

# University of Rizal System’s Quality Management System Toward Sustainability Framework

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**DOI:<https://doi.org/10.54476/apjaet/37810>**

## Abstract

A Quality Management System (QMS) plays an essential role in driving the sustainable development of any institution. Its meticulous implementation is vital for effectively planning, executing, evaluating, and adapting the processes and procedures within a university. This study focuses on evaluating the QMS implementation at the University of Rizal System, aligned with the ISO 9001:2015 standard, and subsequently proposes a sustainable framework based on insights gathered from key university stakeholders and the evaluation conducted by the certifying body. Employing a mixed-method research approach, combining quantitative data gathered through survey questionnaires and qualitative insights derived from document analysis, this study reveals that the University of Rizal System has established a functional, efficient, and effective QMS. This system ensures the delivery of products and services that meet stakeholders' needs and interests, ultimately leading to their satisfaction. The University's QMS has demonstrated compliance with the ISO 9001:2015 standard, effectively maintaining and implementing the organization's policy and objectives. However, there is room for improvement in specific areas such as process operation control, monitoring and addressing nonconformities, and providing necessary support for QMS implementation. Consequently, this study strongly recommends the development and adoption of a sustainability framework to further enhance the university's QMS implementation, thereby ensuring its continued effectiveness, efficiency, and compliance with established standards.

*Keywords: Quality Management System, Sustainability Framework, Sequential Explanatory Approach, University of Rizal System – Philippines*

## Introduction

Higher Education Institutions (HEIs), particularly State Universities and Colleges (SUCs), are required by their respective charters to deliver expected products and services with quality, effectiveness, and efficiency. These deliverables are commodities and services for which the university is accountable, as agreed with appropriate government authorities such as the Department of Budget and Management (DBM) and the National Economic Development Authority (NEDA). The outputs that contribute to the achievement of the organization’s mission/vision and are part of the institution's core functions are designated as performance targets, and the achievement of those, affects stakeholders’ satisfaction, SUC leveling, performance-based bonuses, budget allocations, and appropriations.

The systematic examination of educational provisions to maintain and improve their quality, equity, and efficiency is known as Quality Assurance (QA). It includes school self-evaluation, external evaluation, teacher and school leader evaluations, and student assessments. Universities use the International Organization for Standardization (ISO), particularly the 9001 standards, as an indicator in implementing their quality management system (QMS) processes and procedures. Putting a QMS into place certainly improves the functioning of the institution since it provides information on where people are, what they are doing, how they are doing it, how what they do is being checked, and how things can be anticipated (Molinéro-Demilly, et. al., 2018). Effective

implementation of QMS has evolved into SUCs' key instrument for meeting their deliverables and ensuring quality improvement across the board. Diaz and Martinez-Mediano (2018) revealed that ISO standards of QMS can be adopted in education institutions successfully and they are suitable for improving schools and educational systems overall.

Since its inception as a university in 2001, the University of Rizal System (URS), Rizal province's lone state university, has engaged in quality assurance. URS is an ISO-certified institution, with most of its programs accredited by the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP) and the Commission on Higher Education (CHED) awarding it a Certificate of Program Compliance (COPC). URS operated efficiently and effectively in the areas of instruction, research, extension, production, and administration until the COVID-19 pandemic in 2019. The pandemic had a significant impact on the University of Rizal System, as it had on other universities in the Philippines. The delivery of the expected outputs evolved from physical to virtual, and subsequently to hyflex or mixed. These unexpected changes in the university's operation cause startling irregularities among its stakeholders; that is, despite maintaining quality management system practices, its effectiveness, efficiency, and sustainability are questioned. Mokhtar, et. al. (2013) pointed out that maintaining a quality management system remains critical for an organization that has obtained certification. It has been observed that maintaining a quality management system is a far more daunting task than obtaining one. This paper aims to determine and analyze the status of the quality management system framework of the university based on the agreement of its stakeholders and the findings of the certifying body, and ultimately provide significant improvements in the framework to ensure sustainability in the implementation of the QMS.

