "customer" in higher education, and the conflict between managerial frameworks and academic principles. Jasti, Venkateswaran, and Kota (2022) examined Total Quality Management (TQM) in higher education concerning obstacles, clientele, and accreditation, demonstrating that these themes are pivotal for comprehending the adoption and assessment of TQM in universities.

Despite prior reviews addressing quality management and Total Quality Management in higher education, the literature continues to be fragmented across many subjects, locations, methodologies, and institutional contexts. Certain studies concentrate on models and frameworks, while others examine accreditation,

service quality, student satisfaction, leadership, or corporate culture. This dispersion necessitates the synthesis of the available evidence in a clear and methodical manner. A systematic literature review is appropriate for this objective as it enables the researcher to find, select, assess, and arrange existing studies through clear methodologies. The PRISMA 2020 declaration serves as an established framework for reporting systematic reviews, enhancing transparency in study selection and synthesis (Page et al., 2021).

This essay intends to provide a systematic literature review on Total Quality Management in Higher Education Institutions. This study aims to analyze the conceptualization of TQM, the reported practices, the outcomes linked to its implementation, and the obstacles that persist in hindering its application in higher education. The study seeks to systematically organize the available literature on TQM in higher education and to delineate potential avenues for further research.

Research question

RQ1: What methodological approaches have been used in Total Quality Management and Higher Education Institutions?

RQ2: What future research directions can be proposed based on the reviewed literature?

RQ3: What theories have been used to explain the relationship between Total Quality Management and Higher Education Institutions?

RQ 4What geographical locations have been covered in previous studies on Total Quality Management and Higher Education Institutions**?**

2. Methodology

This study employed a systematic literature review methodology to analyze prior research on Total Quality Management (TQM) inside Higher Education Institutions (HEIs). The review aimed to find, select, and assess pertinent articles concerning TQM practices, methodological techniques, theoretical frameworks, geographical settings, research gaps, and prospective research paths in higher education. The search was conducted utilizing the Scopus database, recognized as one of the most prevalent academic databases for peer-reviewed research. The preliminary search revealed 626 records pertaining to Total Quality Management and Higher Education Institutions. Following the initial screening phase, 266 data were maintained, whereas 360 records were removed due to insufficient alignment with the study's aim.

