

Quality Management System Practices among Higher Education Institutions in Region XII, Philippines

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Abstract. Quality Management System (QMS) is a structured framework or set of processes and procedures an organization implements to consistently deliver educational services and administrative processes that meet or exceed established quality standards. This study examined the QMS practices among Higher Education Institutions (HEIs) in Region XII, Philippines. Using an embedded mixed-method research design, data were collected through surveys and interviews with deans, faculty, students, and quality assurance directors. Descriptive and inferential statistics were used to treat the quantitative data, while thematic analysis was employed to analyze the qualitative data. The quantitative results initially indicated that the private and public HEIs mostly practice the implementation substantially and consistently, indicating that the majority of instances or situations involve the application of the practice, demonstrating a commendable level of adherence. Qualitative probes elaborated on various QMS practices employed by private and public HEIs related to leading, planning, engaging, empowering, cultivating, and governing. Moreover, the quantitative results revealed that the QMS practices are the same across HEIs regardless of categories and groups of respondents. With this result, typical features of QMS practices employed by private and public HEIs uncovered in the qualitative results encompass leadership and governance support, policy development, implementation, academic support, academic environment, and data quality management. The overall outcomes of this research are the proposed policy recommendations to enhance QMS practices in HEIs, highlighting components related to communication, performance monitoring and analysis, stakeholder engagement and feedback, transparency and accountability, benchmarking and competitive analysis, professional development, and well-being. The research findings imply that by adopting and enhancing QMS practices, HEIs can significantly improve educational outcomes, stakeholder satisfaction, and institutional reputation, ultimately fostering a culture of continuous improvement and accountability within the academic environment.

Keywords: Educational management; Quality management system practices; Embedded mixed-method research design; Philippines.

1.0 Introduction

The Sustainable Development Plan for 2030 prioritizes inclusive, high-quality education globally, aiming for universal access to primary, secondary, and higher education. The pursuit of quality education is a pressing issue in the Philippines, where the rapid expansion of higher education institutions (HEIs) has led to increased

competition and varying standards of educational quality. Despite establishing the Commission on Higher Education (CHED) through the Higher Education Act of 1994, which aims to enhance educational standards, many institutions still struggle to implement effective Quality Management Systems (QMS) that ensure compliance with international standards. Quality education is crucial for individual student success and national development, as it directly impacts workforce readiness and economic growth.

Previous studies have explored various aspects of QMS in higher education, such as the role of leadership in fostering a culture of quality (Bryson et al., 2018) and the importance of systematic policy development (Weldeslassie, 2021). However, these studies often overlook the perspectives of key stakeholders, including students, faculty, and administrators, which are essential for a comprehensive understanding of QMS practices. Furthermore, while some research has focused on specific institutions or regions, there is a lack of comparative studies that examine QMS practices across diverse HEIs in the Philippines, particularly in Region XII.

This study aims to bridge these gaps by providing a detailed analysis of current QMS practices in selected HEIs in Region XII, highlighting these institutions' unique challenges and opportunities. By integrating quantitative and qualitative data, this research offers a nuanced understanding of how QMS can be effectively implemented to enhance educational quality. The significance of this research lies in its potential to inform policy recommendations that can lead to improved QMS practices, ultimately contributing to the overall enhancement of educational outcomes and institutional reputation in the region.

2.0 Methodology

2.1 Research Design

The study employed an embedded mixed-method research design, concurrently integrating quantitative and qualitative data, with the quantitative method taking precedence. This approach, as highlighted by Creswell (2021), leverages the strengths of both methods to provide a comprehensive understanding of research questions. The study innovated upon traditional correlation and experimental models by introducing a comparative design, embedding qualitative interview insights into the primary quantitative framework (Cahapay, 2020).

Quantitative data was collected via surveys administered to students, faculty, and deans, capturing perceptions of QMS practices in HEIs. This provided a numerical overview, highlighting significant differences in perceptions across various groups. Concurrently, qualitative data from key informant interviews with faculty, deans, students, and QA/QMS directors offered deeper insights into QMS practices.

Quantitative and qualitative data integration occurred during the interpretation and discussion stages, leading to a comprehensive synthesis of findings. This embedded-comparative approach enriched the study with diverse perspectives, ensuring a thorough exploration of the research question. The combined analysis generated robust policy recommendations by offering a nuanced understanding of the challenges and opportunities within QMS practices among HEIs in Region XII.

2.2 Research Locale

The study strategically focused on four HEIs in Region XII (SOCSKSARGEN Region) to capture the diversity in QMS practices across various localities and cultural settings. The selected institutions were the University of Southern Mindanao (USM) in Kabacan, Cotabato; Sultan Kudarat State University (SKSU) in Tacurong City, Sultan Kudarat; St. Alexius College (SAC) in Koronadal City; and Holy Trinity College (HTC) in General Santos City. The inclusion criteria required HEIs to have achieved at least Level II in SUC Levelling/ISO 9001:2015 certification or held PAASCU accreditation, ensuring a high standard of quality and compliance.

2.3 Research Participants

The study involved 674 respondents for the quantitative phase, which included randomly selected faculty with at least five years of tenure, deans with a minimum of two years of service, QA/QMS directors, and graduating students from four HEIs in Region XII using Cochran's Formula and Stratified Proportional Allocation Sampling Technique. A 5% precision level, 95% confidence level, and 5% estimated proportion were employed. Due to their limited numbers, QA/QMS directors and deans were selected via total enumeration.

