Jurnal Akuntansi, Keuangan, dan Manajemen (JAKMAN)
ISSN 2716-0807, Vol 7, No 2, 2026, 33-44 https://doi.org/10.35912/jakman.v7i2.5330

Quality Management System in Higher Education: A Main Pillar Towards Quality Higher Education

Vonny Tiara Narundana[1*], Yusuf Sulfarano Barusman[2], Defrizal Defrizal[3], Budhi Waskito[4], Habiburahhman Habiburahhman[5]
Universitas Bandar Lampung, Lampung, Indonesia[1,2,3,4,5]
vonny.tiara@ubl.ac.id[1*], yusuf.barusman@ubl.ac.id[2], defrizal@ubl.ac.id[3], Budhi.Waskito@ubl.ac.id[4], Habiburahhman@ubl.ac.id[5]

Article History:
Received 11 August 2025
1st Revision 13 August 2025
2nd Revision 17 August 2025
3rd Revision 23 September 2025
Accepted on 24 September 2025

Abstract
Purpose: This study reviews Quality Management Systems (QMS) in higher education, examining key concepts, implementation models, impacts, and challenges. It highlights leadership, accreditation, technology, and quality culture as critical success factors and shows how globalization and digital transformation shape accountability, innovation, and continuous improvement.
Methodology/Approach: A qualitative descriptive approach was used through a literature review of 11 Scopus-indexed journals, identified via Publish or Perish with keywords "quality management system in higher education." The thematic synthesis identified and interpreted the core themes.
Results/Findings: The findings show that models such as ISO 9001, TQM, and EFQM are widely adopted and aligned with continuous improvement cycles such as PPEPP. An effective QMS enhances the quality of learning, reputation, and employability. Success depends on leadership commitment, stakeholder engagement and contextual adaptability. Bridging theory and practice is essential for sustainable improvements.
Conclusions: Quality management systems in higher education face challenges from diverse stakeholder demands, weak implementation, and limited alignment with ISO 21001:2018. Policies without strong leadership and continuous evaluation are inadequate. TQM offers a comprehensive, evidence-based framework that strengthens the QMS and supports digital integration, engagement, sustainability, and global competitiveness.
Limitations: This study is limited to a literature review of 11 selected articles without primary data collection, which may be subject to search bias and researcher interpretation.
Contributions: This study consolidates diverse QMS models into a strategic reference for university leaders and identifies research gaps, particularly in integrating advanced technologies such as AI and blockchain.

Keywords: *Continuous Improvement, Higher Education, Institutional Quality, Quality Assurance, Quality Management System*

How to cite: Narundana, V. T., Barusman, Y S., Defrizal, D., Waskito, B., & Habiburahhman, H. (2026). Quality Management System in Higher Education: A Main Pillar Towards Quality Higher Education. *Jurnal Akuntansi, Keuangan, dan Manajemen.* 7(2) 33-44.

1. Introduction

The implementation of a Quality Management System (QMS) has become a strategic necessity for organizations in an era of increasing global competition. This is also driven by the fact that Indonesia

remains a developing country, which means that it still needs to make substantial investments in education to achieve developed-country status (Cakranegara, 2020). Market demands for high-quality products and services, accompanied by pressure to improve efficiency and profitability, encourage organizations to adopt systematic and standardized approaches (Ardilla, Syifa, & Sitompul, 2024). A Quality Management System is designed as a framework that encompasses policies, procedures, operational practices, and integrated resource allocation to ensure the achievement of organizational quality objectives.

However, in practice, higher education institutions in Indonesia still face various quality-related problems, such as weak system implementation, lack of leadership commitment, and low adoption of international standards. This condition creates a gap between formal quality documents and their actual implementation. In the context of industrialization and the integration of international standards such as ISO 9001, this system functions not only as a quality control tool but also as a driver of continuous change in production and service processes (Saraiva, Ferreira, Ramos, & Pt, 2017). Therefore, implementing a QMS is an important foundation for building organizational competitiveness while ensuring sustainable stakeholder satisfaction.

A Quality Management System (QMS) is a structured approach implemented by organizations to ensure that the products and services produced not only meet but also exceed customer expectations and applicable quality standards. A QMS encompasses the processes of identification, planning, implementation, control, and continuous improvement of all activities related to quality (Franchina et al., 2023). Through the application of practices such as quality control, product testing, risk management, performance monitoring, and the active involvement of all employees, QMS aims to establish a quality culture embedded at every level of the organization (Mahmudah, Halik, Sari, & Ridwan, 2025). The implementation of this system provides various strategic benefits, including increased customer satisfaction, operational efficiency, cost reduction, and a strengthened institutional reputation.

