

IMPLEMENTATION OF ISO 9001:2015 IN STATE UNIVERSITIES AND COLLEGES: A QUALITY MANAGEMENT, ORGANIZATIONAL PERFORMANCE, AND LEGAL FRAMEWORK

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Abstract

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State universities and colleges (SUCs) in the Philippines are increasingly adopting ISO 9001:2015 by the International Organization for Standardization (ISO) to enhance their organizational performance. However, maintaining the quality management system (QMS) beyond initial certification presents significant challenges, including deviations from compliance and lack of sustained resource support. This research seeks to explore the integration and long-term sustainability of ISO 9001:2015 within SUCs, with a particular focus on extension services. Using a descriptive case study approach, data were gathered through interviews, document analysis, and field observations conducted in two SUCs located in Region III. The research not only identifies the benefits like improved service delivery and satisfying stakeholders, but it also recognizes the hindrances that include the reluctance to change and resource mobilization. The study concludes that indeed the QMS has a positive impact on the performance of an organization, but at the same time, its continuity depends on the uninterrupted support as well as the involvement of relevant stakeholders (Sartor et al., 2019). These findings account for the broader conversation on quality management (QM) in higher education institutions (Al-Bashir, 2016) and how proper strategic planning is the key to meeting the long-term goals of the institution.

Keywords: ISO 9001:2015, Quality Management System, Plan-Do-Check-Act (PDCA), Deming Cycle, State Universities, SDG 4, Quality Education

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1. INTRODUCTION

Implementing the ISO 9001:2015 quality management system (QMS) by the International Organization for Standardization (ISO) is crucial for improving

company success (Gitlow, 2005). Although optional, it is endorsed by an organization's strategy, objectives, and policies (Lavigna, 2014). Every firm must consciously decide to develop a QMS, taking into account its distinct objectives, products, and

services (Mangahas & Leyesa, 1998). The system's design must align with the organization's specific requirements, encompassing its products and procedures (Sajo et al., 1998). To sustain a competitive advantage, organizations must prioritize customer satisfaction and responsiveness to market needs. The significance of quality in a swiftly evolving culture is paramount, as it profoundly influences economic success (Gorji & Farooque, 2011).

In the Philippine setting, education is essential, as stipulated by Article 14, Section 1 of the 1987 Constitution, which underscores the state's obligation to advance education. Executive Order No. 605 (2007) required government agencies, including state universities and colleges (SUCs), to implement ISO 9001:2000 as part of a national quality management (QM) strategy. The Department of Budget and Management mandated the implementation of ISO 9001:2015 for SUCs to be eligible for performance-based bonuses (Government Quality Management Committee [GQMC], 2017).

Despite the broad adoption of ISO 9001:2015 among SUCs, which has improved their instructional, research, and extension activities, a gap persists in comprehending the sustainability of this certification. This research examines how ISO 9001:2015 may be integrated with ISO 14000 and the Occupational Health and Safety Assessment Series (OHSAS) to improve organizational performance. This integration causes implementation challenges, time constraints, and basic model differences (Siva et al., 2016; Silva, 2020). The issues highlight the need for a process-oriented strategy that prioritizes improvement, leadership, and stakeholder engagement (de Nadae et al., 2021).

This study analyzes how ISO 9001:2015 in Region III SUCs organizational structures affects operational efficiency and sustainability. ISO 9001:2015 implementation benefits and drawbacks and higher education sustainability techniques are the main study topics. This research advances the discussion about how QMSs improve educational quality and organizational performance.

This paper is organized as follows. Section 2 examines the pertinent literature regarding QMSs in higher education. Section 3 explains the research methodology, encompassing the descriptive case study strategy for empirical data acquisition. Section 4 delineates the principal conclusions from the case studies, whereas Section 5 provides an in-depth analysis of these results. Section 6 offers recommendations for future research and practical applications in SUCs.

2. LITERATURE REVIEW

2.1. Quality and administration in higher education

According to Lazić et al. (2021), higher education quality depends on students' viewpoints, teaching effectiveness, and curricular relevance. Objective quality refers to universal standards, while relative quality is based on individual perspectives (Nasim et al., 2020). Leadership and human resources (HR) affect an organization's administrative efficiency, employment, and education (Al-Shboul et al., 2024). Corporate social responsibility (CSR) affects institution management, making it an important part

of governance. Like Pisano et al. (2022), who evaluate CSR committees, they classify administrative duties by difficulty. These views emphasize ongoing progress, adaptation, and administrative-academic congruence. Higher education values CSR and governance more.