For the qualitative phase, 16 key informants were selected for interviews, ensuring a diverse representation of perspectives. This included one QA/QMS director, faculty regent or association president, dean responsible for accredited programs, and student regent from each institution. This method ensured a comprehensive understanding of QA/QMS practices across the institutions.

2.4 Research Instrument

The study aimed to evaluate QMS practices within four HEIs in Region XII using a meticulously crafted survey questionnaire based on the Malcolm Baldrige Award Application Guidelines and insights from Naanep (2021). The questionnaire was validated by a research adviser, a panel of experts, and five test construction specialists, who provided feedback to enhance its quality. An expert assessment affirmed the instrument's validity, while a pilot test at Central Mindanao University, Bukidnon, yielded a Cronbach's alpha of 0.98, indicating excellent reliability. The questionnaire employed a five-point Likert scale to measure respondents' ratings on the seven Baldrige Education Criteria for Performance Excellence across three sections, capturing comprehensive data on QMS practices. Additionally, for the qualitative phase, the research utilized the researcher-made interview guide questions to gather in-depth insights from the selected key informants, further enriching the study's findings.

2.5 Data Gathering Procedure

The data-gathering phase was conducted face-to-face (f2f) and online to ensure comprehensive coverage and accessibility for all participants. For the quantitative phase, the survey questionnaires were distributed in person at the selected HEIs, with the assistance of the Human Resource Management Office and Student Services offices, to facilitate effective administration. This approach allowed for immediate clarification of any questions and ensured a higher response rate.

The quantitative survey was conducted over two weeks, during which respondents were given ample time to complete the questionnaires at their convenience. To complement this, an online version of the survey was also made available to accommodate participants who preferred digital access or could not attend in person.

For the qualitative phase, the interviews with the 16 key informants were conducted face-to-face, allowing for a more engaging and interactive discussion. Each interview lasted approximately 30 to 45 minutes, providing sufficient time to explore the participants' insights and experiences regarding QMS practices in their respective institutions. The interviews were scheduled at times convenient for the participants, ensuring their comfort and willingness to share valuable information. All gathered data were treated with the utmost confidentiality and were utilized solely for research purposes by the Data Privacy Act of 2012.

2.6 Ethical Considerations

Ethical considerations played a paramount role when undertaking research, particularly in the context of this study. First and foremost, the researcher obtained informed consent from participants, ensuring that the researcher clearly articulated the research purpose, potential risks, and benefits to university administrators, staff, or students, ensuring that they participated willingly and with full awareness. Maintaining confidentiality was equally critical. The researcher anonymized participant data and securely stored it to prevent unauthorized access, safeguarding their privacy and protecting sensitive information.

Voluntary participation was guaranteed, granting participants the freedom to withdraw from the study at any point without facing adverse consequences. The researcher implemented measures to minimize any potential risks, ensuring that the research did not cause harm, both physically and emotionally, to those involved. Upholding bias and fairness was non-negotiable. The researcher conducted the research without biases or discriminatory practices that could skew results. Transparency permeated the research process, with documented methodologies, data collection procedures, and analysis techniques to ensure transparency and reproducibility.

To maintain integrity, the researcher disclosed any potential conflicts of interest that could influence the objectivity of their research. The researcher also respected intellectual property by appropriately citing and crediting the work of others, guarding against plagiarism.

Ethical approval from the Mindanao State University-Institutional Evaluation and Review Committee was diligently sought from the institution before commencing the research. The beneficence principle emphasized that the research should offer potential benefits to the participating universities and colleges in Region XII, aiming to improve QMS and institutional performance. Honesty and integrity were unwavering throughout the research, from data collection to analysis and reporting. Finally, ethical considerations were the bedrock of responsible research, and adhering to these principles ensured that the highest ethical standards were maintained throughout the research.

3.0 Results and Discussion

3.1 Level of Quality Management System Practice of HEIs in Region XII

Table 1 summarizes the extent to which QMS is practiced among HEIs in Region XII as perceived by deans, faculty, and students.

Table 1. Summary on Extent of Practice of QMS among Private and Public HEIs as perceived by Deans, Faculty, and Students

Quality Management System Dimensions	Private HEI				Public HEI (SUC)			
	Dean	Faculty	Student	Mean	Dean	Faculty	Student	Mean
1. Leadership	4.18 (GE)	4.26 (GE)	4.52 (VGE)	4.32 (GE)	4.70 (VGE)	4.37 (GE)	4.36 (GE)	4.48 (GE)
2. Strategic Planning	4.09 (GE)	4.16 (GE)	4.49 (GE)	4.25 (GE)	4.63 (VGE)	4.32 (GE)	4.31 (GE)	4.42 (GE)
3. Customer Focus	4.08 (GE)	4.11 (GE)	4.44 (GE)	4.21 (GE)	4.58 (VGE)	4.28 (GE)	4.30 (GE)	4.39 (GE)
4. Measurement, Analysis, and Knowledge Management	4.09 (GE)	4.15 (GE)	4.45 (GE)	4.23 (GE)	4.55 (VGE)	4.26 (GE)	4.30 (GE)	4.37 (GE)
5. Workforce Focus	4.06 (GE)	4.15 (GE)	4.44 (GE)	4.22 (GE)	4.55 (VGE)	4.29 (GE)	4.34 (GE)	4.39 (GE)
6. Operations Focus	4.03 (GE)	4.13 (GE)	4.47 (GE)	4.21 (GE)	4.58 (VGE)	4.26 (GE)	4.32 (GE)	4.39 (GE)
7. Organizational Performance Results	4.06 (GE)	4.08 (GE)	4.46 (GE)	4.20 (GE)	4.53 (VGE)	4.27 (GE)	4.33 (GE)	4.38 (GE)
OVERALL MEAN	4.08 (GE)	4.15 (GE)	4.47 (GE)	4.23 (GE)	4.59 (VGE)	4.29 (GE)	4.32 (GE)	4.40 (GE)