In addition, QMS facilitates organizations in meeting regulatory requirements and international quality standards, such as ISO 9001, while also accelerating responses to quality issues and promoting competitive advantage (Zgirskas, Ruževičius, & Ruželė, 2021). A Quality Management System (QMS) is relevant to the industrial sector and is urgently needed in the field of higher education. In the era of globalization and increasingly intense competition among institutions, universities are required to ensure the quality of education that is adaptive to labor market needs and industrial developments (Hadi et al., 2026). The implementation of QMS in higher education institutions aims to develop, implement, and maintain a set of systematic policies, procedures, and evaluation mechanisms to ensure the consistent and high-quality delivery of education, research, and community service processes (Mubarok, Muhith, & Muis, 2024).

Through this approach, higher education institutions can build governance systems that are transparent, accountable, and oriented toward continuous improvement, thereby producing competent and globally competitive graduates. Essentially, the quality of an institution requires planning that follows national standards to improve the quality of the institution. In higher education institutions, a Quality Management System is a structured approach aimed at ensuring and continuously improving the quality of education. Through the establishment of policies, implementation of procedures, and evaluation of learning, research, and community service processes, QMS ensures that educational quality standards are met (Wijaya, Hartoyo, & Wardani, 2026). Universities that consistently implement QMS can identify weaknesses, improve their systems, and adopt best practices to enhance institutional performance.

In addition, QMS includes the management of human resources, infrastructure, and information technology that support educational services. Thus, QMS not only strengthens institutional governance but also builds a quality culture that encourages innovation, efficiency, and sustainable academic excellence (Rifa'i, 2018). The importance of QMS in higher education can be seen from various aspects in helping higher education institutions identify and understand the needs and expectations of

stakeholders such as students, lecturers, and industry professionals. Through this needs assessment process, educational institutions can design appropriate educational programs, provide adequate facilities, and develop effective strategies. By meeting stakeholder expectations, higher education institutions can increase student satisfaction and retention and enhance their image and reputation.

2. Literature Review and Hypothesis Development

2.1 Previous Studies

Research conducted by Nasim, Iqbal, and Khan (2014) the grand theory used in this study was TQM, which emphasizes the involvement of all elements of the organization, continuous improvement, and orientation toward customer/stakeholder satisfaction (Nasim et al., 2014). The study found that the implementation of TQM significantly improved the quality of educational services, particularly in teaching and student satisfaction. Nevertheless, research and partnerships with the industry received less attention within the applied TQM framework. This indicates that the implementation of quality management systems in higher education institutions must be comprehensive and not solely focused on the learning process.

Furthermore, research conducted by M. Suti, M. Syahdi, and D. Didiharyono (2020) highlighted that an integrated quality system not only encourages increased efficiency in academic governance but also strengthens accountability and commitment to continuous quality improvement (Suti, Syahdi, & Didiharyono, 2020). The grand theory underlying this study is also rooted in TQM, where the principles of active involvement of all stakeholders and data-based decision-making are considered the foundation for the successful implementation of a Quality Management System (QMS) in higher-education institutions. This study emphasizes the importance of a comprehensive approach based on total quality theory so that universities can adapt to digitalization and globalization.

2.1.1 Quality and Quality Assurance Systems in Higher Education

Quality in higher education is multidimensional and dynamic in nature. According to Harvey and Green, quality is defined as "fitness for purpose," that is, the alignment between outcomes and institutional objectives. Educational quality is a characteristic that responds to stakeholder needs and realizes the institution's mission and vision (Rahayu et al., 2025). In Indonesia, *Permen Ristekdikti No. 62 Tahun 2016* defines quality as the conformity of higher education implementation with national and institutional standards. Harvey and Green (1993) proposed five perspectives on quality: excellence, consistency, purpose, value for money, and transformation. The Quality Assurance System (QAS) is a systematic approach applied by higher-education institutions to ensure that the processes of education, research, and community service are conducted in accordance with established quality standards (Nugroho & Miyono, 2024). This system consists of two main components: the Internal Quality Assurance System (SPMI) and the External Quality Assurance System (SPME). SPMI focuses on internal institutional efforts to ensure quality, while SPME is conducted by external bodies such as BAN-PT or LAM to conduct accreditation and evaluation.

The success of a quality assurance system is largely determined by institutional policy support and the growth of a quality culture within the academic community. A quality culture refers to the awareness and commitment of all institutional elements to the importance of maintaining and improving quality (Suhardin, 2024). Without a strong quality culture, a quality assurance system will become an administrative document without real implementation. Therefore, the roles of leaders, lecturers, educational staff, and students are vital in building a quality educational ecosystem. The implementation of SPMI in Indonesia is carried out through the PPEPP cycle, *Penetapan, Pelaksanaan, Evaluasi, Pengendalian dan Peningkatan Standar Kualitas Pendidikan Tinggi*. This cycle represents a framework that emphasizes a continuous approach to ensuring and improving quality. Each standard established by the institution must go through processes of implementation, monitoring, evaluation of results, and continuous improvement to ensure that quality is maintained and relevant to contemporary needs.

