

Quality Assurance in Instruction and its Role in Promoting Sustainable Development in Selected State Colleges and Universities in Northern Luzon

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Abstract—This study explores the impact of quality assurance (QA) practices in instruction on sustaining instructional quality and promoting institutional development in state colleges and universities (SUCs) in Northern Luzon, Philippines. Despite significant efforts by the Commission on Higher Education (CHED) to implement standardized QA frameworks, institutions continue to face challenges, including limited resources, insufficient faculty training, and resistance to change, hindering the full implementation of these practices. The study uses a descriptive-correlational research design and surveys 150 faculty members and academic administrators across three SUCs. Key findings indicate that QA practices, including curriculum design, faculty development, and instructional assessment, are largely implemented, with 93.33% of respondents affirming alignment with CHED standards. However, challenges such as insufficient funding (78.67%), lack of faculty training (74.67%), and resistance to change (70%) remain significant barriers. Statistical analysis reveals that QA practices have a strong positive correlation with both instructional quality ($r = 0.68$, $p < 0.001$) and institutional development ($r = 0.61$, $p < 0.001$), indicating that as QA practices improve, so do teaching effectiveness and overall institutional performance. The regression model further confirms that QA practices predict 46% of the variance in instructional quality and 37% in institutional development ($p < 0.001$). These results underscore the importance of strengthening QA systems to improve teaching outcomes and institutional growth. The study proposes practical strategies, including enhanced faculty development programs, increased stakeholder involvement in curriculum development, and greater technological integration in teaching, all of which are crucial for achieving sustainable development in higher education.

Index Terms—Quality Assurance, Instructional Quality, Institutional Development, Higher Education, Faculty Development, Educational Sustainability.

1. Introduction

The foundation of higher education requires quality assurance (QA), which uses systematic methods to maintain and improve educational standards, student performance, and institutional assessment. The University of Northern Philippines, Ifugao State University, and Ilocos Sur Polytechnic State College maintain Quality Assurance practices that

connect their educational methods with the national requirements established by the Commission on Higher Education. This document emphasizes outcomes-based QA, integrating four dimensions: alignment of institutional vision and mission, compliance with government standards, excellence beyond minimum requirements, and stakeholder satisfaction. The Quality Assurance system in Northern Luzon develops regional resilience through its educational programs, which teach sustainable agriculture and disaster risk reduction skills to students living in areas with natural disasters and remote geographic locations, as well as in agricultural-based economies.

The United Nations established 17 Sustainable Development Goals, which provide the foundation for sustainable development work. Among these, SDG 4 (Quality Education) is closely linked to SDG 13 (Climate Action) and SDG 9 (Industry, Innovation, and Infrastructure). Universities and colleges need to improve their quality assurance (QA) processes to embed sustainable development principles in their teaching and research, thereby turning their institutions into partners in building a sustainable green economy. International QA agencies, including Ukraine's NAQA and Europe's ENQA, use the SDGs as part of their evaluation systems to determine how institutions connect their strategic plans, accreditation requirements, and stakeholder relationships with environmental protection objectives (Stukalo & Lytvyn, 2021). The Commission on Higher Education (CHED) in the Philippines uses the ASEAN Quality Assurance Framework (AQAF) to support regional integration, which requires SUCs to conduct internal QA processes and participate in external evaluations by organisations such as PACUCOA. Northern Luzon SUCs exemplify this approach: MMSU's CHED-funded research enhances instructional quality aligned with SDGs, and PSU's Quality Assurance Office monitors institutional outcomes. This dual focus ensures that quality improvement efforts directly support sustainable development objectives.

The research develops educational theory through its analysis of QA frameworks, which establish connections to SD

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frameworks. The study builds on the Stukalo and Lytvyn (2021) model, which defines QA as a tool for assessing whether organizations achieve their intended objectives for SDG implementation. The Philippine educational system requires two main components, which the study introduces through its critical pedagogy framework and its development of learning analytics tools. The research project refines AQAF, which CHED uses to assess SDG integration by creating autonomous status typologies that recognize exemplary SUCs and establishing educational frameworks that support SD learning in areas with limited resources. This method creates opportunities for academic freedom discussions within QA while it establishes SUCs as centres for transformative education that connect to the socio-ecological realities of Northern Luzon.