2.2. Continuum of administrative functions

The continuum of administrative duties categorizes university administration's numerous and complicated roles. This approach balances skill levels and task alignment to academic goals using two fundamental axes. One axis depicts talents from "Highly talented" to "Low skilled". The other aligns tasks with the university's objective, from "Control and support functions" to "Core academic functions and missions". These axes intersect to form five staff types with separate administrative duties. Category 1 is high-level administrative skills focused on monitoring and assistance. Category 2 combines administrative and modest academic skills. Category 3, "Para-academics", connects administration with academia. Category 4 is largely academic with minor administrative functions, whereas Category 5 involves university-essential grassroots roles. The many roles in university administration are important to the institution's performance. Santos (2023b) supports this plan by emphasizing HR performance in ISO 9001:2015-certified higher education institutions. QMS integration requires administrative role alignment for operational efficiency and performance. Jacoba et al. (2024) emphasize that effective governance needs to align administrative operations with a university's performance excellence framework and a well-structured system to achieve goals. The study's conceptual framework analyzes administrative services quantitatively and qualitatively. Jacoba et al. (2024) highlight that quantitative analysis employs accreditation data to give measurable insights, while Santiago and Santos (2021) note that qualitative data captures students' and staff's subjective experiences during important moments like the Philippines' Luzon lockdown. Sidhu et al. (2023) stress social capital and information sharing in higher education governance, which this dual model promotes. Knowledge-sharing promotes governance-institutional mission continuums.

Abuzaid (2023) also emphasizes the need for staff alignment between leadership abilities and plan execution for university governance. This supports the continuum's focus on matching administrative responsibilities with academic objectives to achieve the university's strategic goals. Canaj et al. (2022) claim that varied working groups shape successful assessment procedures, which promote economic well-being through research internationalization and administrative efficiency in higher education. After forming the working group, data-gathering methods must be pilot-tested to meet project goals. Riabichenko et al. (2019) stress the importance of methodological rigor in reducing risks and maintaining smooth procedures to improve higher education service delivery. De Lara and Santos (2024) also emphasize methodological rigor, highlighting the pandemic's problems and required service delivery framework changes, emphasizing the necessity for a flexible yet systematic approach to

administrative activities. This framework concludes with a strengths, weaknesses, opportunities, and threats (SWOT) analysis, which integrates quantitative and qualitative data to describe administrative services. SWOT analyses identify administrative functions' strengths, weaknesses, opportunities, and threats, supporting continual development. Sharma (2024) emphasizes the importance of customer-centric techniques in corporate settings, which may be used to improve university performance by better meeting student and staff demands. Binaluyo et al. (2024) address the obstacles and prospects of digital transformation in Philippine institutions, emphasizing strategic alignment and adaptation within administrative frameworks.

3. RESEARCH METHODOLOGY

A descriptive case study was used to examine a program, event, activity, or process using ISO 9001:2015. This technique is ideal for identifying driving causes, administrative support, obstacles, satisfaction, and implementation advantages in investigated institutions (Bautista, 1998). To protect the secrecy, the research focused on two Region III state universities with ISO 9001:2015-certified extension services departments for three years. To maintain privacy and ethical research, university names are not provided. To understand ISO 9001:2015 implementation, interviews, document reviews, and field observations were conducted. The respondents received two interview guides, and university authorities were contacted for data collection approval. The ISO Core Team, Quality Circle, academic extensionists, executive committee, and randomly selected extension program recipients responded. All subjects gave informed permission, assuring study ethics.

Secondary data were obtained from the document control office and additional reports, such as customer satisfaction surveys, from the Extension Services Office. The collected data were organized, categorized, and analyzed with the assistance of a statistician. Statistical techniques, including frequency and percentage, were used to describe the planning, awareness, engagement, implementation, monitoring, and continuous improvement of ISO 9001:2015 at the two institutions. This analysis also encompassed insights into the partner institution's and customers' involvement in extension programs, community participation, and the support provided by the universities.

4. RESEARCH RESULTS

4.1. Description of ISO 9001:2015, according to the two SUCs

The ISO 9001:2015 certifications of the two SUCs were assessed based on awareness, participation, implementation, monitoring, and continuous improvement.

4.1.1. Reasons for subjecting the university to ISO 9001:2015 certification

Multiple significant factors drove the university's pursuit of ISO 9001:2015 certification. All

26 respondents consistently noted that guidance from oversight agencies significantly influenced this endeavor. Alongside, there was a unanimous recognition of the need to bolster the quality of the university's services. Aligning with the anticipations of partner agencies was also a universally emphasized rationale. The goal of amplifying client satisfaction resonated strongly among all participants. These collective insights emphasize the profound value and multifaceted advantages the ISO 9001:2015 certification brings to the institution.

4.1.2. Initiators of implementation

In our survey about the initiators of the implementation, 66.67% (four of six respondents) identified the Executive Committee as the primary initiator. In contrast, 33.33% (two respondents) attributed the initiation to the Administrative Council. Notably, the Academic Council was not identified as an initiator by any participant. The Executive Committee, which includes the university's president and vice presidents, was recognized by four respondents as the driving force behind the QMS implementation. The other two respondents pointed to the Administrative Council, which comprises the state institution's executive committee, deans, directors, student leaders, and faculty and staff presidents. There was no indication that the Academic Council played a role in starting the implementation. This aligns with Clause 5, "Leadership", of the ISO 9001:2015 specification, which stipulates that an organization's leadership must demonstrate commitment to the QMS's execution.

4.1.3. Administration demonstrates adequate support in the implementation of QMS

All 26 responders to our poll on the administration's assistance for QMS implementation said it was satisfactory. The university's unequivocal support for Clause 7, "Support", of the ISO 9001:2015 is evident. This paragraph emphasizes that organizations must support QMS implementation with HR, facilitators, a suitable atmosphere, suppliers, and materials.