Figure 1. PPEPP cycle

Figure 1 shows, the framework of the Internal Quality Assurance System (SPMI) in higher education consists of five main stages: the establishment of higher education standards, implementation of standards, evaluation of implementation, control of evaluation results, and improvement of standards based on evaluation and control outcomes. This cycle illustrates a continuous process of systematically ensuring and enhancing the quality of higher education. By following the PPEPP cycle, institutions can ensure that all *Tridharma Pendidikan Tinggi* are carried out according to established standards, evaluated objectively, controlled to remain on the quality path, and consistently improved to achieve optimal quality.

2.1.2 Models and Approaches to Quality Management Systems

A Quality Management System (QMS) in higher education is a strategic framework aimed at ensuring and continuously improving both academic and non-academic quality. The implementation of QMS has become an urgent necessity as universities face the challenges of globalization, regulatory changes, industrial demands, and the needs of students as primary stakeholders. From a theoretical perspective, QMS is rooted in Total Quality Management (TQM) as the grand theory that emphasizes the involvement of all organizational elements, stakeholder satisfaction, and continuous improvement (Nasim et al., 2014)

Various international quality models have emerged from TQM principles, including ISO 9001:2015, ISO 21001:2018, the European Foundation for Quality Management (EFQM) Model 2020, and the Baldrige Excellence Framework (UNESCO). ISO 9001 emphasizes a process-based approach and quality documentation, whereas ISO 21001 was specifically developed for educational organizations with a focus on learner and stakeholder satisfaction. The EFQM and Baldrige frameworks offer comprehensive evaluation frameworks encompassing leadership, strategy, resources, processes, and institutional results. These four models share a common objective, namely to ensure consistent quality while enhancing the competitiveness of educational institutions (Cakranegara, 2020)

Recent studies have demonstrated the effectiveness of implementing QMS models to improve the quality of higher education. Nasim et al. (2014) found that the application of TQM significantly improved the quality of educational services, particularly in teaching and student satisfaction. However, the study also noted the weak integration of research aspects and industry partnerships. This highlights that QMS implementation must be comprehensive and not solely focused on the learning process.

Furthermore, Suti et al. (2020) emphasize that quality-based university governance in the era of digitalization promotes efficiency, accountability, and stakeholder involvement in decision-making processes. A consistently implemented QMS can improve the quality of learning processes through curriculum monitoring, lecturer evaluation, and student assessment. These studies affirm that QMS is not merely an administrative mechanism but also a transformational instrument for strengthening both academic and non-academic quality.

In Indonesia, the latest regulatory basis for higher education quality assurance is stipulated in *Permendikbudristek No. 53 Tahun 2023*, which emphasizes the importance of the PPEPP cycle (Establishment, Implementation, Evaluation, Control, and Improvement). This cycle serves as the mandatory Internal Quality Assurance System (SPMI) instrument for every higher-education institution. This regulation underscores that QMS is no longer merely a compliance instrument for accreditation but also a framework for sustainable quality development that must align with international standards (Nasim et al., 2014).

The impact of QMS implementation is not limited to internal improvement but also influences the external image and reputation of institutions. Favorable accreditation results as an outcome of quality implementation can enhance a university's reputation in the eyes of society, industry, and its international partners. In addition, QMS has been shown to improve graduate employability because curricula and learning strategies are better aligned with the labor market's needs. Thus Rahu, Neolaka, and Djaha (2025), QMS becomes a strategic factor in enhancing the global competitiveness of higher education institutions.

The implementation of a QMS also encourages digital transformation in the delivery of academic services. Quality information systems, such as internal quality audit applications, SPMI e-documents, and performance monitoring dashboards, provide speed and accuracy in decision making. However, challenges also arise, such as potential procedural rigidity if not balanced with managerial flexibility and the risk of the QMS becoming merely an administrative formality without a real impact (Syukron, 2022). Therefore, strengthening a quality culture, visionary leadership, and empowerment of the academic community are critical factors to ensure that QMS is not merely documented but truly embedded in institutional practice (Kashem, Ahmed, & Mohammad, 2025).

The novelty of this study lies in the effort to synergize the TQM grand theory with global models (ISO 9001, ISO 21001, EFQM, and Baldrige) as well as the national PPEPP framework (*Permendikbudristek No. 53 Tahun 2023*) within the context of higher education institutions in Indonesia. Previous studies have generally discussed only one model. In contrast, this study adopts an integrative approach that considers contextual factors such as leadership, quality culture, and digital transformation. Thus, this research is expected to provide an academic contribution in the form of a comprehensive mapping of QMS models as well as practical recommendations to improve the quality and competitiveness of higher education sustainably.