The results provide SUC administrators with practical solutions to improve their internal QA systems, including SDG-based rubrics for assessing instructional methods. The tools improve job prospects for people working in green industries, including agricultural IoT and disaster management edge computing. Faculty members receive methods for teaching sustainable computing in their Java-based courses. The data enables policymakers to determine which CHED funding priorities will help them achieve development goals based on established quality standards. The students at the institution experience better educational spaces that enhance student retention and align with the Philippine Qualifications Framework (PQF) standards. The research promotes regional partnerships that boost SDG progress through community-led climate adaptation initiatives. The initiatives assist CHED in achieving its goals, including granting operational freedom to successful SUCs and implementing national quality assurance systems that contribute to the country's sustainable development.

Ruiz and Junio-Sabio (2012) argue that Philippine higher education needs to view quality assurance as a process that evolves across the entire institution rather than as a requirement to be fulfilled. The organization's main argument is that QA needs to become part of management and planning processes because standardized assessment methods lead the organization to miss essential aspects of instructional and institutional quality. The research paper presents a policy and systems analysis of the existing Philippine quality assurance system, including CHED regulations, IQuAME, accreditation, and government quality management standards. The research results demonstrate that the Philippines supports multiple quality assurance systems. Yet, these systems create difficulties because they overlap and do not function properly within public and private higher education institutions. The research found that accreditation and institutional monitoring serve as tools for enhancement, yet static standards hinder actual educational progress because they do not adapt to evolving educational requirements. The research study has a limitation because it primarily focuses on theoretical and policy-based content, without substantial empirical data from educational institutions or classroom environments. The research gap calls for studies that demonstrate how quality assurance systems affect

instructional performance and institutional growth in college environments.

The researchers conducted their study by investigating the supervisory practices deans used to ensure quality teaching in teacher education institutions throughout the Central Luzon Region of the Philippines. The study by Riza B. Lintag, Julius Ceazar G. Tolentino, Jenelyn T. Peña, Chona M. Navarro, and Analaine G. Laxamana (2025) demonstrates that deans use their supervisory responsibilities to maintain teaching standards at teacher education institutions. The primary assertion of the study shows that teaching effectiveness depends on both established QA systems and the methods that academic leaders use to manage programs, develop their teaching staff, implement technology, distribute their assets, and make strategic changes. The researchers implemented a qualitative case study research method, including comprehensive interviews with deans from four TEIs in Central Luzon, and conducted thematic analysis with external validation.

The research study identified six primary areas of supervisory practice: instructional supervision and program management, faculty development, technology-enhanced learning and assessment, QA systems, resource allocation, and strategic adaptation. The findings provide important insights because they demonstrate how leadership practices transform quality assurance requirements into daily instructional management procedures. The research findings cannot be applied to all higher education institutions because the study focuses on four specific institutions and limits itself to those facilities. The research gap indicates insufficient evidence on how dean-level supervisory practices affect teaching quality and institutional resilience in Philippine higher education institutions.

The paper entitled "Best Practices of High-Performing Higher Education Institutions in the Philippines Towards the Development of Harmonized Quality-Assured Instructional Leadership Framework" presents its main argument, which states that high-performing higher education institutions require an evidence-based instructional leadership framework that needs to be standardized and validated through quality assurance procedures to maintain their educational excellence. The system unifies both QA and instructional leadership as essential elements that work together to achieve ongoing advancement, flexible growth, and organizational success. The study employed a qualitative comparative multi-case design, which included six high-performing institutions from Luzon and 88 study participants, and collected data through both interviews and document analysis, which experts later validated. The study identified a six-phase, quality-assured instructional leadership framework comprising 20 components that emerged from shared best practices across state universities and colleges, private higher education institutions, and local universities and colleges. The research paper identifies typical patterns of institutional strength across governance, faculty development, curriculum responsiveness, student support services, stakeholder involvement, and infrastructure operations. The study's limitation is that it examines only specific high-performing institutions in Luzon, which results in

the framework failing to accurately reflect the conditions of smaller resource institutions and facilities outside this geographic area. The research identified its main gap: previous studies lacked an established framework connecting QA practices with instructional leadership across various higher education institution environments.

The research study by Sanga Nyoni and Sanga (2025) provides insight into the strategies school quality assurance officers use to assess educational quality in public secondary schools. The research by Aliko Obadia Sanga, Kristofa Zulu Nyoni, and Faraja Sanga establishes that school quality assurance officers drive educational improvement by connecting classroom implementation with institutional policy standards. The main point of the argument is that QA systems reach their full potential when officers perform their duties by conducting inspections. At the same time, they also provide organizational development through classroom observation activities, feedback sessions, mentoring programs, and support for curriculum development. The researchers conducted their qualitative case study research by using interviews, focus group discussions, and document review to gather information about public secondary schools.