Legend: 4.50-5.00-Very Great Extent (VGE) 3.50-4.49-Great Extent (GE) 2.50-3.49-Moderate Extent (ME) 1.50-2.49-Less Extent (LE) 1.00-1.49-Least Extent (LTE)

Leadership

The overall mean scores of 4.32 for private HEIs and 4.48 for public HEIs in the Leadership dimension, described as "Great Extent," indicate substantial implementation of quality management systems (QMS) in leadership practices across both sectors. This suggests consistent and significant adherence to effective leadership in private and public HEIs, with public institutions showing slightly stronger leadership practices. This difference may result from larger resource allocation, greater accountability, or different institutional priorities. Supporting this, Ahmad et al. (2021) found that public universities have more formalized leadership structures and processes, leading to higher perceived effectiveness. Conversely, Smith et al. (2018) reported no significant difference in leadership effectiveness between private and public universities, implying that factors beyond institutional type may influence leadership practices. In conclusion, while private and public HEIs demonstrate a strong commitment to QMS in leadership, public HEIs tend to exhibit marginally stronger practices due to potentially greater resources and formalized structures. Nonetheless, effective leadership practices are commendably adhered to in both sectors.

Strategic Planning

The overall mean scores of 4.25 for private HEIs and 4.42 for public HEIs in the Strategic Planning dimension, both described as "Great Extent," indicate a high level of implementation of quality management systems (QMS) related to strategic planning practices in both sectors. This suggests strong adherence to strategic planning practices and a commitment to effective strategic planning within private and public HEIs. Public HEIs, with a mean score of 4.42 compared to 4.25 for private HEIs, appear to emphasize or implement strategic planning practices more robustly. This could be attributed to stricter regulatory requirements, greater resources allocated to strategic planning, and the complexity of their organizational structures. Bryson (2018) supports this by noting that public institutions typically have more formalized and rigorous strategic planning processes, potentially leading to higher effectiveness. However, conflicting findings suggest that effective strategic planning can be equally present in public and private institutions, depending on leadership and institutional culture. In summary, private and

public HEIs adhere to strategic planning practices within their QMS. While public HEIs show slightly stronger scores, possibly due to regulatory and resource advantages, effective strategic planning is robustly implemented across both sectors.

Customer Focus

In private HEIs, the overall mean score for customer focus is 4.21; in public HEIs, it is 4.39, indicating "Great Extent" implementation of quality management practices related to customer focus. This suggests a high level of adherence to ensuring student and stakeholder satisfaction through consistent implementation of customer-focused QMS. Public HEIs show a slightly higher mean score (4.39) than private HEIs (4.21), suggesting a more robust emphasis on customer-focused practices. This may be influenced by rigorous accountability measures, public scrutiny, and the broader mandate of public institutions to serve diverse populations. Research by Seale (2015) supports this, noting that public institutions often prioritize student retention and satisfaction due to public accountability, aligning with higher customer focus ratings. However, Jasti (2022) suggests that competitive pressures can strongly lead private institutions to emphasize customer focus. Both private and public HEIs demonstrate commendable adherence to customer-focused QMS, ensuring substantial and consistent practices to meet student and stakeholder needs. Public HEIs exhibit slightly stronger scores, potentially due to regulatory frameworks and broader mandates, but both types of institutions are committed to quality management in Customer Focus.

Measurement, Analysis, and Knowledge Management

Private HEIs have an overall mean score of 4.23, while public HEIs score 4.37 in Measurement, Analysis, and Knowledge Management, both described as "Great Extent." This indicates a high level of commitment and effectiveness in implementing practices related to these areas across both types of institutions. Public HEIs, with a slightly higher mean score of 4.37 compared to 4.23 for private HEIs, may employ a more rigorous or systematic approach to measurement, analysis, and knowledge management. Factors contributing to this could include stricter regulatory requirements, more resources allocated to data analysis and knowledge management, and institutional priorities focused on transparency and accountability. Research by Hazelkorn et al. (2018) supports this, highlighting that public institutions often implement comprehensive QMS due to stringent accountability standards. Conversely, Hong et al. (2019) argue that private institutions, driven by competition and innovation, can also excel in these areas, challenging the notion of inherent superiority in public HEIs. Both private and public HEIs demonstrate a strong commitment to measurement, analysis, and knowledge management practices, reflected in their high ratings. While public HEIs show slightly higher scores, both institutions consistently implement these practices effectively, ensuring continuous improvement and institutional effectiveness in Measurement, Analysis, and Knowledge Management.