3. Research Methodology

3.1 Research Design

This research design employs a literature review study method, focusing on examining quality management systems in higher education institutions. This study used a descriptive qualitative approach, in which the analyzed data were derived from reputable scientific publications, including international journals indexed in Scopus. This method was selected to obtain a comprehensive overview of the concepts, implementation, and challenges of quality management systems in the context of higher education based on findings from previous studies (Toeweh, 2022).

Data sources were obtained using Publish or Perish software version 8, which enables systematic literature searches through global academic databases. The keywords used in the search included "quality management system in higher education," "university quality assurance," and "quality improvement in higher education institutions (Setyorini, Putri, & Hamdani, 2026)." The initial search yielded 200 relevant articles. Subsequently, a screening process was conducted based on topic relevance, publication quality, and Scopus indexing or inclusion in reputable international journals. The screening resulted in 20 preliminary articles relevant to this topic. A final selection was then carried out to ensure more specific alignment with the research focus, resulting in 11 international and Scopus-indexed journal articles as the primary sources. This design allows researchers to synthesize findings from various studies to comprehensively understand the implementation and development of quality management systems in higher-education institutions (Suargita, Skristyanto, & Wirata, 2026).

3.2 Research Theory

Research theory serves as a conceptual foundation for explaining, understanding, and analyzing the phenomena under investigation. Theory functions as a reference framework for linking research variables and providing direction in the process of data analysis and interpretation (Mubarok et al., 2024). In research on Quality Management Systems (QMS) in Higher Education Institutions, the theories used are derived from the grand theory of Total Quality Management (TQM) and relevant derivative theories, such as educational quality management theory and higher education quality assurance theory**.**

1. Total Quality Management (TQM)

Total Quality Management (TQM) is a grand theory that emphasizes the involvement of all organizational elements, orientation toward customer satisfaction, and commitment to continuous improvement. According to Mahmudah et al. (2025), quality is not merely the fulfillment of standards but also an effort to transform organizations to enhance competitiveness through innovation and accountability. Nnanna-Ohuonu, Chikwesiri, Okudo, and Chikwesiri (2026) in the context of higher education, TQM principles are relevant because universities are required to produce graduates who meet labor market needs and to maintain transparent and accountable governance.

2. Theory of Higher Education Quality Management

The theory of educational quality management emphasizes the importance of quality standards in the *Tridharma Pendidikan Tinggi* (education, research, and community service) to ensure sustainability. This theory defines educational quality from five perspectives: excellence, consistency, purpose, value for money, and transformation (Siswopranoto, 2022). In practice, this theory is realized through the Internal Quality Assurance System (SPMI) using the PPEPP cycle (Establishment, Implementation, Evaluation, Control, and Improvement), as stipulated in *Permen Ristekdikti No. 62 Tahun 2016.*

3. Quality Assurance and Higher Education Governance Theory

This theory is based on the view that higher education governance must be grounded in quality, accountability and transparency. An integrated quality management system functions not only as an administrative mechanism but also as a strategic instrument to strengthen the global competitiveness of higher-education institutions. Suti et al. (2020) emphasize that quality-based governance requires the involvement of all stakeholders and data-driven decision-making, enabling quality management to operate effectively in the era of digitalization.

3.3 Data Analysis

Data analysis was conducted using a thematic synthesis approach, in which information contained in the 11 selected articles was identified, categorized, and interpreted. Each article was read thoroughly to identify key themes, such as models of quality management system implementation, supporting and inhibiting factors of implementation, and outcomes achieved by higher education institutions adopting these systems.

The data obtained from each article were organized into a literature matrix table. This table contains important information, such as authors, year of publication, research objectives, methodology, main findings, and contributions to the understanding of quality management systems in higher-education institutions. Through this approach, researchers can compare the findings of various studies and identify common patterns and existing differences.

The final stage of the analysis involved developing a descriptive narrative that explains the key findings of the literature. Researchers also identified existing research gaps, so that the results of this study not only provide a summary of current knowledge but also offer directions for future research. This analysis ensures that the conclusions drawn are based on strong and representative scientific evidence (Rusdi, Yuliansyah, & Gamayuni, 2023).

4. Results and Discussions

4.1 Research Results

Based on a literature review of scientific journals and Scopus-indexed publications, several gaps, existing models, the state of the art, and future research directions related to quality management systems in higher-education institutions were identified.

4.1.1 Gaps in Quality Management Systems

Several gaps have been identified in the quality management systems of higher education institutions, namely:

a. Stakeholder Expectation Gap: There are differences between the expectations and needs of various stakeholders (such as students, lecturers, and industry) regarding the quality of higher education; therefore, universities must establish quality standards that are appropriate for each stakeholder group.
b. Theory–Practice Gap: Many universities possess formal quality management system documents but do not consistently and effectively implement them in daily operations.
c. Strategy–Implementation Gap: Although universities have clear visions, missions, and quality strategies, many lack the mechanisms, resources, and support needed for effective implementation.
d. National and International Standards Gap: Universities often refer to national standards but pay insufficient attention to international standards relevant to global competition.
e. Gap with ISO 21001:2018 Standards: Many universities are not yet prepared or have not met the requirements of the international ISO 21001:2018 standard, which is specifically designed for educational institutions.