The essential findings demonstrate that regular classroom observations, teacher feedback, pedagogy seminars, peer learning activities, and curriculum guidance contribute to improved teaching quality and reflective practice. The study identified major limitations, including inadequate staffing, deficient monitoring systems, restricted access to professional development materials, and staff members who refused to accept feedback. The study restricts its findings to a single district, which creates challenges for researchers seeking to apply its results in other locations. The research gap exists because educational institutions lack sufficient data about the implementation of QA strategies and the impact of support-oriented supervision on teaching outcomes throughout the academic year.

The authors, Oke Abiodun Adewole and Adesope Akinola Olusegun, present their research findings in the paper "Impacts of Quality Assurance System on Classroom Teachers' Effectiveness in Ibarapa East Local Government Secondary Schools," demonstrating that quality assurance systems have a substantial impact on educators' teaching effectiveness, which subsequently affects student academic results. The research demonstrates that educational quality depends on teaching quality, which requires schools to implement teacher monitoring and supervision along with organized quality assurance systems. The study collected data from 200 teachers using a descriptive survey design and analyzed them using percentages and t-test statistics. The study identified two main outcomes: first, the teachers who participated in the study displayed low teaching competency; and second, the research found strong evidence that quality assurance systems enhance teacher performance by improving control over educational quality. The study has three main limitations: it relies on a self-developed questionnaire, uses a limited, specific community sample, and employs an elementary correlational method, which prevents more complex causal analysis. The research gap

it leaves requires studies to identify the reasons why QA systems fail to achieve high teacher effectiveness and to determine which institutional or professional factors enhance that connection.

Rashid Ceazar Galanto Ormilla and Eileen Baptista Dupra demonstrate that higher education institutions need to establish essential quality assurance mechanisms alongside institutional sustainability practices to operate effectively and comply with CHED requirements. The main point of the study is that institutional quality requires organizations to implement necessary systems, including evidence collection, awareness training, and the development of leadership capabilities across all vital operational areas, including governance, teaching and learning, research, student support, and community relations. The research employed a descriptive-correlational design, using a modified CHED self-evaluation document to assess seven HEIs in Region II. The research findings demonstrated that the HEIs showed only moderate readiness for the main QA and sustainability assessment criteria. The research identified essential obstacles, including the lack of innovation and technology, the absence of sustainability practices, and the need for leadership skills and financial capabilities. The research relies mainly on institutional self-evaluation data, which is a study limitation because self-evaluation results may reflect institutional perceptions more than actual operations. The research gap requires further investigation into specific KRAs, along with enhanced institutional self-evaluation processes that extend beyond readiness assessments to encompass complete implementation and actual results evaluation.

Ancho I.V. (2019) argues that future educational leaders require perspectives to both understand and enhance the quality assurance system of Philippine education. The study demonstrates that aspiring school leaders understand both quality and QA. The study required 18 graduate students in educational leadership to answer open-ended questions about quality, quality assurance, existing quality assurance mechanisms, and potential policy changes. The key findings show that respondents associate quality with standards, excellence, value, and efficiency, and they view QA both as a process and as a measure. The study identified external quality assurance mechanisms, including accreditation and certification, as well as internal mechanisms comprising strategic planning, administrative controls, and incentives. The research used a small participant group with specific characteristics, limiting the generalizability of the results. The research gap centers on the need for studies that examine how educational leaders' conceptual understanding of QA translates into actual policy and practice, especially in institutional settings where leadership decisions shape instructional quality.

A. *Synthesis*

The research papers exhibit consistent results demonstrating that quality assurance reaches its maximum effectiveness when it becomes a core part of educational leadership and supervisory functions, institutional operations, and continual enhancement processes. The literature defines QA as an active process that operates as a dynamic assessment system at three levels:

national policy, dean's supervision, teacher monitoring, and institutional self-assessment. The studies identify six common operational pathways: curriculum review and monitoring, evaluation, stakeholder feedback, accreditation, faculty development, and evidence-based planning. The research findings demonstrate ongoing obstacles to research, including deficiencies in implementation capabilities, inconsistent leadership, insufficient resources, limited distribution of evidence, and excessive reliance on documented information and perception-based assessments. The literature shows a significant research gap, as researchers have conducted too few studies demonstrating how QA mechanisms directly tie to instructional enhancements and institutional sustainability in public higher education institutions. The reviewed works show that future research should examine QA as both a regulatory requirement and an institutional practice that shapes teaching quality, leadership effectiveness, and educational sustainability.