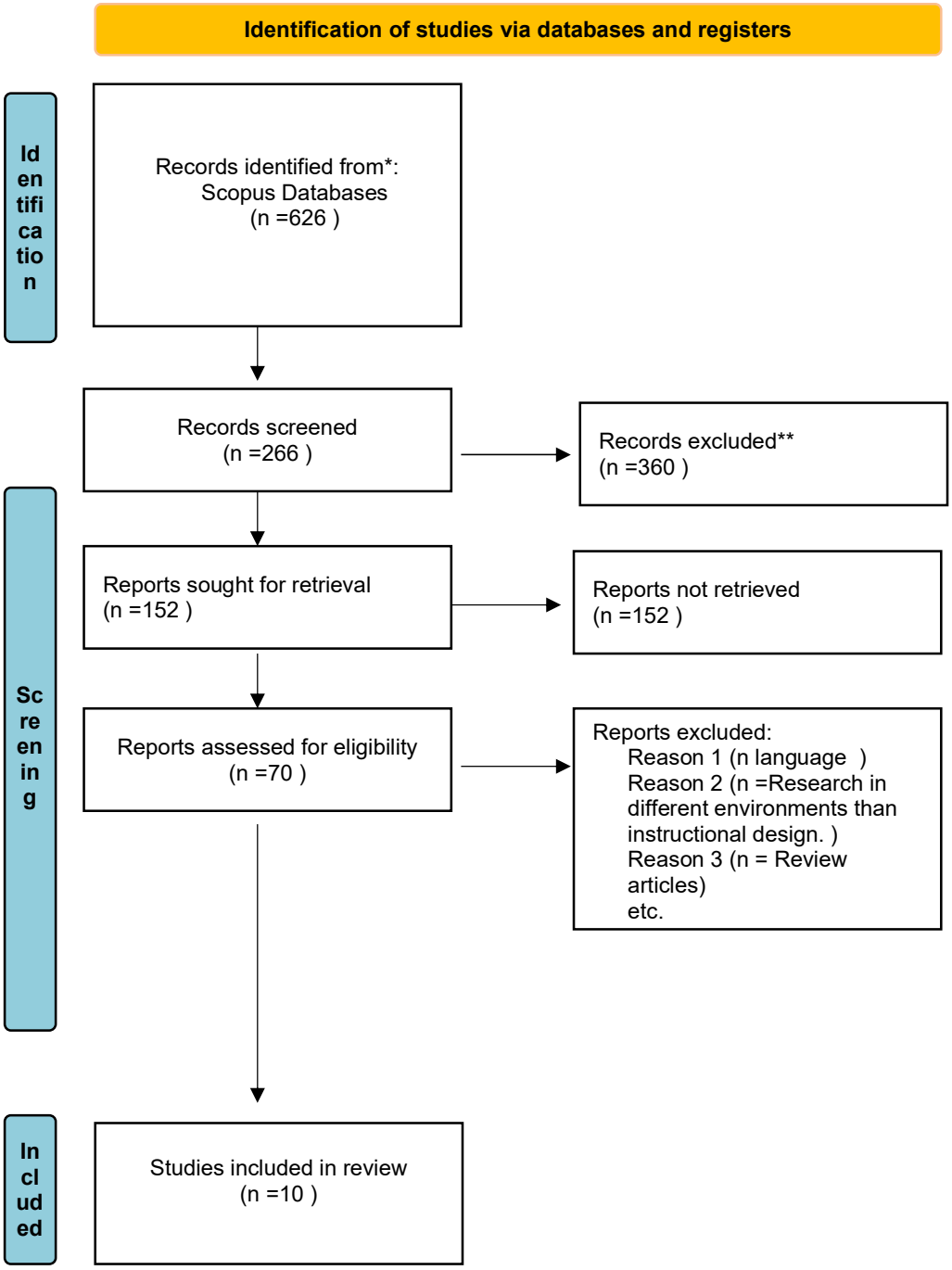
In the subsequent phase, 152 reports were requested for recovery. Nonetheless, merely 70 reports were evaluated for eligibility following the application of the inclusion and exclusion criteria. The eligibility evaluation was predicated on the pertinence of each study to Total Quality Management and higher education, the language of publishing, the research context, and the publication type. Studies were rejected if they were written in an inappropriate language, concentrated on situations unrelated to higher education or TQM, or were review articles instead of empirical or directly pertinent studies.

Following the comprehensive eligibility evaluation, ten studies were ultimately incorporated into the review. The studies were manually analyzed in accordance with the article's research questions. The analysis concentrated on five primary dimensions: the methodological approaches employed in prior studies, the gaps recognized in the literature, prospective research directions, the theories and frameworks utilized, and the geographical regions addressed by past research.

The review process adhered to the PRISMA methodology, progressing from identification to screening, eligibility evaluation, and final inclusion. This process facilitated openness in the selection of research and established a clear foundation for synthesizing the literature on Total Quality Management in Higher Education Institutions.

TITLE-ABS-KEY (Total QUALITY Management AND Higher Education Institutions) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND PUBYEAR > 2015 AND PUBYEAR < 2024

Fig 1 PRISMA 2020



*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).

**If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.

Source:Page MJ, et al. BMJ 2021;372:n71. doi: 10.1136/bmj.n71.

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3. Results

3.1 RQ1: What methodological approaches have been used in Total Quality Management and Higher Education Institutions?

Table 1. Methodological Approaches Used in Studies on Total Quality Management in Higher Education Institutions