4.1.4. Support of the administration in the implementation of QMS

All 26 responders agreed on ISO 9001:2015 implementation preparations. They verified their companies wanted consulting services. They said qualified staff had been assembled to fill ISO 9001:2015 posts. These organizations also provided preparatory materials and office equipment and facilities. Every respondent said their universities have benchmarked against others, meeting Clause 7.1.6, "Organizational Knowledge", of the ISO 9001:2015, ready for implementation. This section underlines that a company must have the expertise needed to implement the QMS.

The research participants all agreed that their institutions promoted quality policy and objectives. ISO 9001:2015 requires enterprises to set quality objectives based on their aims. SUCs use various tactics to promote quality policy and objectives.

The data suggests these strategies are both comprehensive and effective, meeting the international standard's directive that the quality policy and quality objectives be clearly communicated to everyone within the organization's purview. Presently, two SUCs are actively engaged in extension initiatives, namely Entrepreneurial and Vocational Education Training in Business Administration and Management, as well as Technical Vocational Education and Community Planning Assistance. While the Executive Committee, Quality Management Representative, and Extension Director are informed that the operations handbook, regulations, and guidelines support extension services, a significant majority (16 out of 20) of faculty members remain unaware of this inclusion. Distinctly, four faculty members are even unaware of the existence of any operations handbook, regulations, or procedures related to extension services.

However, all respondents were consistent in asserting that specific system procedures are in place for executing extension projects. This concurs with ISO 9001:2015 mandates which dictate operational planning and control for all processes under its governance. Furthermore, there was a unanimous agreement among respondents that their institutions maintain a structured approach to monitoring extension activities and operations.

4.1.5. Extension programs of the university being accessed

In a bustling community supported by two universities, a range of university extension programs offer an array of courses aimed at fostering skills and promoting well-being. Among these, technical vocational training stands out as the most popular, with every respondent partaking in it. Close on its heels, the livelihood and entrepreneurial training attracts 83% of the participants. Business administration and management training are not far behind, with around 68% participation, while both project planning and management and information and communications-related training see approximately 67% engagement.

Other significant programs like technical assistance in local development planning, health and wellness projects, animal husbandry — including livestock, poultry, and small ruminants — along with Women and children empowerment and welfare, each garner the attention of half the respondents.

Yet, not all programs boast such high engagement. Courses like physical and infrastructure development planning, crop production, aquaculture, disaster and calamity preparedness, moral recovery and values development, each captivate around a third of the audience. The emphasis on environmental protection, conservation, and human rights is even less, engaging only about 17% of the respondents.

During interactive sessions with clients and partnering institutions, it's revealed that the universities are committed to providing all the resources necessary for these courses to flourish. The only noted exception is the provision of starter kits, which are not included in the resources provided.

4.1.6. Steps taken towards the implementation of ISO 9001:2015 in extension services

The implementation of ISO 9001:2015 at one of the state universities traces back to its origins as the Central Luzon Agricultural School, established on April 12, 1907, where agricultural mechanics, farming principles, and homemaking skills were taught. By December 31, 1950, the institution achieved college status, and in 1964, Republic Act No. 4067 granted it university status. According to university executives, the primary motivation for deploying the QMS was to enhance service quality and improve customer satisfaction. The Executive Committee, comprising the university president and vice presidents, led the QMS implementation efforts, with authorization from the administrative council. A key aspect of the implementation was the alignment of the university's mission to become a globally recognized research institution, particularly in agriculture, sciences, and technology. Additional objectives included contributing to poverty reduction, environmental protection, and sustainable development. The university's vision, purpose, and quality policy declarations were prominently displayed on bulletin boards, the main entry gate, and digital monitors throughout the university, reinforcing their commitment to ISO 9001:2015 standards and their goal of continually improving services in extension and other key areas.

4.2. Challenges encountered in the implementation of QMS

State universities in Region III had no difficulty convincing the executive committee and administrative council members to adopt ISO 9001:2015. However, getting the academics and staff to do the same proved challenging. The second group objected because such individuals have a concern about altering their long-standing job procedures. They feared that the introduction of ISO 9001:2015 would need significant modifications to their work procedures (interview conducted by the QMR on May 27, 2019). This corroborates the findings of Morgan and Murgatroyd (1994), who found that the public sector is more resistant to change owing to its dedication to regulation, precedent, and regulations. The mobilization of resources as the major informants of two state universities is an additional obstacle to the execution. They spent millions on preparations and deployed a large number of workers, resulting in the stoppage of other academic and extracurricular activities. They invest around 1,700,000 Philippine pesos (PHP) in certification and consulting services. In addition, extra supplies, equipment, furniture, and fixtures (e.g., cabinets, shelves, seats) were acquired to meet the international standards' requirements. The following obstacles were faced during the implementation of the QMS, as reported by interviews with key informants: implementing the QMS standard was met with resistance from teachers and employees. As disclosed by the QMR during the interview, professors and staff had an erroneous worry that implementing the QMS standard would disrupt their research activities, as well as their workflow and the nature of the assignment itself. Cost and other resources associated with implementing a QMS at

the university. The mobilization of a considerable quantity of funds and a small number of individuals was necessary to implement the QMS. In terms of financial resources, the University invested 700,000.00 PHP in this endeavor. Regarding the need for HR, a considerable number of people had been mobilized, affecting the routine duties of the affected individuals. In addition to staff, various logistical assistance such as office supplies, furniture, and fixtures were manufactured to meet ISO 9001:2015 standards.