Workforce focus

In private HEIs, the overall mean score for workforce focus is 4.22; in public HEIs, it is 4.39, both falling within the "Great Extent" range. This suggests high commitment and effectiveness in implementing practices prioritizing workforce development, satisfaction, and performance in both institutions. Public HEIs, with a slightly higher mean score of 4.39 compared to 4.22 for private HEIs, may have a more rigorous or systematic approach to workforce focus. This could be due to better incentives for professional development, greater resources for training and benefits, and enhanced job security typically associated with public sector employment. Research by Solomon (2023) supports this, highlighting structured and well-funded workforce development programs in public institutions supported by government policies. Conversely, Shevchenko (2021) suggests that private institutions, driven by competition, can also excel in workforce focus, challenging assumptions about public HEIs' inherent superiority. Both private and public HEIs demonstrate a strong commitment to workforce-focused practices, reflected in their "Great Extent" ratings. While public HEIs show slightly higher scores, institutions consistently implement initiatives to enhance workforce development, satisfaction, and performance. This commitment ensures the effective nurturing of their workforce, contributing to overall institutional effectiveness and success.

Operation Focus

Private HEIs have an overall mean score of 4.21, while public HEIs score 4.39 in Operation Focus, falling within the "Great Extent" range. This indicates a strong commitment to operation-focused practices in both institutions,

with substantial and consistent implementation across various contexts. Public HEIs, with a slightly higher mean score of 4.39 compared to 4.21 for private HEIs, demonstrate a tendency towards a more rigorous and systematic approach to operational management. This can be attributed to larger financial allocations from government sources, enabling comprehensive investment in operational infrastructure and technology. Also, heightened accountability measures drive public HEIs to adopt transparent and compliant operational practices, effectively meeting regulatory standards and stakeholder expectations. Research by Hazelkorn (2018) supports this, emphasizing that public institutions, due to their scale and accountability, implement rigorous operational standards to ensure efficiency and effectiveness in serving diverse stakeholders. In conclusion, both private and public HEIs show strong adherence to operation-focused practices, reflected in their ratings. Public HEIs may exhibit slightly higher scores due to financial support, accountability measures, and the complexity of managing larger operations. Nonetheless, both institutions prioritize operational efficiency and effectiveness, contributing to their success and reputation in delivering quality education and support services.

Organizational Performance Results

Private HEIs have an overall mean score of 4.20, while public HEIs score 4.38 in Organizational Performance Results, both categorized as "Great Extent." This indicates strong implementation of organizational performance measures in both institutions, with effective practices applied consistently. Public HEIs, with a slightly higher mean score of 4.38 compared to 4.20 for private HEIs, often achieve better performance results due to advantages such as substantial government funding. This financial support allows public institutions to invest in infrastructure, faculty development, research capabilities, and student support services at a larger scale. Additionally, the larger organizational scale of public HEIs enables them to leverage economies of scale and implement more comprehensive quality management systems. This includes robust mechanisms for monitoring and improving performance metrics across teaching quality, research output, student outcomes, and overall institutional effectiveness. While private HEIs can excel in areas like agility and innovation, they may face challenges such as funding constraints and differing priorities in resource allocation. In conclusion, private and public HEIs strongly adhere to achieving high organizational performance results. Public HEIs' slightly higher mean score reflects their advantage in resources and scale, contributing to their ability to maintain rigorous standards and measurable outcomes. Nonetheless, both types of institutions consistently implement practices that enhance organizational performance, ensuring the delivery of quality education and services.

Overall, both public and private higher education institutions demonstrate a widespread and substantial implementation of Quality Management Systems (QMS) across dimensions such as leadership, strategic planning, customer focus, measurement, analysis, knowledge management, workforce focus, operations focus, and organizational performance results, as perceived by deans, faculty, and students. This indicates a consistent and commendable adherence to QMS practices, which are applied effectively in most instances or situations. Research, such as that by Pires et al. (2020), supports the effectiveness of QMS in enhancing organizational efficiency, accountability, and overall performance in universities. Integrating QMS frameworks in various institutional functions ensures that universities meet stakeholder needs while upholding high quality and performance standards in academic and administrative realms. This proactive adoption of QMS underscores a commitment to operational excellence, promoting a conducive environment for learning, research, and institutional advancement. Figure 1 shows the word cloud QMS practice employed by private and public HEIs in Region XII, unveiling key improvement areas. These areas, encompassing leadership, strategic planning, customer focus, measurement analysis, knowledge management, workforce focus, operation focus, and organization performance results, signify critical aspects for enhancing educational quality.