No.	Article	Context / Focus	Methodological approach	Data collection / Sample	Data analysis technique
1	**Academic solidarity and digitization: Management of a displaced university**	Management of a displaced university during war in Ukraine	Descriptive / experience-based case study	Institutional experience of Kherson State University	Generalization and systematization of institutional experience
2	**A Proposed Measurement Instruments for Total Quality Management Practices in Higher Education Institutions**	TQM measurement in HEIs	Conceptual / literature-based study	Previous studies on TQM measurement in education	Theoretical analysis and synthesis of previous dimensions
3	**Educational empowerment: Evolution, innovations and challenges of educational financing in commercial banks**	Higher education financing in India	Secondary-data-based analytical study	Secondary data on education expenditure, GER, and educational loans	Trend and descriptive analysis
4	**Influence of Innovation Strategy, Total Quality Management (TQM) and Internationalization Strategy on Improving Higher Education Performance**	TQM, innovation, internationalization, and HEI performance	Quantitative explanatory study	Variables related to TQM dimensions, innovation strategy, and internationalization strategy	Multiple linear regression analysis
5	**Investigating Agropreneurial Intention among Students in Higher Learning Institution using the Theory of Planned Behaviour**	Students' agropreneurial intention in higher education	Qualitative study	Focus Group Discussion with 20 students from UPM	Qualitative interpretation based on TPB
6	**Partial Least Square Structural Equation Model "PLS-SEM" to Predict Total Quality Management in UAE Higher Education**	TQM and organizational performance in UAE HEIs	Quantitative survey study	Survey data from 99 respondents	PLS-SEM
7	**Success Factors of Total Quality Management (TQM) Practices: A Case Study of UTAS in Oman**	TQM implementation success factors in Oman	Quantitative case-study survey	Questionnaire; 300 completed responses from seven UTAS colleges	Factor analysis and t-test
8	**The Application of Continuous Quality Improvement Methods at Universities in**	CQI/TQM methods in	Quantitative survey study	Surveys with students and	Cluster analysis and cross-tabulations

	the Opinion of Students and Lecturers of the University of Lodz	Polish higher education		lecturers	
9	**The moderating effect of gender and age on the students' acceptance of learning management systems in Saudi higher education**	LMS acceptance in Saudi HEIs	Quantitative study	851 online surveys submitted; 833 used for analysis	PLS-SEM and multigroup analysis
10	**The potential financial impact and influence of BEE on private higher education institutions in South Africa: Management alert**	Total Quality Service framework in private HEIs	Exploratory qualitative and predictive study	Secondary data, document analysis, and previous TQS framework	Adapted "5 Star" methodology; inductive reasoning

Source: Prepared by the researcher

The methodological classification of the examined studies indicates that research on Total Quality Management in Higher Education Institutions predominantly employs quantitative methods. The majority of research utilize questionnaire-based data collection and employ statistical methods include multiple regression, PLS-SEM, factor analysis, t-tests, cluster analysis, and cross-tabulations. These methodologies are primarily employed to analyze the correlation between TQM characteristics and outcomes, including institutional performance, service quality, student satisfaction, employee satisfaction, and continuous improvement. Conversely, conceptual and literature-based studies enhance the field by formulating measurement frameworks and pinpointing essential TQM features, but qualitative and mixed-method studies are comparatively scarce. The examined literature demonstrates a pronounced inclination towards quantifying TQM via statistical models; however, it also underscores the necessity for forthcoming research employing more comprehensive qualitative and mixed-method approaches to elucidate the TQM implementation process in higher education institutions.

3.2 RQ2: What future research directions can be proposed based on the reviewed literature?

No.	Article	Main gap observed in the study	Proposed future research direction
1	**Academic Solidarity and Digitization: Management of a Displaced University**	The article focuses on the experience of a displaced university during an exceptional crisis, highlighting digitization and institutional communication as mechanisms for maintaining university operations.	Future research could examine the relationship between **Total Quality Management, digital transformation, and crisis management** in higher education institutions, especially universities operating under unstable or emergency conditions.
2	**A Proposed Measurement Instruments for Total Quality Management Practices in Higher Education Institutions**	The article proposes a measurement instrument for TQM practices in HEIs, but it is mainly based on previous literature and does not provide broad empirical validation.	Future studies should empirically test the proposed TQM dimensions across different universities using methods such as **Confirmatory Factor Analysis (CFA)** or **Structural Equation Modeling (SEM)** to verify their validity and reliability in higher education contexts.
3	**Educational Empowerment: Evolution, Innovations and Challenges of Educational Financing in Commercial Banks**	The article examines higher education financing in India using secondary data, but it does not directly connect financing with Total Quality Management.	Future research could investigate how **educational financing, loan systems, and financial resources** affect the ability of higher education institutions to implement TQM and improve educational service quality.
4	**Influence of Innovation Strategy, Total Quality**	The article shows that some TQM dimensions, such as teacher	Future studies could expand the sample, improve questionnaire indicators, and include additional