4.1.2 Quality Management System Models

Several quality management system models have been implemented in higher education institutions, including the following:

a. EFQM Excellence Model: A model developed by the European Foundation for Quality Management (EFQM) that emphasizes leadership, strategic management, and the achievement of sustainable excellence through nine criteria.
b. Baldrige Excellence Framework: A model from the United States that focuses on improving productivity and global competitiveness through guidelines in leadership, strategic planning, and knowledge management.
c. ISO 9001: An international standard that provides a framework for effective quality management, covering quality policies, process control, and continuous improvement.
d. ISO 21001:2018 Model: An international standard specifically designed for educational institutions with the aim of helping improve the quality of educational services in accordance with stakeholder expectations.
e. Six Sigma: A methodology focused on quality control and process improvement using data-driven approaches and statistical analyses.
f. Lean Management: An approach that focuses on identifying and eliminating non-value-added activities (waste) to improve efficiency and quality.
g. Deming Cycle Model (Plan–Do–Check–Act): A model that applies a four-phase cycle (planning, implementation, evaluation, and follow-up) for the systematic improvement of products or services.

4.1.3 State of the Art

A review of the literature over the past ten years indicates that recent developments (state-of-the-art) in research on quality management systems in higher education focus on:

a. Use of Information Technology: Utilization of software systems, mobile applications, and e-learning for data collection and performance monitoring.
b. Performance Matrices and Indicators: Development of relevant quality indicators to measure stakeholder satisfaction and support data-driven decision making.
c. Stakeholder Engagement: The importance of involving faculty members, staff, students, alumni, and industry in improving the quality of education.
d. Role of Leadership: Studies on effective leadership characteristics in strengthening quality culture.

e. Improvement of Learning Processes: Development of competency-based learning methods and integration of technology in teaching and learning processes.
f. Sustainability and Innovation: Integration of sustainability principles and innovative approaches in curriculum development.

4.2 Discussion

The literature review results indicate that quality management systems in higher education institutions continue to face various gaps that require serious attention. These gaps include differences in expectations among stakeholders, misalignment between theory and practice, weak strategy implementation, and a lack of integration between national and international standards (Farida et al., 2024). Moreover, the adoption of ISO 21001:2018 remains relatively low in many educational institutions. This suggests that although universities already possess formal documents and clear strategic visions, the implementation process is often constrained by limited resources, a lack of commitment, and insufficient mechanisms for continuous evaluation. The effective implementation of a quality management system should provide a clear framework for identifying gaps, designing control processes, measuring performance, and conducting continuous improvement (Ardilla et al., 2024).

Findings related to the state-of-the-art show that research developments over the past ten years have tended to focus on the utilization of information technology, the development of performance indicators, stakeholder engagement, the role of leadership, and the integration of innovation and sustainability. This indicates that higher education institutions are beginning to shift their quality management approach from one that is primarily administrative to one that is more data- and technology-based (Suti, Syahdi, & D, 2020). This trend provides a logical foundation for future research directions, such as the use of Artificial Intelligence (AI) to analyze quality data predictively, the application of blockchain to enhance the transparency of academic data, or the development of real-time student satisfaction monitoring systems. Thus, future research should focus not only on maintaining quality but also on encouraging institutions to become more adaptive, innovative, and responsive to changes in the external environment.

In addition, the relationship between the current findings and future research directions demonstrates strong continuity. The use of information technology at the state-of-the-art stage naturally evolves into research based on AI, big data analytics, and blockchain-based systems (Harvey & Green, 1993). The development of performance matrices and indicators currently used for annual evaluations is also beginning to move toward dynamic monitoring methods, such as interactive quality dashboards. Likewise Qizi (2025), the emphasis on stakeholder engagement and sustainability requires the design of more inclusive frameworks that consider social, environmental, and economic aspects. Ultimately, Temalagi, Darmawati, and Amiruddin (2025) found that all of these efforts converge on measuring the impact of quality management system implementation on student performance, the achievement of institutional vision and mission, and the global competitiveness of higher education institutions.

The diversity of research methodologies found in the literature, ranging from quantitative surveys and qualitative case studies to multivariate statistical analyses, reflects the complexity of this topic. Survey methods enable the measurement of quality perceptions across large populations, case studies provide an in-depth understanding of implementation in specific contexts, and statistical analyses allow for testing causal relationships among quality-related variables. The combination of these methods has the potential to generate more comprehensive insights, while also offering more accurate recommendations for the development of quality management systems in higher-education institutions. Accordingly, the results of this literature review not only map the current condition but also offer a roadmap for improvement and innovation in higher-education quality systems in the future.