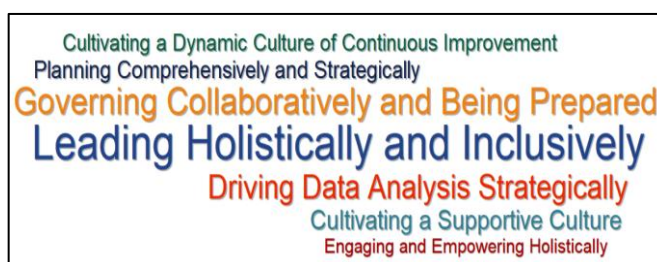


Figure 1. Word cloud of the QMS practice employed by private and public HEIs

The emergence of seven distinct themes in Quality Management System (QMS) practices across private and public Higher Education Institutions (HEIs) underscores institutions' varied approaches to ensure operational excellence and continuous improvement. These themes encapsulate comprehensive strategies aimed at enhancing organizational effectiveness and meeting the diverse needs of stakeholders. Effective leadership involves holistic and inclusive approaches to guiding institutional policies and fostering a culture of quality throughout the organization (Oakland, 2014). Strategic planning emphasizes the importance of aligning institutional goals with QMS objectives and allocating resources strategically to achieve desired outcomes (Bryson et al., 2018). Employee engagement and empowerment are supported by research showing that engaged employees contribute significantly to organizational success through their commitment and innovative contributions (Oluoch, 2014). Data-driven decision-making underscores the critical role of strategic data analysis in monitoring performance and driving improvements (Bousdekis et al., 2021). Cultivating a supportive culture focuses on fostering an organizational environment that promotes collaboration, trust, and mutual support among stakeholders, essential for sustaining quality initiatives (Galpin et al., 2015). Collaborative governance and preparedness highlight the importance of inclusive decision-making processes and readiness to address challenges effectively, aspects crucial for institutional resilience and responsiveness (Shmueli et al., 2021). Lastly, cultivating a dynamic culture of continuous improvement underscores the ongoing commitment of HEIs to assess, adapt, and innovate in response to evolving educational demands and external pressures (Oakland, 2014). By integrating these QMS practices, institutions can enhance their operational efficiency, foster stakeholder confidence, and effectively navigate the complexities of the higher education landscape, ensuring sustained institutional success and excellence. These themes reflect practices in quality management and provide a comprehensive framework for HEIs to optimize their educational delivery and institutional governance, thereby supporting their mission of providing high-quality education and preparing students for future challenges.

3.2 Comparison of QMS Practices between Private and Public HEIs in Region XII

Table 2 shows no statistically significant difference in QMS practices between private and public HEIs in Region XII, with a p-value of 0.2387. This suggests that the mean scores of quality management practices (Private HEIs: M = 4.36, Public HEIs: M = 4.32) do not differ significantly.

Table 2. The difference in the QMS Practices between Private and Public HEIs in Region XII

HEI Category	Mean	Mean Ranks	U-value	p-value	Remark	Decision
Private	4.36	49705.5	39694.5	0.2387	Not Significant	Accept null hypothesis
Public	4.32	175079.5				

*Tested at 0.05 level of significance

This finding aligns with existing literature highlighting both institutions' shared commitment to quality education despite operational differences. Private HEIs leverage autonomy to align strategies with institutional missions, while public HEIs navigate regulatory constraints and funding challenges. Both prioritize stakeholder expectations and continuous improvement to enhance educational outcomes and institutional reputation. This underscores the importance of tailored QMS strategies while fostering collaboration to elevate overall quality standards in higher education.

Table 3. Difference in QMS Practices among HEIs in Region XII as perceived by Deans, Faculty and Students

Groups	Mean	Mean Ranks	H-value	p-value	Remark	Decision
Deans	4.39	359.54	3.3100	0.1911	Not Significant	Accept Null Hypothesis
Faculty	4.28	319.93				
Students	4.36	345.13				

*Tested at 0.05 level of significance

Table 3 indicates no statistically significant difference in quality management practices among Higher Education Institutions (HEIs) in Region XII as perceived by deans, faculty, and students, with a p-value of 0.1911. Despite slight variations in mean scores (Deans: M=4.39, Faculty: M=4.28, Students: M=4.36), these differences are not considered significant. This finding suggests that perceptions of quality management practices may not vary significantly among different stakeholders within HEIs. Deans, faculty, and students likely have distinct

perspectives influenced by their roles and experiences within the institution. Deans, as leaders, may view quality management practices more positively, reflecting their strategic oversight. Faculty and students involved in academic and administrative processes may perceive these practices differently based on their interactions and expectations. The implication for quality management system (QMS) practices is the importance of incorporating diverse stakeholder perspectives in assessing and improving quality standards. HEIs should establish robust feedback mechanisms to solicit input from all stakeholders, ensuring that QMS initiatives effectively address their needs and expectations. This inclusive approach fosters transparency, collaboration, and alignment towards shared quality goals, ultimately enhancing institutional effectiveness and stakeholder satisfaction.

As shown in Figure 2, Four themes of common QMS practices emerged. These themes depict 1) Efficient and Compliant Data Quality Management, 2) Strong Leadership and Governance Support, 3) a Collaborative and Communicative Academic Environment, and 4) Systematic Policy Development, Implementation, and Academic Support. This implies typical features of QMS practices employed by private and public HEIs. This uniformity fosters easier collaboration and benchmarking across institutions, facilitating shared best practices and continuous improvement. Additionally, common features help streamline processes and reduce complexities, making implementing and maintaining quality standards across the region simpler.



Figure 2. Word Cloud for common features that elaborate no difference in QMS practices across categories and groups of respondents

Literature supports the importance of these themes in higher education management. Strong leadership is vital for setting strategic directions, fostering a quality culture, and ensuring alignment of institutional goals with QMS objectives (Bryson et al., 2018). Systematic policy development and implementation are crucial for establishing clear guidelines, procedures, and standards that support academic and administrative functions (Weldeslassie, (2021). A collaborative academic environment enhances communication, teamwork, and shared decision-making among stakeholders, contributing to a positive institutional culture (Galpin et al., 2015). Efficient data quality management through digital systems not only improves information accuracy and accessibility but also supports evidence-based decision-making and regulatory compliance (Bendermacher, 2017). By adopting these common QMS practices, HEIs can streamline operations, promote transparency, and facilitate continuous improvement efforts. Moreover, fostering easier collaboration and benchmarking across institutions enables sharing best practices and lessons learned, ultimately enhancing the region's educational outcomes and institutional reputation.