	Management (TQM) and Internationalization Strategy on Improving Higher Education Performance	empowerment and teacher training, influence higher education performance, together with innovation and internationalization strategies.	variables such as motivation, working conditions, leadership style, human resources, financial operations, and organizational procedures. Comparative studies between public and private universities would also be useful.
5	**Investigating Agropreneurial Intention among Students in Higher Learning Institution Using the Theory of Planned Behaviour**	The article focuses on students' agropreneurial intention through a focus group discussion and is not directly centered on TQM.	Future research could examine how **program quality, training quality, institutional support, and student-centered services** influence students' entrepreneurial intentions, while linking these factors to TQM principles such as student focus and continuous improvement.
6	**Partial Least Square Structural Equation Model "PLS-SEM" to Predict Total Quality Management in UAE Higher Education**	The article uses a quantitative design to test relationships between TQM, service quality, student satisfaction, employee satisfaction, and organizational performance.	Future studies should adopt **longitudinal and mixed-method designs**, combining questionnaires with interviews, observations, and institutional documents to understand how TQM is implemented inside universities, not only how it affects performance statistically.
7	**Success Factors of Total Quality Management (TQM) Practices: A Case Study of UTAS in Oman**	The article identifies TQM success factors such as top management commitment, continuous improvement, employee development and empowerment, and strategic management, but it focuses on one institutional case.	Future research could conduct comparative studies across several universities in Oman or other countries to examine whether the same TQM success factors appear in different higher education contexts.
8	**The Application of Continuous Quality Improvement Methods at Universities in the Opinion of Students and Lecturers of the University of Lodz**	The article studies students' and lecturers' opinions about the application of CQI/TQM methods in the university context. However, it focuses mainly on perceptions rather than direct educational outcomes.	Future research could compare student performance in courses or departments applying CQI methods with those using traditional approaches in order to assess the real effect of continuous improvement on educational outcomes.
9	**The Moderating Effect of Gender and Age on the Students' Acceptance of Learning Management Systems in Saudi Higher Education**	The article focuses on students' acceptance of learning management systems and the quality of learning content, but it does not directly examine TQM.	Future studies could connect **digital content quality, technology acceptance, student satisfaction, and e-learning quality** with a TQM framework, especially in the context of digital transformation in higher education.
10	**The Potential Financial Impact and Influence of Black Economic Empowerment (BEE) on Private Higher Education Institutions in South Africa: Management Alert**	The article uses a Total Quality Service framework to examine the possible effect of BEE policy on private higher education institutions in South Africa.	Future research could study how government policies and regulatory frameworks influence TQM implementation in private universities, especially in relation to financial sustainability, recruitment, procurement, equity, and institutional performance.

Source: Prepared by the researcher

The examined literature suggests that forthcoming research on Total Quality Management in Higher Education Institutions should progress in multiple avenues. Initially, current TQM measuring tools require enhanced empirical validation across diverse institutional and country settings. Secondly, subsequent research should apply longitudinal and mixed-method approaches to investigate the temporal implementation of TQM and its impact on service quality, student satisfaction, personnel satisfaction, and institutional performance. Third, comparative analyses between public and private universities are essential to ascertain whether TQM success factors differ based on institutional type and country environment. Subsequently, future study ought to link TQM with rising themes such digital transformation, innovation, internationalization, funding, crisis management, employability, and learning outcomes. The literature indicates that research should progress from broad assessment to a more profound comprehension of TQM implementation, contextual factors, and tangible educational outcomes.

3.3RQ3: What theories have been used to explain the relationship between Total Quality Management and Higher Education Institutions?

Table 3. Theoretical and Conceptual Frameworks in the Reviewed Literature on Total Quality Management in Higher Education Institutions