Preparing for ISO 9001:2015 certification takes more time. In the instance of state universities, the majority of respondents said that the two-year preparation period was too lengthy, since it interfered with other crucial tasks of the university's staff. During the reinstatement interview, one state university faculty member said that faculty comprehension of extension services' processes and paperwork is lacking. This suggests that state universities faced difficulty with Clause 7.3, "Awareness", of the ISO 9001:2015, which specifies that the institution must guarantee that those doing work under its supervision are aware of the QMS's procedures.

4.3. Proposed framework for sustainable implementation of QMS in extension services

Several publications highlight the corporate culture factors necessary for the maintenance of ISO 9001:2015, including teamwork, recognition, upper management dedication, and a focus on continual development (Talavera, 2005). Key elements involve the ISO 9001:2015 implementation process, internal and certification audits, surveillance, and management reviews (Botuyan et al., 1993; ISO, 2009). Successful maintenance of ISO 9001:2015 requires collaboration across departments, emphasizing teamwork (Cohen & Brand, 1993). Senior management plays a critical role in the process, engaging both internal and external customers such as extension service providers and beneficiaries (ISO, 2009). Management must actively participate in project activities, orientation, and training to sustain the QMS (Sajo et al., 1998).

Personnel involved in extension services must possess the appropriate education, training, and experience (ISO, 2009). ISO (2009) emphasizes the importance of providing ongoing training to both upper and lower-level staff, especially in ISO 9001:2015-certified institutions. Furthermore, institutions must manage the work environment to support QMS objectives, fostering governance that values leadership and creativity (Zamora, 1993). Recognizing staff participation through incentive systems is crucial to maintaining motivation and engagement in ISO 9001:2015 processes.

ISO 9001:2015 also underscores the importance of process-based management, which involves engaging extension recipients and addressing challenges associated with ISO 9000 implementation. Administration is responsible for evaluating QMS performance and suggesting improvements, based on management reviews (Gitlow, 2005). Decision-making is supported by data analysis, particularly in customer satisfaction metrics, internal audit results, and transparent communication of findings (ISO, 2009).

Internal audits are critical for compliance with ISO 9001:2015, with auditors maintaining professionalism and offering developmental recommendations (Talavera, 2005). Third-party certification audits, which assess conformity with ISO 9001:2015 standards, provide opportunities for organizations to address noncompliance issues (Bautista, 1998; Morgan & Murgatroyd, 1994). Corrective actions should focus on eliminating the causes of nonconformity and fostering a positive and blame-free culture to support continuous improvement (Morgan & Murgatroyd, 1994; Azanza, 2003).

Sustaining ISO 9001:2015 certification requires the demonstration of ongoing QMS activities and improvements. Surveillance audits help ensure compliance, with nonconformities addressed promptly (Morgan & Murgatroyd, 1994). Maintaining ISO 9001:2015 involves teamwork, leadership commitment, employee participation, and communication, all of which support continuous improvement (ISO, 2009).

Understanding an organization's context is the first step in QMS implementation. Institutions must align their vision, purpose, and values with their quality policies, evaluating the relevance of these components to the organization's objectives (ISO, 2009). For extension services, it is essential to continuously assess the requirements and expectations of oversight authorities and stakeholders, including communities, NGOs, local governments, and industry partners (ISO, 2009).

Leadership is a critical factor in sustaining the QMS, with administrative council members, quality management representatives, and the ISO Core Team responsible for ensuring QMS alignment with institutional goals. Nonconformities identified during audits require root cause analysis and corrective actions as per Clause 10, "Improvement", of the ISO 9001:2015, ensuring continuous improvement (ISO, 2009).

5. DISCUSSION

5.1. Overview of ISO 9001:2015 in two state colleges and universities

Reasons for ISO certification: Siltori et al. (2021) and Sartor et al. (2019) show that universities seek ISO 9001:2015 certification to improve service quality and meet partner agency requirements. ISO certification significantly improves educational operational quality and client happiness, according to this research. Mandates from oversight bodies and the need to fulfill external expectations drive ISO 9001:2015, which is consistent with Sartor et al. (2019), who found performance advantages and the favorable effects of past ISO experience on company performance. This detailed perspective helps ISO certification to improve client satisfaction and service performance.

Initiators of implementation: Executive committees push ISO 9001:2015 certification in universities, implying a top-down QM approach. This shows the importance of leadership commitment to QMS projects. The absence of Academic Council engagement suggests a disconnect or administrative-focused approach to quality improvements. Akanmu et al. (2020) and Negrón (2020) emphasize

management leadership and quality attitude as key components of a successful total quality management (TQM) strategy, which aligns with the universities' top-down ISO 9001:2015 pursuit. Yeung et al. (2018) argue that visual service process redesign might improve academic participation with quality procedures, integrating administrative and academic interests.

Administration's support in the implementation of QMS: Universities need administration help to acquire and maintain ISO 9001:2015 certification. According to Clause 7 of the ISO 9001:2015, this requires people capital, materials, and a suitable environment. Negron (2020) emphasizes the need for QM methods and administrative support for QMS projects. Akanmu et al. (2020) stress the importance of senior management in creating a QM-friendly culture. To boost teacher and staff engagement, Wysocka et al. (2022) emphasize specific HR motivator systems. These studies show that QMS adoption and ISO compliance require significant administrative support.