The novelty of this research lies in its effort to synergize the grand theory of Total Quality Management (TQM) with global quality management models (ISO 9001, ISO 21001, EFQM, and Baldrige), which are integrated with the national PPEPP framework as stipulated in *Permendikbudristek No. 53 Tahun 2023* (Rahma, Gresinta, Suhendra, & Risdiana, 2024). Unlike previous studies that tended to highlight a single model in a partial manner, this study presents a comprehensive approach by linking national

and international standards and incorporating perspectives on digitalization, leadership, and quality culture as key variables. Thus Wulandari, Saladin, and Mulyani (2024), this study contributes to filling the gap in the literature related to the integration of global quality standards with the Indonesian regulatory context, while also providing a strategic roadmap for higher education institutions to enhance quality, reputation, and global competitiveness.

5. Conclusions

5.1 Conclusion

Based on a literature review of 11 international and Scopus-indexed journals, this study reveals that quality management systems in higher-education institutions still face several fundamental gaps. The main problems identified include differences in stakeholder expectations, misalignment between theory and practice, limitations in the implementation of quality strategies, and low integration between national and international standards, particularly in the application of ISO 21001:2018. This indicates that the existence of formal documents and strategic visions alone is insufficient to guarantee the effectiveness of quality management without adequate resource support, leadership commitment, and sustainable evaluation mechanisms.

Through the Total Quality Management (TQM) framework as the grand theory, all of these problems can be explained and addressed in the following manner. TQM principles that emphasize the involvement of all organizational elements, stakeholder satisfaction, and continuous improvement can provide solutions to existing gaps. TQM addresses differences in stakeholder expectations through a customer-focused orientation, overcomes theory–practice misalignment through continuous improvement cycles, and strengthens strategy implementation through top management commitment. In addition, the principles of the process approach and evidence-based decision-making in TQM can bridge the gap between national and international standards, thereby ensuring educational quality at the global level.

The state-of-the-art review also shows a shift in the research focus toward the utilization of information technology, development of data-based performance indicators, stakeholder engagement, and integration of sustainability in quality management. These developments are consistent with TQM principles that are adaptive to environmental changes and are relevant to future research directions, including the use of artificial intelligence, blockchain, and real-time student satisfaction monitoring systems. Thus, TQM serves as both a theoretical foundation and a practical framework relevant to addressing new challenges in higher education quality management.

Overall, this study maps the current condition of quality management systems in higher-education institutions and provides a strategic roadmap for future improvement and innovation. Strengthening quality management requires a comprehensive approach rooted in TQM theory, involving collaboration among all stakeholders, utilizing advanced technology, and being oriented toward improving graduate quality and the global competitiveness of higher-education institutions. Therefore, the theory used in this study is not merely conceptual but is also capable of addressing real problems and providing practical contributions to the development of higher-education quality systems in Indonesia and internationally.

5.2 Research Limitations

This study had several limitations that need to be acknowledged. The main limitation lies in the method used, namely a literature review; therefore, all findings depend on the scope and quality of the 11 articles analyzed, without primary data from the field. The literature search process, which relied on specific keywords and databases, may have excluded other relevant studies that were not indexed or used different terminology. In addition, the data analysis process through thematic synthesis contains elements of subjective interpretation by the researcher, which may influence the emphasis on certain aspects. Therefore, the application of findings from this international literature should be carried out cautiously, considering the differences in regulatory contexts, academic cultures, and institutional characteristics across countries, including Indonesia.

Following up on these findings and limitations, further studies are strongly needed to deepen the understanding of quality management systems (QMS) in higher education institutions. The main focus of future research should be to formulate and validate a holistic, integrated, and sustainable QMS model with a design specifically suited to the context of higher-education institutions in Indonesia. Such studies should also explore the application of advanced technologies, such as artificial intelligence for data analysis, blockchain technology for transparency in certification and academic document validation, and real-time student satisfaction measurement methods. In addition, empirical studies, including longitudinal research, are needed to measure the long-term impact of QMS implementation on student and institutional performances. Future research should also develop risk management frameworks capable of anticipating internal and external challenges, as well as sustainable quality models that can address audit fatigue after accreditation. Thus, quality management systems in higher education institutions should not only focus on compliance with standards but also encourage innovation, relevance, and global competitiveness.

5.3 Suggestions and Directions for Future Research

Future research may explore several promising directions to strengthen quality management systems in higher education. One important area is the integration of Artificial Intelligence (AI) and data analytics to enhance the efficiency of data analysis and support more informed decision-making processes. Additionally, future studies could focus on developing real-time and more responsive methods for measuring student satisfaction, such as online polling mechanisms or sentiment analysis techniques. Another critical direction involves advancing risk management practices by creating tools to identify, measure, and manage both internal and external risks faced by higher-education institutions.