3.3 Policy Recommendations to Enhance QMS Practices among HEIs

Based on the analysis of significant results of the study, the following policy components as a result of meta-analysis can be proposed as input to policy recommendations to enhance QMS Practices among HEIs:

Inclusive Communication Policy

Continuous and open communication with staff and faculty is essential for the success of Higher Education Institutions (HEIs) in Region XII. However, there are significant gaps that need urgent attention. Although leadership recognizes the importance of communication with faculty, there is a notable shortfall in ensuring open communication with all personnel, including utility staff. This exclusion means that valuable insights from utility staff are often overlooked, undermining the inclusivity of the planning process. True alignment with the institution's vision necessitates the active participation of all community members, yet current practices fall short by not fully including utility staff in these critical discussions.

Table 4. Summary of Quantitative and Qualitative Results as Input to Policy Recommendations to Enhance QMS Practices among HEIs

Gap	Objective	Policy Component
1. Practice continuous and open communication with staff and faculty.-4.06	1.1. To foster an environment of open and inclusive communication within the institution 1.2 To enhance stakeholder engagement by ensuring that planning processes involve representatives from all levels of the organization 1.3. To regularly assess communication strategies, identify areas for improvement, and ensure alignment with Quality Management System (QMS) principles,	Inclusive Communication Policy
2.1. The school management undertakes the strategic development process, taking into account the school's competitors, weaknesses, and strengths.-3.94	2.1. To develop a systematic approach to analyze competitors and identify strengths and weaknesses to enhance the school's competitiveness. 2. To integrate SWOT analyses into the school's strategic planning process to inform decision-making and prioritize areas for improvement and growth.	Performance Monitoring and Analysis Policy (Futures and Foresights Thinking)
2.2. The school management conducts performance analysis that includes examining trends.-4.00	3. To cultivate a culture of ongoing enhancement, actively engage stakeholders in the strategic development process.	
3. The school management has created a climate conducive to learning. -3.94	3.1. To conduct regular assessments of the school's physical infrastructure to ensure optimal learning environments. 3.2. To establish and uphold policies and practices that foster a safe, inclusive, and supportive environment for all school community members. 3.3. To establish robust feedback mechanisms to gather input from students, teachers, and parents about the learning environment and overall school experience.	School Climate Policy
4. The school management uses feedback from our stakeholders to assess our programs and offerings.-3.94	4.1. To establish and maintain effective mechanisms for collecting feedback from stakeholders to improve school programs and offerings. 4.2. To facilitate in-depth discussions and qualitative feedback gathering through focus groups and forums. 4.3. To apply the Plan-Do-Check-Act (PDCA) cycle to continuously improve the learning environment based on stakeholder feedback and assessments.	Stakeholder Engagement and Feedback Policy
5.1. The school management sustains high trust of the stakeholders.-3.94	5.1. To enhance transparency and keep stakeholders informed by regularly updating school initiatives, performance, and changes.	Transparency and Accountability Policy
5.2. The school performance results reveal that the stakeholders highly trust the organization.-3.94	5.2. To foster transparency and encourage stakeholder engagement by maintaining open and accessible communication channels. 5.3. To promote transparency and accountability by regularly collecting stakeholder feedback and demonstrating responsiveness through visible changes and improvements.	
6. The school management obtains data and information by benchmarking and seeking competitive comparisons.-4.00	6.1. To integrate benchmarking and competitive comparison practices into data acquisition processes to identify areas for improvement and best practices.	Benchmarking and Competitive Analysis Policy
7.1 The school management ensures that people keep current with changing educational needs and directions.4.00	7.1. To promote a culture of continuous learning and innovation by recognizing and rewarding staff members' engagement in professional development activities.	Professional Development and Well-being Policy
7.2.The school provides many opportunities for employees' professional development, services, and benefits-3.88	7.2. To develop specialized training programs aligned with organizational goals to enhance staff members' skills and competencies.	
7.3. The school ensures that the faculty members properly	7.3. Regular needs assessments and gap analyses should be conducted to identify staff skill gaps and training needs, leading to targeted professional development initiatives.	

From a QMS perspective, these gaps present serious challenges. QMS principles emphasize the importance of involving all stakeholders in decision-making processes to meet quality objectives (Alonderiene and Majauskaite, 2016 and Tran et al., 2019). The exclusion of some staff from communication channels hinders the effectiveness of QMS initiatives, as their valuable contributions are not considered. Furthermore, open communication is vital for continuous improvement, a fundamental tenet of QMS. The current gaps in communication practices suggest significant barriers to identifying areas for improvement and implementing necessary changes, which ultimately impacts the overall quality and effectiveness of HEIs in Region XII. As an action, a component of inclusive communication policy is a necessary feature in the proposed policy recommendation in this study.

Performance Monitoring and Analysis Policy Using Futures and Foresights Thinking

The strategic development process and performance analysis are crucial components within the framework of QMS to ensure the effectiveness of a school's management. However, recent assessments indicate significant gaps in both areas, highlighting potential challenges that may impede the school's ability to achieve its objectives and maintain quality standards. Firstly, the strategic development process, with a mean score of 3.94, suggests a lack of comprehensive analysis and utilization of critical factors such as competitors, weaknesses, and strengths. In the context of QMS, understanding competitors is essential for benchmarking and establishing performance standards (Bush, 2021). The identified gap indicates a potential deficiency in competitive analysis, which limits the school's ability to identify best practices and areas for improvement. Similarly, failing to identify weaknesses and leverage strengths implies a missed opportunity for continuous improvement and optimization of educational offerings and operational efficiencies (Walter & Helman, 2020). Consequently, without a robust strategic development process, the school may struggle to set realistic goals, recognize necessary improvements, and capitalize on its strengths, ultimately leading to suboptimal performance and stagnation.