Detailed preparatory actions: Collectively hiring consulting services and trained people indicates a proactive and competent attitude to creating the QMS to fulfill ISO requirements and best practices. This plan displays a strategic commitment to continual improvement, which is essential for QMS adoption, according to Siltori et al. (2021).

Promoting quality policy and objectives: Faculty comprehension of extension service operating needs is inadequate, suggesting the quality policy and objectives need greater communication and training. For institutions pursuing ISO 9001:2015 certification, Siltori et al. (2021) emphasize the importance of quality standards for decreasing operational expenses and enhancing process efficiency. QM improves operational performance through communication and training, according to Negron (2020). To improve efficiency, Gryshchenko (2021) emphasizes current management systems and communication techniques, similar to the necessity for comprehensive quality policy promotion and integration in colleges. QMS adoption and acceptability require better communication and training.

Engagement in extension programs: Universities' involvement in vocational training and community planning shows how the QMS improves educational outreach and service quality. This involvement matches programs with community needs and university resources and identifies priority areas. Vlašić et al. (2022) acknowledge the relevance of community participation in universities to improve service quality and customer loyalty in the banking sector. Active involvement develops young innovation potential, according to Krakhmalova (2021), implying that extension programs can increase creativity and educational quality. Active involvement in extension programs strengthens community bonds and improves education.

5.2. Obstacles in deploying the QMS

Resistance to change: The main reason university professors and personnel resist ISO 9001:2015 is that it may interrupt routines and harm workflow and research. Public sector organizations have a culture of following rules, making them difficult to change. According to Sartor et al. (2019), such

opposition might hinder the implementation of new processes, reflecting the difficulties universities encounter when changing long-standing work methods.

Resource mobilization: Universities struggle to adopt the QMS due to budgetary and HR constraints. The institutions' 1.7 million PHP planning, certification, and consultancy fees limited academic and recreational funding and staff. Vajjhala and Thandekkattu (2017) raise similar concerns about balanced and transparent resource allocation in large-scale deployments. Puauschunder (2017) stresses intergenerational justice and sustainability, stressing wise resource management for long-term sustainability throughout substantial institutional changes. These findings show universities' QMS implementation hurdles and financial constraints, requiring a balanced resource allocation plan for operational stability and long-term survival.

Logistical and material requirements: Institutions need extra supplies, equipment, furniture, and fixtures to satisfy ISO 9001:2015. Integrating these new materials into the infrastructure without disrupting operations costs a lot and requires careful planning. ISO standard adoption problems involve corporate management and sustainable development. Management systems, process digitization, and transparency are stressed by Kalyta (2020) and Grabowska (2021). These methods are needed to modernize universities and maintain efficiency to meet global standards.

Time duration for preparation: ISO 9001:2015 certification takes two years to prepare, which may tire university workers and stakeholders. This prolonged interval may stall change management and crucial tasks. Kalyta (2020) stresses the need for higher education management systems to handle lengthy preparatory processes without harming operational efficiency or instructional quality.

Awareness and understanding of QMS procedures: Faculty require better communication and training on QMS, especially for extension service processes and documentation. Documentation and data recording are QM priorities for Negron (2020). These processes educate all personnel on the new QM concepts, promoting university QMS implementation and integration.

5.3. Recommended approach for lasting implementation of QMS in extension programs

Critical elements of the proposed framework: University cultures should include ISO 9001:2015 according to the framework. Collaboration, recognition, prizes, managerial dedication, and growth are emphasized. These properties are necessary for a dynamic, ever-improving QMS. Negron (2020) emphasizes structural adjustments and providing high-level functions with major responsibility to improve organizational performance through QM. The framework emphasizes management commitment and continuous growth to embed ISO 9001:2015 in organizational culture. Kalyta (2020) supports the framework's focus on ongoing improvement and ISO standard integration by emphasizing effective management systems and QM education.

Process-based management: ISO 9001:2015 process-based management needs thorough organizational and divisional collaboration. Negron (2020) emphasizes the importance of

interdepartmental communication and collaboration in QMS implementation, stating that top management may directly improve processes and HR to increase customer satisfaction.

Leadership and management engagement: The framework stresses senior management and the administrative council's QMS implementation and maintenance. They must ensure all organizations understand, execute, and sustain the university's quality policy. Sartor et al. (2019) discuss how ISO 9001:2015 may boost corporate performance and how effective leadership can help in a competitive market. This research shows that high management and the administrative council must actively lead a QMS.

Training and competency: Doroshuk (2019) underlines the need for training and expertise for extension service staff. The QMS requires extensive training to maintain its integrity and efficacy. Santos (2023b) also outlines HR management strategies that improve organizational performance, highlighting the importance of focused training in company success.

Work environment and governance: Chiarini (2017) discusses the necessity to define and manage an ISO 9001:2015-compliant and well-governed workplace. This paper examines ISO 9001:2015 risk-based thinking and risk management in European manufacturing small and medium-sized enterprises (SMEs), emphasizing the need for employee engagement in quality goals. Santos (2023a) offers long-term public space enhancement projects that include safety and inclusion measures, demonstrating the need for well-managed work spaces for successful government.