No.	Article	Theory / framework used	How it explains the relationship with Higher Education Institutions
1	**Academic Solidarity and Digitization: Management of a Displaced University**	No direct TQM theory. The article is mainly grounded in **academic solidarity, digitization, crisis communication, and university resilience**.	The article explains how digitization, social communication, and solidarity help a university maintain educational quality during war and displacement. It is related to higher education management, but not directly to TQM.
2	**A Proposed Measurement Instruments for Total Quality Management Practices in Higher Education Institutions**	**TQM principles**, quality management models, and measurement frameworks such as **EFQM**, Deming, Juran, Crosby, and higher education quality models.	The article uses TQM as a managerial framework for measuring quality in HEIs through dimensions such as leadership, strategic planning, customer satisfaction, knowledge management, human resources, course delivery, facilities, benchmarking, and partnership.
3	**Educational Empowerment: Evolution, Innovations and Challenges of Educational Financing in Commercial Banks**	No direct TQM theory. The article is closer to **higher education financing, cost-sharing, and market-based financing models**.	It explains how financial resources, educational loans, and commercial bank financing affect access, equity, and sustainability in higher education. Its link to TQM is indirect, because financing can support or limit quality improvement in HEIs.
4	**Influence of Innovation Strategy, Total Quality Management (TQM) and Internationalization Strategy on Improving Higher Education Performance**	**TQM framework**, innovation strategy, internationalization strategy, and organizational performance model.	The article explains that TQM dimensions such as communication, teacher empowerment, training, continuous improvement, leadership commitment, data analysis, and student focus can improve HEI performance. It also links TQM with innovation and internationalization.
5	**Investigating Agropreneurial Intention among Students in Higher Learning Institution Using the Theory of Planned Behaviour**	**Theory of Planned Behaviour (TPB)** by Ajzen.	TPB explains students' intention through attitude, subjective norms, and perceived behavioral control. Although the article is not directly about TQM, it shows how institutional quality and program design can influence student intentions and educational outcomes.
6	**Partial Least Square Structural Equation Model "PLS-SEM" to Predict Total Quality Management in UAE Higher Education**	**TQM framework**, service quality model, student satisfaction, employee satisfaction, and organizational performance model.	The article explains the TQM–HEI relationship through a structural model where TQM affects organizational performance directly and indirectly through service quality, student satisfaction, and employee satisfaction.
7	**Success Factors of Total Quality Management (TQM) Practices: A Case Study of UTAS in Oman**	**TQM success factors framework**, with references to institutional theory, continuous improvement, strategic management, and employee empowerment.	The article explains TQM in HEIs through factors such as top management commitment, continuous improvement, employee development and empowerment, and strategic management. These factors are treated as conditions for successful TQM implementation.
8	**The Application of Continuous Quality Improvement Methods at**	**Continuous Quality Improvement (CQI)** and **Deming**	The article presents CQI as a higher-education adaptation of TQM. It explains

	Universities in the Opinion of Students and Lecturers of the University of Lodz	**Cycle: Plan–Do–Check–Act (PDCA)**.	quality improvement through continuous feedback, stakeholder involvement, and repeated improvement cycles in teaching, research, and administration.
9	**The Moderating Effect of Gender and Age on the Students' Acceptance of Learning Management Systems in Saudi Higher Education**	**Technology Acceptance Model (TAM)**.	TAM explains students' use of learning management systems through perceived usefulness and perceived ease of use. The article is not directly about TQM, but it relates to digital service quality and student satisfaction in HEIs.
10	**The Potential Financial Impact and Influence of Black Economic Empowerment (BEE) on Private Higher Education Institutions in South Africa: Management Alert**	**Total Quality Service (TQS) framework** and BEE policy framework.	The article uses TQS to examine how policy requirements may affect quality-service dimensions in private HEIs, including procurement, ownership, staffing, management, and graduate throughput.

Source: Prepared by the researcher

The examined literature indicates that the association between Total Quality Management and Higher Education Institutions has primarily been elucidated through TQM-based frameworks, rather than a singular theory. The predominant theoretical framework is the overarching Total Quality Management (TQM) philosophy, centered on leadership commitment, continuous improvement, stakeholder engagement, employee participation, strategic planning, service excellence, and performance evaluation. Certain articles augment this perspective by employing associated models, like Continuous Quality Improvement, the Deming PDCA cycle, Total Quality Service, service quality frameworks, and organizational performance paradigms. Other studies employ theories not explicitly based on TQM, such as the Theory of Planned Behavior and the Technology Acceptance Model, to elucidate student behavior, technology acceptance, and program quality in higher education. The literature indicates that Total Quality Management (TQM) at Higher Education Institutions (HEIs) is predominantly regarded as a management and institutional framework aimed at enhancing teaching, services, administration, stakeholder satisfaction, and organizational performance.

3.4 RQ4What geographical locations have been covered in previous studies on Total Quality Management and Higher Education Institutions?