Furthermore, the potential application of blockchain technology warrants further investigation, particularly in improving data transparency and security in areas such as certification management and transcript validation. Future research should also emphasize the development of inclusive and sustainable quality management frameworks that account for social impact and equity considerations. Finally, assessing the impact of quality management system implementation on institutional performance remains essential, especially in terms of student success and the achievement of strategic objectives.

Author Contributions

VTN was responsible for the conceptualization, study design, data collection, and manuscript drafting. YSB contributed to the data analysis, manuscript revision, and interpretation of results. DD assisted with the literature review, data collection, and manuscript revision. BW contributed to the study design, data collection, and manuscript revision. HH supervised the research, provided critical revisions to the manuscript, and ensured the overall quality of the study.

References

Ardilla, O., Syifa, S. M. N., & Sitompul, A. L. (2024). Implementasi Pendekatan Sistematik Untuk Meningkatkan Kualitas Manajemen Pendidikan. *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial 2(4)* 20-28. https://doi.org/10.5281/zenodo.14026352

Cakranegara, P. A. (2020). Manajemen perubahan perguruan tinggi pada saat pandemi Covid-19(Management of change in higher education during the Covid-19 pandemic). *Studi Ilmu Manajemen Dan Organisasi, 1*, 57-69. https://doi.org/10.35912/simo.v1i1.95

Farida, Rotama, A., Tisnawati, N., Harjati, P., Setyowati, R. D., Patimah, S., & Badrudin. (2024). Integrasi Manajemen Mutu Dalam Kebijakan Pendidikan Nasional: Sebuah Peta Jalan Untuk Keunggulan Pendidikan. *Jurnal Program Studi Administrasi Pendidikan 4(2)* 104-109. https://doi.org/10.24127/poace.v4i2.5781

Franchina, V., Stabile, S., Cenna, R., Mannozzi, F., Federici, I., Testoni, S., Cagnazzo, C. (2023). ISO 9001:2015 standard implementation in clinical trial centers: An exploratory analysis of benefits and barriers in Italy. *Contemporary Clinical Trials Communications, 33*, 101104. doi:https://doi.org/10.1016/j.conctc.2023.101104

Hadi, M., Wa, A. R., Hasbullah, H., Surya, A., Desmon, D., & Cn, Y. (2026). The Effects of Competence, Work Experience, and the Work Environment on Employee Performance. *Journal of Multidisciplinary Academic Business Studies, 3*(2) 13-25. doi:https://doi.org/10.35912/jomabs.v3i2.3884

Harvey, & Green. (1993). Defining Quality. *Assessment & Evaluation in Higher Education*.

Kashem, M. A., Ahmed, M., & Mohammad, N. (2025). Maternal healthcare using IoT-based integrated medical device: Bangladesh perspective. *International Journal of Accounting and Management Information Systems, 3*(2), 85-99. doi:https://doi.org/10.35912/ijamis.v3i2.3288

Mahmudah, S., Halik, A., Sari, A. P., & Ridwan. (2025). Budaya Mutu Organisasi pada Satuan Pendidikan. *Sulawesi Tenggara Educational Journal*, 5(2) 417-424. https://doi.org/10.54297/seduj.v5i1.1196

Mubarok, R., Muhith, A., & Muis, A. (2024). Manajemen Peningkatan Mutu Pendidikan di Universitas Islam Jember. *Cetta: Jurnal Ilmu Pendidikan*. 7(1) 277-290 https://doi.org/10.37329/cetta.v7i1.3160

Nasim, K., Iqbal, M. Z., & Khan, I. A. (2014). Antecedents of TQM implementation capability: a review with a conceptual model. *Total Quality Management & Business Excellence,*, 1395–1409. 10.1080/14783363.2013.807682

Nnanna-Ohuonu, O., Chikwesiri, N. P., Okudo, A., & Chikwesiri, I. V. (2026). Artificial Intelligence Personalized Marketing Content and Consumer Behavior in Nigerian SMEs. *Annals of Management and Organization Research, 7*(3), 325-339. doi:https://doi.org/10.35912/amor.v7i3.3418

Nugroho, P., & Miyono, N. (2024). Dampak Strategi Pelaksanaan Sistem Penjaminan Mutu Eksternal terhadap Kualitas Pendidikan di SMK Negeri Bansari. *Jurnal Inovasi Pembelajaran di Sekolah*, 5(2) 391-398. https://doi.org/10.51874/jips.v5i2.243

Qizi, K. Z. S. (2025). Modern methodological principles in developing phonetic competence: Activation, integrativeness, and individual approach. *Advances in Management and Business Studies, 1*(1), 19-32. doi:https://doi.org/10.35912/ambus.v1i1.3748