Continuous improvement and nonconformity management: Continuous improvement and nonconformity management are key to the framework. It requires regular internal audits and management reviews to verify compliance and identify improvements. By examining crucial elements in Greek manufacturing businesses and ISO 9001:2015 objectives that stress continuous improvement and rigorous nonconformity management, Psomas and Antony (2015) shed light on this. Corrective measures are crucial to resolving faults and preventing their recurrence, ensuring QMS robustness.

Communication and stakeholder engagement: QMS installation and sustainability depend on good communication and stakeholder participation. Australian local council sustainability reporting

involves stakeholder participation, according to Kaur and Lodhia (2014). Their findings emphasize the significance of genuine two-way stakeholder engagement to adjust the QMS to all parties' changing requirements and expectations. This strategy keeps the QMS current and practical, harmonizing stakeholder interests and boosting system success.

Strategic alignment with organizational goals: QMS alignment with organizational goals and extension service needs is essential for QM programs to support and enhance the university's strategic goals. Kumar et al. (2014) examine QM techniques in manufacturing SMEs and show how knowing QM may aid continuous improvement and strategic alignment. This study emphasizes the need to connect the QMS with corporate goals and extension service requirements and continual development to ensure long-term success and relevance.

6. CONCLUSION

This study focused on university ISO 9001:2015 implementation and customer involvement in extension services. Both universities have task teams, train people, and allocate resources to apply the standard. Considering the meticulous preparation phase, maintaining the momentum of these projects has been challenging. Ongoing provision of resources and motivational incentives is essential for sustaining compliance and enhancing service quality. It is recommended that universities provide supplementary incentives to academic staff engaged in extension services to enhance their performance. A primary constraint of this study is its concentration on two universities, which may not accurately reflect the wider issues encountered by other SUCs in the Philippines. Subsequent studies ought to mitigate this restriction by broadening the scope to encompass a more extensive sample of institutions. It may also examine supplementary variables such as financial performance, corporate reputation, cost savings, and customer satisfaction to offer a more thorough knowledge of the effects of ISO 9001:2015. Moreover, utilizing several research approaches, including secondary data analysis, may produce deeper insights. Extending this research to more sectors, including government agencies and private enterprises, may corroborate the findings and uncover sector-specific results.

REFERENCES

- Abuzaid, A. N. (2023). The mediating role of employee alignment in the relationship between CEO's skills and successful strategy execution [Special issue]. *Corporate & Business Strategy Review*, 4(2), 351-361. <https://doi.org/10.22495/cbsrv4i2siart15>
- Akanmu, M. D., Hassan, M. G., & Bahaudin, A. Y. B. (2020). A preliminary analysis modeling the relationship between quality management practices and sustainable performance. *Quality Management Journal*, 27(1), 37-61. <https://doi.org/10.1080/10686967.2019.1689800>
- Al-Bashir, A. (2016). Applying total quality management tools using QFD at higher education institutions in Gulf area (Case study: ALHOSN University). *International Journal of Production Management and Engineering*, 4(2), 87-98. <https://doi.org/10.4995/ijpme.2016.4599>
- Al-Shboul, M. A. (2024). The correlations between business ethics rules, talented human resource supply chain management and managing SMEs ethics: Fresh insight from Middle Eastern countries. *International Journal of Social Economics*. Advance online publication. <https://doi.org/10.1108/IJSE-10-2023-0763>
- Azanza, P. A. (2003). *Determinants of quality plan implementation in maritime school administration* [Doctoral dissertation, University of the Philippines Diliman]. Philippine eLib Project. <https://www.elib.gov.ph/details.php?uid=2f23906045265284e303b207c506186f>
- Bautista, V. A. (1998). *Research and public management*. Open University, University of the Philippines.