## **Objectives of the Study**

This study aimed to provide a sustainability framework for the quality management system of the University of Rizal System. In accordance, it sought to fulfill the following specific objectives:

1. Assess the stakeholders' agreement on the quality management system of the institution in terms of
  - 1.1 Context of the Organization,
  - 1.2 Leadership,
  - 1.3 Planning,
  - 1.4 Support,
  - 1.5 Operation,
  - 1.6 Performance Evaluation, and
  - 1.7 Improvement.
2. Determine the status of the quality management system of the university based on the results of certification/surveillance audits in terms of the above-cited indicators.
3. Design a sustainability framework for the quality management system of the university.

## **Methodology**

This research used Mixed Methods utilizing a Sequential Explanatory Design. Mixed methods of research is an approach that combines both qualitative and quantitative research methods to gain a more complete and accurate understanding of a research question or problem. It allows researchers to examine multiple aspects of a phenomenon, providing a more nuanced understanding of the issue at hand.

Additionally, it allows researchers to collect objective and subjective data, enabling them to explore a phenomenon's measurable and experiential aspects.

This study's quantitative and qualitative data were gathered following the sequential explanatory design. This involved collecting and analyzing data in two distinct phases: a quantitative phase followed by a qualitative phase. The first phase of the design involved collecting quantitative data through a survey using Google Forms. This phase generated initial findings explored/validated in the qualitative phase.

In the second phase of the design, qualitative data were collected through document analysis. The goal was to explore further the initial findings generated from the quantitative data analysis and to provide more in-depth explanations and understanding.

Finally, the quantitative and qualitative data findings were integrated to provide a comprehensive understanding of the research question. The qualitative data were used to explain and provide context for the quantitative data and to generate new questions that can be further explored in future research.

This study involved the key officials, administrators, internal quality auditors, process owners, faculty, and staff of the University of Rizal System. Purposive Sampling was employed to select the eighty-nine (89) samples/respondents of the study based on criteria such as experience, expertise, and exposure to QMS.

This study utilized Survey Questionnaire as its primary instrument. These are benchmark statements adopted from ISO 9001:2015 Quality Management System standard. A Five-Point Scale was used to measure the extent of the agreement of the selected stakeholders in each question.

To ensure accuracy in quantitative data analysis, this research utilized descriptive and inferential statistics using SPSS version 26. Descriptive statistics included mean and standard deviation. On the other hand, the inferential statistics used was Cronbach's Alpha.

## Results and Discussion

### 1. Stakeholders' Agreement on the Quality Management System of the University

Table 1 presents the stakeholders' agreement on the quality management system of the University of Rizal System.

**Table 1**  
*Stakeholders' Agreement on the Quality Management System of the University*

Indicators	Mean	Standard Deviation	Verbal Interpretation
Context of the Organization	4.74	0.49	Very Much Agree
Leadership	4.75	0.48	Very Much Agree
Planning	4.74	0.48	Very Much Agree
Support	4.61	0.58	Very Much Agree
Operation	4.66	0.56	Very Much Agree
Performance Evaluation	4.76	0.47	Very Much Agree
Improvement	4.65	0.55	Very Much Agree
<b>Grand Mean</b>	<b>4.70</b>	<b>0.52</b>	<b>Very Much Agree</b>

As reflected in Table 1, URS stakeholders very much agreed that there is a strong manifestation of the above indicators in the implementation of the University's quality management system. The grand mean of 4.70 and the standard deviation of 0.52 indicate that the stakeholders were homogenous in assessing that the quality management system is effective, efficient, and compliant with ISO 9001:2015 standard.

Nevertheless, it could also be noted that the indicators support, improvement, and operation got the lower means. The support indicator pertains to determining and providing the resources needed to establish, implement, maintain, and continually improve the quality management system. This includes resources such as people, infrastructure, and environment to operate processes, competence, awareness, communication, and documented information. This simply means that for the University to sustain its quality management system, the stakeholders believed that needed support should be improved.