Secondly, performance analysis, particularly in examining trends, is identified as a significant weakness with a mean score of 4.00. Trend analysis is critical within the QMS framework to understand performance over time, identify patterns, and predict future performance (Tambare et al., 2021). However, the identified gap suggests that school management may not effectively analyze performance data to inform decision-making. This deficiency in data-driven decision-making can result in decisions based on incomplete or inaccurate information, undermining the effectiveness of improvement initiatives (Tambare et al., 2021). Without examining trends, the school cannot effectively implement continuous improvement processes, which are core principles of QMS. Consequently, inadequate performance analysis can lead to missed opportunities for improvement, declining performance, and an inability to meet stakeholder expectations.

Therefore, addressing these gaps through proposed policy recommendations in this research is paramount to enhance the school's management effectiveness and maintain quality standards. By implementing robust processes for competitive analysis, identifying weaknesses, leveraging strengths, and conducting thorough performance analysis, the school can foster a culture of continuous improvement and ensure its ability to meet the evolving needs of its stakeholders.

School Climate Policy

Creating a conducive learning environment is important for educational excellence. However, a mean score of 3.94 shows significant gaps in this area. The school management lacks strategies to foster a conducive learning environment, as seen in various areas such as physical infrastructure, emotional safety, teacher-student relationships, and overall school culture. These gaps indicate a disconnect in aligning with principles of stakeholder engagement, continuous improvement, and support system implementation. Without proactive measures, the school risks impacting student performance, teacher morale, and reputation in the community.

These gaps have an impact beyond academics. Poor student performance can lead to higher dropout rates and hinder academic success. Teacher well-being may suffer, resulting in burnout and decreased effectiveness, especially when professional development opportunities are limited. Additionally, the school's reputation and standing in the community may be negatively affected, affecting enrollment rates and stakeholder trust.

Addressing these gaps through a QMS-aligned approach is crucial for creating a nurturing learning environment for student success and organizational growth. Therefore, the proposed policy recommendation in this study includes a relevant component on this matter.

Stakeholder Engagement and Feedback Policy

The significant gap in utilizing stakeholder feedback, highlighted by a mean score of 3.94, reveals a critical deficiency in the school's approach to assessing and improving its programs and offerings. This gap may stem from various factors, including inadequate mechanisms for collecting feedback, insufficient analysis processes, or a lack of action upon receiving feedback (Carpentier & Mageau, 2016). In connection with QMS, effective stakeholder engagement is paramount for understanding and meeting the needs and expectations of the school community; without robust feedback mechanisms aligned with QMS principles, the school risks missing valuable insights that could inform continuous improvement efforts.

The impact of this gap extends across multiple dimensions of the school's operations and relationships. Programs and offerings may suffer from decreased relevance and quality, as feedback incorporation is essential for identifying areas of improvement and innovation. Moreover, stakeholders may experience decreased satisfaction and trust in the school management, leading to reduced engagement and support (Zepke, 2018). This lack of stakeholder satisfaction can negatively affect overall school performance and outcomes, as missed insights from feedback may hinder the implementation of effective teaching methods, curriculum adjustments, and resource allocation strategies (Hassan, 2024). In connection, confronting this gap in the proposed policy recommendation in this research is essential for the school to enhance program effectiveness, stakeholder satisfaction, and overall organizational success.

Transparency and Accountability Policy

The significant gap in maintaining high trust among stakeholders, as indicated by a mean score of 3.94, poses a critical challenge for school management in fostering positive relationships and ensuring overall organizational success. This deficit could be attributed to various factors, including deficiencies in communication, transparency, responsiveness, and consistency in actions. Trust, intricately linked to stakeholder satisfaction within Quality Management Systems (QMS) frameworks (Freeman, 2022), plays a vital role. Stakeholders are unlikely to be satisfied with the school's services without trust, underscoring the importance of addressing this gap to uphold stakeholder trust and satisfaction (Johnson & Johnson, 2022).

The impact of this gap extends to multiple aspects of the school's operations and relationships. Low levels of trust can lead to decreased engagement from parents, students, and teachers, negatively impacting school initiatives and community support. Furthermore, a lack of trust can damage the school's reputation, resulting in lower enrollment rates and difficulties attracting high-quality staff (Rodriguez et al., 2018). This erosion of trust can also harm student morale and motivation, consequently affecting academic performance and overall outcomes (Dyson et al., 2016). Additionally, teachers and staff may feel undervalued or unsupported in an environment lacking trust, potentially reducing job satisfaction and performance (El-Moussa, 2023; Silva et al., 2016). Therefore, the school must address these trust issues in the policy recommendations outlined in this study to enhance stakeholder engagement, improve its reputation, and enhance overall organizational performance.

Benchmarking and Competitive Analysis Policy

The significant gap in effectively obtaining data and information through benchmarking and competitive comparisons, as indicated by a mean score of 4.00, highlights a critical deficiency in the school's strategic management and continuous improvement processes. This gap suggests that the school may not systematically compare its performance with other schools or industry standards nor leverage these comparisons to drive improvements effectively. Within the framework of QMS, benchmarking serves as a cornerstone for measuring performance against best practices or industry standards, identifying gaps, and fostering a culture of continuous improvement (Jain & Gautam, 2016).