Table 4. Geographical Contexts Covered in the Reviewed Literature on Total Quality Management in Higher Education Institutions

No.	Article	Geographical location covered	Type of geographical focus	Relevance to TQM and HEIs
1	**Academic Solidarity and Digitization: Management of a Displaced University**	**Ukraine**	Single-country / single-university context	The study focuses on Kherson State University in Ukraine and discusses university management, digitization, and institutional continuity during war. Its link to TQM is indirect, but it is relevant to higher education management and quality under crisis conditions.
2	**A Proposed Measurement Instruments for Total Quality Management Practices in Higher Education Institutions**	**General / not limited to one country**	Conceptual and literature-based focus	The article proposes TQM measurement instruments for HEIs based on previous studies. Although the authors are based in Malaysia, the proposed framework is not restricted to a single national context.
3	**Educational Empowerment: Evolution, Innovations and Challenges of Educational**	**India**	Single-country context	The study examines higher education financing in India. It is not directly focused on TQM, but it relates to the financial conditions that can affect quality improvement in higher education.

	Financing in Commercial Banks			
4	**Influence of Innovation Strategy, Total Quality Management (TQM) and Internationalization Strategy on Improving Higher Education Performance**	**Indonesia**	Single-country / higher education performance context	The article studies TQM, innovation strategy, internationalization strategy, and higher education performance in the Indonesian higher education context.
5	**Investigating Agropreneurial Intention among Students in Higher Learning Institution Using the Theory of Planned Behaviour**	**Malaysia**	Single-country / university student context	The study focuses on students at Universiti Putra Malaysia. It is not directly centered on TQM, but it relates to program quality, institutional support, and higher education outcomes.
6	**Partial Least Square Structural Equation Model "PLS-SEM" to Predict Total Quality Management in UAE Higher Education**	**United Arab Emirates**	Single-country / HEI performance context	The article directly examines TQM in UAE higher education institutions, linking TQM to organizational performance, service quality, student satisfaction, and employee satisfaction.
7	**Success Factors of Total Quality Management (TQM) Practices: A Case Study of UTAS in Oman**	**Oman**	Single-country / case study	The study focuses on the University of Technology and Applied Sciences in the Sultanate of Oman and identifies TQM success factors such as top management commitment, continuous improvement, employee development, and strategic management.
8	**The Application of Continuous Quality Improvement Methods at Universities in the Opinion of Students and Lecturers of the University of Lodz**	**Poland**	Single-country / single-university context	The study was conducted at the University of Lodz in Poland and examines students' and lecturers' perceptions of CQI/TQM methods in higher education.
9	**The Moderating Effect of Gender and Age on the Students' Acceptance of Learning Management Systems in Saudi Higher Education**	**Saudi Arabia**	Single-country / higher education technology context	The study focuses on Saudi higher education institutions and examines LMS acceptance. It is not directly about TQM, but it is relevant to digital service quality and student satisfaction.
10	**The Potential Financial Impact and Influence of Black Economic Empowerment (BEE) on Private Higher Education Institutions in South Africa: Management Alert**	**South Africa**	Single-country / private HEI context	The article examines private higher education institutions in South Africa through a Total Quality Service framework, with attention to policy, finance, staffing, procurement, and institutional quality.

Source: Prepared by the researcher

The analyzed papers encompass several geographical contexts, including Ukraine, India, Indonesia, Malaysia, the United Arab Emirates, Oman, Poland, Saudi Arabia, and South Africa. The geographical distribution indicates a significant concentration in Asia and the Middle East, particularly in Malaysia, Indonesia, India, the UAE, Oman, and Saudi Arabia. Europe is represented by Ukraine and Poland, and Africa is represented by South Africa.
The majority of the research focus on single-country situations or case studies from individual institutions. Previous research on TQM in higher education has frequently focused on quality management within particular national or institutional contexts instead of conducting extensive cross-country comparisons. The conceptual paper on TQM measurement tools provides a broader perspective that transcends a specific geographical region.
The literature indicates that Total Quality Management in higher education has been examined in several countries; however, comparative international study is still few. Future research may analyze universities across various nations, regions, or educational frameworks to elucidate the impact of national policies, institutional culture, funding models, and quality assurance systems on the execution of Total Quality Management in higher education institutions.