Rahayu, S., Syahuri, S., Oktavia, A., Adania, R., Huda, F., & Saefudin, D. M. (2025). Pentingnya Visi dan Misi Sekolah dalam Pengelolaan Mutu Pendidikan. *Jurnal Pendidikan Tambusai*, 9(2) 17035-17040. https://doi.org/10.31004/jptam.v9i2.28554

Rahma, R., Gresinta, E., Suhendra, S., & Risdiana, A. (2024). Implementasi Implementasi Sistem Manajemen Mutu ISO 21001: 2018 sebagai Strategi Pendidikan di Era Digital. *JIEMAR (Journal of Industrial Engineering & Management Research). 5(3) 16-22* https://doi.org/10.7777/jiemar.v5i3.523

Rahu, K. Y. d., Neolaka, M. N. B. C., & Djaha, A. S. A. (2025). Personnel management information system in order to create up-to-date and integrated personel data and information in the personnel and Human Resources Agency in Malaka Regency. *International Journal of Accounting and Management Information Systems, 3*(2), 101-115. doi:https://doi.org/10.35912/ijamis.v3i2.3291

Rifa'i, A. A. (2018). Manajemen Mutu Pendidikan Tinggi (Mmpt): Konsep Dasar Dan Strategi Dalam Peningkatan Mutu Berkelanjutan *Jurnal Ilmiah Sustainable*, 1(1) 20-38. https://doi.org/10.32923/kjmp.v1i1.917

Rusdi, L. H., Yuliansyah, & Gamayuni, R. R. (2023). Analisis Ketepatan Pemberian Opini Akuntan Publik di Indonesia. *Goodwood Akuntansi Dan Auditing Reviu*, 1(2) 109-130. https://doi.org/10.35912/gaar.v1i2.1961

Saraiva, M., Ferreira, O., Ramos, A., & Pt. (2017). Iso 9001 Quality Management Systems: Literature Review. *8*.

Setyorini, M. E., Putri, N. E., & Hamdani, C. (2026). Bridging Global Leadership and Local Talent: Succession Planning and Cultural Adaptation in a Multinational Context. *Advances in Management and Business Studies, 1*(2), 83-96. doi:https://doi.org/10.35912/ambus.v1i2.3863

Siswopranoto, M. F. (2022). Standar Mutu Pendidikan. *Al-Idaroh: Jurnal Studi Manajemen Pendidikan Islam*.

Suargita, I. N., Skristyanto, A., & Wirata, G. (2026). Effectiveness of Bumdes in Implementing Mandara Program to Improve Welfare in Buahan Village. *Advances in Management and Business Studies, 1*(2), 71-81. doi:https://doi.org/10.35912/ambus.v1i2.3818

Suhardin. (2024). Budaya Mutu (Quality Culture) Universitas Ibnu Chaldun Jakarta. *Syntax Admiration*.

Suti, M., Syahdi, M., & Didiharyono, D. (2020). Tata Kelola Perguruan Tinggi dalam Era Teknologi Informasi dan Digitalisasi. *JEMMA (Journal of Economic, Management and Accounting), 3(2) 3*, 203. doi:10.35914/jemma.v3i2.635

Syukron, B. (2022). Penerapan Klausul ISO 21001:2018 Sebagai Upaya Penguatan Manajemen Budaya Mutu Pendidikan Tinggi Keagamaan Islam. *Tarbawiyah : Jurnal Ilmiah Pendidkan*. 6(2) 197-217. https://doi.org/10.32332/tarbawiyah.v6i2.5550

Temalagi, S., Darmawati, D., & Amiruddin, A. (2025). Environmental Social Governance (ESG) Score and Return on Equity (ROE) on company values which registered in IDX ESG Leaders. *Advances in Management and Business Studies, 1*(1), 61-70. doi:https://doi.org/10.35912/ambus.v1i1.3755

Toeweh, B. H. (2022). Literature Review: Akuntansi Forensik Untuk Deteksi Korupsi. *Studi Akuntansi, Keuangan, Dan Manajemen*, 2(2) 135-146. https://doi.org/10.35912/sakman.v2i2.1672

Wijaya, T., Hartoyo, H., & Wardani, C. (2026). Analysis of Lampung Tourism Contents on Social Media (Comparative Study of Instagram Accounts @Lampuung and @Potraitlampung. *Journal of Multidisciplinary Academic Business Studies, 3*(2), 1-11. doi:https://doi.org/10.35912/jomabs.v3i2.3870

Wulandari, C. E., Saladin, H., & Mulyani, A. (2024). Analysis of the effect of dividend policy and profitability on stock price. *Journal of Multidisciplinary Academic Business Studies, 1*(4), 237-243. doi:https://doi.org/10.35912/jomabs.v1i4.2306

Zgirskas, A., Ruževičius, J., & Ruželė, D. (2021). Benefits of quality management standards in organizations. *Standards, 1*(2), 154-166. doi:https://doi.org/10.3390/standards1020013