- Binaluyo, J. P., Santos, A. R., & Agustin, N. B. (2024). Challenges and opportunities for digital transformation in Philippine microfinance institutions. *International Journal of Economics and Financial Issues*, 14(5), 269–278. <https://doi.org/10.32479/ijefi.16526>
- Botuyan, M. J. E., Pardinas, M. D., Rivera, M. R. M., Salangad, C. C., & Zarate, M. T. L. L. (1993). *A total quality management study at the University of the Philippines Institute for Small Scale Industries* [Unpublished doctoral dissertation, University of the Philippines Diliman].
- Canaj, K., Nimani, A., Canaj, B., & Spahija, D. (2022). Management and internationalization of research strategies in higher education institutions as a basis of economic well-being [Special issue]. *Corporate & Business Strategy Review*, 3(2), 221–229. <https://doi.org/10.22495/cbsrv3i2siart3>
- Chiarini, A. (2017). Risk-based thinking according to ISO 9001:2015 standard and the risk sources European manufacturing SMEs intend to manage. *The TQM Journal*, 29(2), 310–323. <https://doi.org/10.1108/tqm-04-2016-0038>
- Cohen, S., & Brand, R. (1993). *Total quality management in government: A practical guide for the real world*. Jossey-Bass.
- De Lara, M. G. O., & Santos, A. R. (2024). Service delivery and quality assurance in administrative units of higher education institutions during the pandemic [Special issue]. *Corporate & Business Strategy Review*, 5(1), 494–504. <https://doi.org/10.22495/cbsrv5i1siart22>
- de Nadae, J., Carvalho, M. M., & Rodrigues Vieira, D. (2021). Integrated management systems as a driver of sustainability performance: Exploring evidence from multiple-case studies. *International Journal of Quality & Reliability Management*, 38(3), 800–821. <https://doi.org/10.1108/ijqrm-12-2019-0386>
- Doroshuk, H. (2019). Organizational development as a modern management tool for transformation of the company (Case of Ukrainian energy company). *Management*, 23(1), 61–74. <https://doi.org/10.2478/manment-2019-0004>
- Executive Order No. 605: Institutionalizing the Structure, Mechanisms and Standards to Implement the Government Quality Management Program, amending for the Purpose Administrative Order No. 161, S. 2006. (2007). https://lawphil.net/executive/execord/eo2007/eo_605_2007.html
- Gitlow, H. S. (2005). *Quality management* (3rd ed.). McGraw-Hill.
- Gorji, A. M. H., & Farooque, J. A. (2011). A comparative study of total quality management of health care system in India and Iran. *BMC Research Notes*, 4, Article 566. <https://doi.org/10.1186/1756-0500-4-566>
- Government Quality Management Committee (GQMC). (2017). *Memorandum Circular No. 2017-1*. https://www.coa.gov.ph/wpfd_file/gqmc-memorandum-circular-no-2017-1-june-23-2017/
- Grabowska, S. (2020). Changes in the social architecture of business model in the perspective of the Industry 4.0 concept. *Management*, 24(1), 130–142. <https://doi.org/10.2478/manment-2019-0039>
- Gryshchenko, I. (2021). Implementing best practices for improving energy efficiency in universities. *Management*, 34(2), 9–17. <https://doi.org/10.30857/2415-3206.2021.2.1>
- International Organization for Standardization (ISO). (2009). *Environmental management: The ISO 14000 family of international standards*. https://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/theiso14000family_2009.pdf
- International Organization for Standardization (ISO). (2015). *ISO 9001:2015: Quality management systems — Requirements*. <https://www.iso.org/obp/ui/#iso:std:iso:9001:ed-5:v1:en>
- Jacoba, F. P., Santos, A. R., Armas, K. L., & Gamit, A. M. (2024). A comprehensive analysis of a science and technology university's alignment with the performance excellence framework: A governance outlook study. *Journal of Governance & Regulation*, 13(3), 213–223. <https://doi.org/10.22495/jgrv13i3art18>
- Kalyta, P. (2020). System management for sustainable development: Models and problems. *Management*, 32(2), 93–110. <https://doi.org/10.30857/2415-3206.2020.2.7>
- Kaur, A., & Lodhia, S. K. (2014). The state of disclosures on stakeholder engagement in sustainability reporting in Australian local councils. *Pacific Accounting Review*, 26(1–2), 54–74. <https://doi.org/10.1108/PAR-07-2013-0064>
- Krakhmalova, N. (2021). Development of the innovative potential of young people on the basis of the use of the university hackathon ecosystem. *Management*, 34(2), 45–61. <https://doi.org/10.30857/2415-3206.2021.2.5>
- Kumar, M., Khurshid, K. K., & Waddell, D. (2014). Status of quality management practices in manufacturing SMEs: A comparative study between Australia and the UK. *International Journal of Production Research*, 52(21), 6482–6495. <https://doi.org/10.1080/00207543.2014.948574>
- Lavigna, R. (2014, November 28). Why government workers are harder to motivate. *Harvard Business Review*. <https://hbr.org/2014/11/why-government-workers-are-harder-to-motivate>
- Lazić, Z., Đorđević, A., & Gazizulina, A. (2021). Improvement of quality of higher education institutions as a basis for improvement of quality of life. *Sustainability*, 13(8), Article 4149. <https://doi.org/10.3390/su13084149>
- Lim, S. A. H., Priyono, A., & Ming, C. H. (2020). An exploratory study of integrated management system on food safety and organic certifications. *International Journal of Academic Research in Business and Social Sciences*, 10(3), 882–892. <https://doi.org/10.6007/ijarbss.v10-i3/7111>
- Mangahas, J. V., & Leyesa, M. D. L. (1998). Improving government administration through TQM. *Philippine Journal of Public Administration*, 42(3–4), 203–235. <https://shorturl.at/nVgLx>
- Morgan, C., & Murgatroyd, S. (1994). *Total quality management in the public sector: An international perspective*. McGraw-Hill Education.
- Nasim, K., Sikander, A., & Tian, X. (2020). Twenty years of research on total quality management in higher education: A systematic literature review. *Higher Education Quarterly*, 74(1), 75–97. <https://doi.org/10.1111/hequ.12227>
- Negron, L. A. (2020). Relationship between quality management practices, performance and maturity quality management, a contingency approach. *Quality Management Journal*, 27(4), 215–228. <https://doi.org/10.1080/10686967.2020.1809582>
- Pisano, S., D'Amore, G., Landriani, L., & Lepore, L. (2022). Can a corporate social responsibility committee be utilized to enhance the effectiveness of independent directors? *Corporate Ownership & Control*, 20(1), 201–213. <https://doi.org/10.22495/cocv20i1art18>
- Psomas, E., & Antony, J. (2015). The effectiveness of the ISO 9001 quality management system and its influential critical factors in Greek manufacturing companies. *International Journal of Production Research*, 53(7), 2089–2099. <https://doi.org/10.1080/00207543.2014.965353>