Improvement indicators is about determining and selecting opportunities for improvement and implementing any necessary actions to meet customer requirements and enhance customer satisfaction. It includes (a) improving products and services to meet requirements as well as to address future needs and expectations, (b) correcting, preventing, or reducing undesired effects, and (c) improving the performance and effectiveness of the quality management system. The stakeholders believed that the university shall continually improve the suitability, adequacy, and effectiveness of the quality management system, that is, the institution shall consider the results of analysis and evaluation, and the outputs from management review, to determine if some needs or opportunities shall be addressed as part of continual improvement.

Likewise, stakeholders agreed that in sustaining QMS, the university must ensure that the operation of processes shall be given preferential attention. Specifically, the university should plan, implement, and control the processes needed to meet the requirements for the provision of products and services, and to implement the actions determined during planning. Hence, the university should ensure that outputs that do not conform to their requirements are identified and controlled to prevent unintended use or delivery.

## 2. Status of the Quality Management System

Table 2 shows the status of the Quality Management System of the University of Rizal System based on the results of the certification and surveillance audits.

**Table 2**  
*Summary of Findings in the Certification and Surveillance Audits*

Type of Findings	Frequency	Percentage
Positive	23	26.14
Opportunities for Improvement	62	70.45
Non-conformity (Minor)	3	3.41
<b>Total</b>	<b>88</b>	<b>100</b>

As reflected in Table 2, the University incurred a total of eighty-eight (88) findings during certification and surveillance audits, of which, most were on opportunities for improvement. These recommendations came from processes and procedures involving the top management, performance and effectiveness of QMS, management reviews, curriculum and instruction, student development services, customer satisfaction, records and documentation, handling of risks, supply and property management, procurement process, academic laboratory operations, human resource management, physical and electronic facilities development, safety and security, accounting, budgeting, and cashiering, admission and enrolment processes, international development and special programs, library services, medical and dental services, and research development.

Meanwhile, the certifying body identified a considerable number of positive points in the implementation of the University’s QMS. Noteworthy were the excellent ratings in the customer satisfaction surveys, institutional recognitions and awards, digitization of library operations, construction of more buildings, excellent conduct of extension projects, well-maintained working environment, and high board passing percentage.

Considered threats to the implementation of the quality management system were the three (3) verified minor non-conformities. These were brought about by a lack of control in the implementation of a course syllabus, improper handling of incurred non-conformities from internal audits, and incongruences in assessing the academic performance of students.

Having not incurred a single major non-conformity and despite numerous recommended opportunities for improvement, the data implies that the quality management system of the university has established and maintains an effective system to ensure compliance with its policy and objectives, that is, the organization’s management system complies with, adequately maintains, and implements the requirements of the standard.

### 3. Conformance with the Specific Chapters and Provisions of the ISO 9001:2015 Standard

Table 3 indicates the conformance of the University's Quality Management System on the specific chapters and provisions of the ISO 9001:2015 standard.

**Table 3**  
*Conformance with the Specific Chapters and Provisions Of the ISO 9001:2015 Standard*

Chapters/Provisions	Conformance Rating	Interpretation
Context of the Organization (4.1, 4.2, 4.3, 4.4)	1	Conforming
Leadership (5.1, 5.2, 5.3)	1	Conforming
Planning (6.1, 6.2, 6.3)	1	Conforming
Support (7.1, 7.2, 7.3, 7.4, 7.5)	1	Conforming
Operation (8.1, 8.5)	3	Nonconforming(minor)
(8.2, 8.3, 8.4, 8.6, 8.7)	1	Conforming
Performance Evaluation (9.1, 9.2, 9.3)	1	Conforming
Improvement (10.1, 10.3)	1	Conforming
(10.2)	3	Nonconforming(minor)
Conformance Ratio = 25/28	Conformance Rate = 89.28%	

The conformance of the quality management system of the university to the ISO 9001:2015 standard is summarized in Table 3. It can be noted that of the twenty-eight (28) specific provisions in the standard, URS QMS conformed with twenty-five (25) of them for a remarkable eighty-nine-point two eight percent (89.28%) rate. Conformance came from the organization's context, leadership, planning, support, performance evaluation, and some provisions in operation and improvement.