Moreover, competitive analysis is essential for understanding the school's relative performance and maintaining a competitive edge in the education sector (Iqbal, 2021). Without leveraging benchmarking data for data-driven

decision-making, the school risks missing opportunities for improvement and innovation, ultimately leading to suboptimal performance and stagnation. The impact of this gap extends across various facets of the school's operations and relationships. Firstly, without benchmarking, the school may lack a clear understanding of its relative performance, hindering its ability to identify and implement best practices that drive performance improvement. Secondly, inadequate competitive analysis can result in strategic plans not aligned with market realities, impeding the school's ability to effectively achieve its goals (Paliulis & Labanauskis, 2015). Furthermore, stakeholders may lose confidence in the school's ability to remain competitive if they perceive a lack of proactive engagement in seeking and implementing best practices. This loss of confidence can significantly impact student enrollment, staff recruitment, and overall community support (Paliulis & Labanauskis, 2015). Addressing these gaps in benchmarking and competitive analysis is essential for the school to enhance performance, strategic planning effectiveness, and stakeholder confidence, ultimately driving continuous improvement and organizational success. Hence, a component responsive to such a need is covered in the proposed policy recommendation of this study.

Professional Development and Well-being Policy

The school management's efforts to keep staff members updated with evolving educational needs and directions, as evidenced by a mean score of 4.00, are commendable. However, it is important to note that potential gaps may exist if systematic mechanisms for identifying and addressing changing educational needs are lacking. Without structured processes, the school struggles to anticipate and adapt to emerging trends, methodologies, and technologies effectively (Papanthymou & Darra, 2017). Additionally, while professional development opportunities may be available, they might not be tailored to individual staff members' specific needs or aligned with strategic objectives. This could result in inefficiencies and missed opportunities for enhancing educational quality and organizational goals (Tambare et al., 2021).

On the other hand, the mean score of 3.88 regarding opportunities for employees' professional development, services, and benefits suggests significant gaps in the school's support for its workforce. Despite emphasizing investing in employees' growth and well-being within QMS principles, shortcomings could hinder organizational effectiveness and sustainability. Insufficient access to training programs, inadequate support for career advancement, or below-standard benefits packages may decrease employee morale, productivity, and retention (Solomon et al., 2023). Addressing these gaps and aligning employee development initiatives with QMS principles are crucial for enhancing workforce satisfaction, performance, and overall organizational success.

Similarly, the mean score of 3.88, highlighting potential gaps in ensuring faculty members are adequately prepared to deliver learning-centered processes, underscores the importance of addressing deficiencies in training and support. Despite the emphasis on competency and capability development within QMS principles, shortcomings may persist in providing necessary resources and alignment with educational objectives. Insufficient training or support for implementing learning-centered teaching methodologies, outdated instructional materials, or a lack of alignment between faculty development initiatives and educational goals could hinder faculty members' ability to support student success effectively (Dung et al., 2019). Therefore, addressing these gaps incorporated into the components of the proposed policy recommendation in this research is essential for enhancing the capacity of faculty to deliver high-quality education, ultimately contributing to the school's overall effectiveness and alignment with QMS principles (Hakanen et al., 2019).

The proposed policy recommendations aim to enhance the QMS among Higher Education Institutions (HEIs) in Region XII by addressing key gaps identified in leadership, strategic planning, customer focus, measurement, analysis, knowledge management, workforce focus, and operational focus. By implementing these recommendations, HEIs can foster inclusive communication, strengthen stakeholder engagement, improve strategic planning processes, enhance customer satisfaction, optimize data analysis practices, develop the workforce, and ensure operational readiness, ultimately driving organizational success and stakeholder satisfaction in Region XII.

4.0 Conclusion

The findings of this study have significant implications for policy, practice, education, and future research on Quality Management Systems (QMS) within higher education institutions (HEIs) in the Philippines, particularly

in Region XII. The study highlights the necessity for policymakers to develop and implement comprehensive QMS frameworks tailored to the unique challenges HEIs face. By establishing clear guidelines and support mechanisms, policymakers can facilitate the adoption of best practices in quality management, ensuring that institutions meet accreditation standards and foster a culture of continuous improvement. The proposed policy recommendations, such as enhancing stakeholder engagement and establishing transparency and accountability measures, are crucial for building trust and collaboration among all educational stakeholders.

The quantitative and qualitative data insights underscore the importance of integrating stakeholder feedback into QMS practices. Institutions should prioritize establishing robust feedback mechanisms that allow for the continuous assessment and enhancement of educational programs. Additionally, training and professional development opportunities for faculty and staff should be emphasized to equip them with the necessary skills to implement effective QMS practices. This focus on practice will ultimately lead to improved educational outcomes and institutional performance. The findings suggest that a strong QMS can significantly enhance the quality of education provided by HEIs. By aligning educational practices with QMS principles, institutions can create a more supportive and effective learning environment for students. This alignment not only improves student satisfaction and success rates but also enhances the institution's overall reputation within the community and among potential students.

Finally, this study opens avenues for future research to explore the long-term impacts of QMS implementation on educational quality and institutional effectiveness. Further studies could investigate the specific challenges faced by different types of HEIs in adopting QMS practices and the role of leadership in driving these initiatives. Additionally, comparative studies across various regions could provide deeper insights into the effectiveness of different QMS approaches in diverse educational contexts.

5.0 Contributions of Authors

Author 1 was responsible for editing, writing, encoding, and conducting the data analysis for this project. Author 2 provided invaluable guidance and supervision throughout the data analysis process.

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7.0 Conflict of Interests

There is no conflict of interest associated with this research.

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