- Puaschunder, J. (2017). We — today's and tomorrow's — people of the united world: Rethinking capitalism for intergenerational justice in the fin-de-millénaire. *Corporate Governance and Sustainability Review*, 1(2), 30–35. <https://doi.org/10.22495/cgsrv1i2p4>
- Riabichenko, D., Oehmichen, M., Mozghovyi, Y., & Horsch, A. (2019). Ownership structure and risk profile of banks in emerging economies. *Risk Governance and Control: Financial Markets & Institutions*, 9(3), 46–65. <https://doi.org/10.22495/rgcv9i3p4>
- Sajo, T. A., Santiago, E. V., & Joaquin, M. E. T. (1998). *Handbook of modern management in Philippine local government*. University of the Philippines.
- Santiago, J. M., & Santos, A. R. (2021). Knowledge, attitude and practices of the university students about COVID-19 during the Luzon lockdown in the Philippines. *International Journal of Public Health Science*, 10(3), 670–678. <https://doi.org/10.11591/ijphs.v10i3.20844>
- Santos, A. R. (2023a). Business transformation at the vegetable trading post: Foundational development strategy for the future. *Corporate & Business Strategy Review*, 4(3), 46–55. <https://doi.org/10.22495/cbsrv4i3art5>
- Santos, A. R. (2023b). Critical success factors toward a safe city as perceived by selected medium enterprises in the province of Nueva Ecija: A crafted business development policy model. *Asian Development Policy Review*, 11(1), 53–66. <https://doi.org/10.55493/5008.v11i1.4750>
- Sartor, M., Orzes, G., Touboul, A., Culot, G., & Nassimbeni, G. (2019). ISO 14001 standard: Literature review and theory-based research agenda. *Quality Management Journal*, 26(1), 32–64. <https://doi.org/10.1080/10686967.2018.1542288>
- Sharma, B. (2024). Effect of service quality, customer satisfaction, customer trust, and security on customer loyalty with respect to virtual organisation. *International Journal of Public Sector Performance Management*, 13(3), 423–435. <https://doi.org/10.1504/ijpspm.2024.138056>
- Sidhu, A., Singh, A., Qazi, S., & Bhalla, P. (2023). Social media, social capital, and knowledge sharing: Impact and implications for the higher education governance [Special issue]. *Corporate & Business Strategy Review*, 4(4), 227–234. <https://doi.org/10.22495/cbsrv4i4siart3>
- Siltori, P. F. S., Rampasso, I. S., Martins, V. W. B., Anholon, R., Silva, D., Pinto, J. S., & Filho, W. F. (2021). Analysis of the motivations for ISO 9001:2015 adoption in the Brazilian business context. *Quality Management Journal*, 28(2), 76–85. <https://doi.org/10.1080/10686967.2021.1886025>
- Silva, C., Magano, J., Moskalenko, A., Nogueira, T., Dinis, M. A. P., & Pedrosa e Sousa, H. F. (2020). Sustainable management systems standards (SMSS): Structures, roles, and practices in corporate sustainability. *Sustainability*, 12(15), Article 5892. <https://doi.org/10.3390/su12155892>
- Siva, V., Gremyr, I., Bergquist, B., Garvare, R., Zobel, T., & Isaksson, R. (2016). The support of quality management to sustainable development: A literature review. *Journal of Cleaner Production*, 138(2), 148–157. <https://doi.org/10.1016/j.jclepro.2016.01.020>
- Talavera, M. G. V. (2005). TQM adoption and firm performance in the Philippines. *Philippine Management Review*, 12, 23–44. <https://pmr.upd.edu.ph/index.php/pmr/article/view/288>
- Vajjhala, N. R., & Thandekkattu, S. G. (2017). Potential and barriers to adoption of B2B e-commerce in SMEs in transition economies: Case of Albania. *Management*, 12(2), 155–169. <https://doi.org/10.26493/1854-4231.12.155-169>
- Vlašić, G., Keleminić, K., & Šubić, R. (2022). Understanding drivers of consumer loyalty in the banking industry: A comparative study of generation z individuals exhibiting high vs. low financial literacy. *Management*, 27(1), 213–235. <https://doi.org/10.30924/mjcmi.27.1.12>
- Wysocka, K., Jungnickel, C., & Szelągowska-Rudzka, K. (2022). Internationalization and quality assurance in higher education. *Management*, 26(1), 204–230. <https://doi.org/10.2478/manment-2019-0091>
- Yeung, S. M.-Y., Ko, C., & Leung, H. (2018). Visually re-design service processes for quality sustainable development. *Corporate Governance and Sustainability Review*, 2(2), 30–37. <https://doi.org/10.22495/cgsrv2i2p3>
- Zamora, E. A. (1993). Quality management in practice. *The Philippine Management Review*, 4, 20–32. <https://pmr.upd.edu.ph/index.php/pmr/article/view/26>