4. CONCLUSION

This systematic literature analysis reveals that Total Quality Management (TQM) in higher education has been examined from several perspectives; yet, the discipline is inconsistent regarding methodologies, ideas, contexts, and research emphasis. The review commenced with an extensive Scopus search and ultimately refined to ten publications that directly or indirectly pertained to TQM and higher education institutions. This selection approach enabled the study to concentrate on works pertaining to quality management, institutional performance, service quality, student satisfaction, employee satisfaction, continuous improvement, and associated higher education matters.
The initial significant conclusion pertains to the methodological characteristics of the examined research. The findings suggest that investigations into TQM inside higher education institutions predominantly utilize quantitative methodologies. Numerous research included questionnaires and statistical methods including multiple linear regression, PLS-SEM, factor analysis, t-tests, cluster analysis, and cross-tabulations. These methodologies were primarily employed to examine the correlations between TQM characteristics and institutional outcomes, encompassing organizational performance, service quality, student satisfaction, employee satisfaction, and continuous improvement. This inclination indicates that scholars frequently regard TQM as a quantifiable administrative framework whose impacts can be evaluated by statistical models.

This numerical superiority presents distinct benefits. It enables researchers to quantify the correlation between TQM practices and institutional outcomes, juxtapose factors, and evaluate proposed models. Research employing PLS-SEM and regression analysis demonstrates the influence of leadership, workforce engagement, training, service quality, and student happiness on institutional success. This methodological pattern also imposes a constraint. An excessive dependence on surveys may diminish Total Quality Management to mere quantifiable metrics, but the genuine execution of quality management at universities is frequently influenced by cultural factors, leadership approaches, staff dispositions, internal opposition, governance frameworks, and resource availability. Consequently, the results indicate that subsequent study should not only assess TQM but also investigate its application in routine academic and administrative activities.
The review indicates that conceptual and framework-building studies are significant in the discipline. Several analyzed studies suggested measuring tools and Total Quality Management elements for higher education institutions, including leadership, strategic planning, customer satisfaction, knowledge management, human resources, course delivery, facilities, benchmarking, and partnerships. These contributions are valuable as higher education institutions cannot only replicate industrial TQM models without modification. Universities possess distinct purposes pertaining to education, research, community engagement, student growth, and academic independence. Consequently, assessment instruments intended for higher education must accurately represent the characteristics of academic endeavors rather

than categorizing institutions as conventional economic entities.
A significant discovery pertains to the theoretical frameworks employed in the examined studies. The findings indicate that the connection between TQM and higher education institutions has primarily been elucidated through TQM-based frameworks rather than a singular prevailing philosophy. The predominant foundation is the overarching TQM philosophy, encompassing leadership commitment, continuous improvement, stakeholder engagement, employee participation, strategic planning, service quality, and performance evaluation. Several studies employed analogous models, including Continuous Quality Improvement, the Deming PDCA cycle, Total Quality Service, service quality frameworks, and organizational performance paradigms. This affirms that Total Quality Management in higher education is typically perceived as a managerial and institutional strategy focused on enhancing services, instructional methodologies, administrative functions, stakeholder contentment, and institutional efficacy. The review concurrently identified that certain research employed theories not directly associated with TQM, like the Theory of Planned Behaviour and the Technology Acceptance Model. These ideas were employed to elucidate student intents, technology adoption, utilization of learning management systems, and the quality of digital services. Their inclusion indicates that the literature on TQM and higher education is linked to broader themes, such as student behavior, digital transformation, program quality, and institutional support. Nonetheless, it indicates that not all examined research are equally focused on TQM. Some are directly associated with TQM implementation, and others are more indirectly linked through quality, management, service delivery, funding, or digital learning.
The geographical distribution of the examined literature warrants consideration. The research encompasses several national contexts, including Ukraine, India, Indonesia, Malaysia, the United Arab Emirates, Oman, Poland, Saudi Arabia, and South Africa. The majority of these studies are either single-country investigations or case studies from individual institutions. TQM in higher education has frequently been analyzed within a particular national, institutional, or policy framework rather than through extensive worldwide comparison. This is advantageous since it enables researchers to comprehend local situations; yet, it constrains the generalizability of the findings. Higher education systems vary on governance, finance, accreditation, autonomy, labor market demands, and institutional culture. Consequently, TQM approaches that demonstrate efficacy in one nation may not provide same outcomes in another.
The results indicate a distinct research gap concerning comparative and longitudinal investigations. The analyzed literature indicates the necessity for forthcoming research to investigate TQM in various university types, encompassing both public and private institutions, as well as throughout diverse national frameworks. It also indicates the necessity for longitudinal research that examines TQM adoption over time rather than assessing it at a single moment. This is especially significant as TQM is not a transient managerial instrument. The process is long-term and needs leadership commitment, staff engagement, cultural transformation, training, feedback mechanisms, and ongoing assessment.
The analyzed studies indicate that next study ought to link Total Quality Management with contemporary transformations in higher education, including digital transformation, innovation, internationalization, financing, crisis management, employability, and learning outcomes. This perspective is pertinent since colleges currently face pressure to enhance quality while addressing technology advancements, global rivalry, financial limitations, and evolving student expectations. TQM should be examined not solely as an internal quality system, but also as a strategic framework that enables higher education institutions to address external demands.
This review's findings suggest that TQM continues to be a significant subject in higher education research; nonetheless, the discipline requires enhanced theoretical integration, wider empirical validation, and more sophisticated methodological frameworks. The examined literature substantiates the significance of TQM principles, including leadership, continuous improvement, stakeholder engagement, employee participation, and performance assessment. Nonetheless, it indicates that greater emphasis must be placed on the actual experience of implementation within colleges. Subsequent study should integrate