On the other hand, important three (3) provisions on operation and improvement resulted in a minor nonconformity. These provisions are eight-point one (8.1) operational planning and control, eight-point five (8.5) control of production and service provision, and ten-point two (10.2) nonconformity and

corrective action. When aggravated into major nonconformities, these minor nonconformities may lead to the deferment or cancellation of QMS certification.

The data above imply that while the quality management system of the University remains effective, efficient, and compliant with the ISO 9001:2015 standard, improvement in its framework is inevitable to sustain it. Improvement should particularly come from the control in the operation of processes, monitoring and attending to nonconformities and corrective actions, and perhaps on needed support.

In terms of the framework for sustainability in the implementation of the quality management system of the University of Rizal System, important elements of sustainability are considered such as the quality management system indicators and specific target provisions of ISO 9001:2015 standard, evidence requirements, strategies, and action plans, concerned individuals and entities, and the period of implementation. The framework specifically identifies programs, projects, and activities that will ensure sustainability in the conformance of the QMS to the international standard. When applied, this framework is believed to be of great help in sustaining effective, accurate, and efficient implementation of QMS processes and procedures for better delivery of products and services to the stakeholders' satisfaction.

## **Conclusions**

The University of Rizal System has manifested a functional, efficient, and effective quality management system necessary to deliver products and services to ensure stakeholders' satisfaction with their needs and interests. The quality management system of the university has established and maintained an effective system to ensure compliance with its policy and objectives, that is, the organization's management system complies with, adequately maintains, and implements the requirements of the ISO 9001:2015 standard. However, while the quality management system of the University remains effective, efficient, and compliant with the standard, improvement in its framework is inevitable to sustain it, particularly in the control of the operation of processes, monitoring and attending to nonconformities and corrective actions, and on needed support to implement QMS. (Girmanová, Šolc, Blaško, and Petrik, 2022) pointed out that a properly implemented ISO 9001 quality management system will provide very effective management tools focused on the expectations and needs of the stakeholders. (Petkovska and Gjorgjeska, 2013) confirmed that introducing and implementing a quality management system significantly improves the aims of the management team in any organization. However, the value of QMS is dependent on successful implementation, which is quite challenging (Mustafa, 2020). Implementing QMS requires proper knowledge and expertise; otherwise, it will lead to failure. Hence, (Ibarrientos, 2022) concluded that although the stakeholders revealed a high level of satisfaction with QMS implementation, a proposed suggestion will make the institution's QMS more vibrant and value-adding.

## **Recommendations**

This study provides a framework for sustainability in the implementation of the quality management system of the University of Rizal System. Important elements of sustainability are considered in the development of this framework such as the quality management system indicators and specific target provisions of ISO 9001:2015 standard, evidence requirements, strategies, and action plans, concerned individuals and entities, and the period of implementation. The framework specifically identifies programs, projects, and activities that will ensure sustainability in the conformance of the QMS to the international standard. When applied, this framework is of great help in sustaining effective,

accurate, and efficient implementation of QMS processes and procedures for better delivery of products and services to the stakeholders' satisfaction. The University of Rizal System shall continue the implementation of its quality management systems as it remains generally effective, efficient, and compliant with the provisions and requirements of ISO standards. However, much more frequent periodic assessments and evaluations may be conducted to ensure the functionality and effectiveness of the QMS.

The University of Rizal System may consider adapting the recommendations for improvement provided by this research in its quality management system framework to ensure the sustainability of its QMS implementation.

Utilizing the proposed URS QMS sustainability framework derived from this study is highly recommended to guide the university in implementing its quality management system processes and procedures.

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