quantitative data with qualitative insights to elucidate not only if TQM enhances higher education performance, but also how, why, and under which circumstances it is effective.

This systematic literature review analyzed the correlation between Total Quality Management and Higher Education Institutions by evaluating chosen studies that focus on methodological approaches, research deficiencies, prospective research avenues, theoretical frameworks, and geographical scope. The assessment affirms that Total Quality Management continues to be a pertinent strategy for higher education institutions aiming to enhance academic services, administrative procedures, stakeholder satisfaction, and institutional performance.
The results indicate that the majority of prior research has utilized quantitative methodologies, particularly questionnaire-based frameworks augmented by statistical methods like regression analysis, PLS-SEM, factor analysis, t-tests, cluster analysis, and cross-tabulations. These methodologies have enabled researchers to assess the correlation between TQM characteristics and outcomes like service quality, student satisfaction, employee satisfaction, continuous improvement, and organizational performance. The restricted application of qualitative and mixed-method designs indicates that the literature requires further exploration of the actual implementation of TQM within universities, the experiences of staff and students, and the internal factors influencing its success.
The analysis indicates that Total Quality Management in higher education has primarily been articulated through managerial and quality-oriented frameworks rather than a singular cohesive theory. The predominant underpinnings encompass TQM principles, Continuous Quality Improvement, the Deming PDCA cycle, service quality models, Total Quality Service, and organizational performance frameworks. Alternative theories, including the Theory of Planned Behavior and the Technology Acceptance Model, emerge in research that is tangentially associated with TQM via student behavior, digital learning, institutional support, and program quality. This signifies that TQM in higher education extends beyond internal quality protocols, encompassing broader academic, technological, managerial, and policy-related concerns.

The research examined were undertaken in various geographical contexts, including Ukraine, India, Indonesia, Malaysia, the United Arab Emirates, Oman, Poland, Saudi Arabia, and South Africa. This distribution indicates an increasing interest in TQM across various geographies; yet, the majority of studies are confined to single-country or single-institution contexts. Consequently, there remains a necessity for extensive comparative study that investigates the impact of national policies, institutional culture, funding mechanisms, accreditation standards, and governance frameworks on the execution of Total Quality Management in higher education institutions.
Future research should concentrate on validating TQM measurement instruments across various institutional contexts, employing longitudinal and mixed-method approaches, and correlating TQM with contemporary higher education priorities such as digital transformation, innovation, internationalization, crisis management, financing, employability, and learning outcomes. This research would advance the field beyond broad measurement to a more nuanced comprehension of the specific conditions that enable TQM to facilitate quality enhancement in universities.
This analysis indicates that Total Quality Management offers a beneficial framework for enhancing higher education institutions; yet, its effectiveness relies on factors beyond merely implementing formal quality standards. It necessitates dedicated leadership, engaged staff involvement, student-focused perspectives, dependable assessment systems, ongoing feedback, and an organizational culture that regards quality as a collective obligation. TQM should be perceived not merely as an administrative framework, but as a long-term strategy for cultivating more responsive, accountable, and quality-focused higher education institutions.

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