Quality assurance (QA) in instruction has become the primary focus of higher education institutions that operate State Colleges and Universities (SUCs) because these institutions need to produce skilled graduates who will help drive national and regional development. In the Philippine context, QA operates as a fundamental element that binds together accreditation systems, instructional leadership, and institutional performance. Higher education institutions must develop sustainable practices to meet social, economic, and technological requirements, as the growing connection between QA and sustainable development underscores.

B. Quality Assurance in Instruction in Higher Education

Quality assurance in education uses organized procedures to verify that teaching and learning activities satisfy predefined standards while simultaneously improving performance. Higher education institutions use quality assurance methods, which include accreditation processes, curriculum assessments, faculty performance reviews, and institutional evaluations. Research shows that quality assurance functions as a compliance mechanism but also serves as a system for ongoing institutional development embedded in operational activities. The Philippine education system uses AACCUP, PAASCU, and CHED as quality assurance organizations that establish standardized educational standards and uphold institutional responsibility. According to Aquino (2025), quality assurance serves as a strategic instrument that helps educational institutions achieve their mission objectives by improving learning outcomes. Previous studies also suggest that QA boosts institutional credibility, competitiveness, and performance. The process loses effectiveness because it stresses documentation too much rather than focusing on real improvements in teaching methods. QA functions as a flexible system that adapts to different contexts to support academic standards and institutional development while maintaining effective quality improvement methods for future needs.

C. Instructional Leadership and Supervisory Practices

The process of educational quality assurance requires effective instructional leadership. The deans, program heads,

and administrators must convert the existing quality assurance policies into operational teaching methods. The research conducted by Lintag et al. (2025) demonstrates that dean-supervisory methods directly influence the quality of instruction by developing faculty members and shaping curricular materials and assessment methods. These practices ensure that teaching meets institutional standards while adjusting to changing educational requirements. The study identified six key supervisory areas: instructional supervision and program management; faculty development and empowerment; technology-based supervision; assessment and QA systems; resource allocation; and strategic adaptation. The findings demonstrate that instructional leadership serves as a link between quality assurance systems and teaching standards, making it an essential component. The Developmental Supervision Theory and other leadership theories hold that effective supervision requires an approach that combines flexible, collaborative methods to support teacher development rather than relying on control methods. The educational system of Northern Luzon needs adaptable quality assurance systems, which this approach provides to improve educational results.

D. Quality Assurance Systems and Teaching Effectiveness

Quality assurance (QA) systems establish educational standards that assess teaching performance and provide feedback to improve teaching quality. The research findings show that QA methods, including classroom, faculty, curriculum, and stakeholder assessments, lead to improved teaching practices and student learning outcomes. Aquino (2025) demonstrates that instructional leadership that uses QA systems leads educational institutions to achieve better teaching outcomes through the implementation of data-based decision-making and stakeholder participation.

The research identifies three main limitations: QA systems focus on compliance requirements rather than improving processes; there is a gap between educational policies and classroom practices; and public schools face resource constraints. The successful implementation of QA systems requires educational institutions to establish effective practices that can be applied to daily operations and tailored to their specific context.

E. Quality Assurance and Sustainable Development in Higher Education

Higher education contributes to sustainable development through three main processes. These processes create skilled graduates who drive innovation while addressing important social challenges. Quality assurance (QA) in instruction ensures that educational programs remain relevant, provide access to all learners, and enable flexible learning options. Aquino (2025) shows that QA frameworks help students achieve all learning goals, increase their chances of getting jobs, and make universities more flexible and better support their ongoing development. Lintag et al. (2025) demonstrate that QA-based supervisory systems help universities build their capacity to withstand technological and international challenges that disrupt their operations. QA fosters economic development by

building a skilled workforce, promoting social development through inclusive education, and supporting institutional sustainability through ongoing enhancement. QA functions as a vital academic element because it serves as a strategic tool that helps educational institutions achieve their sustainability goals by connecting their educational objectives to the needs of their country and the world.

F. Literature Gap

The existing research about quality assurance (QA) and instructional leadership shows multiple gaps that need to be addressed. Research mainly examines high-performing institutions and specific geographic areas, while there is a lack of research on State Universities and Colleges (SUCs) in Northern Luzon. The connection between QA and sustainability remains weak because researchers have yet to establish direct links between these two elements and sustainable development results. Higher education institutions (HEIs) need unified frameworks because current systems lack comprehensive solutions for integrating QA, instructional leadership, and sustainability practices. The study lacks sufficient analysis to determine how resource constraints and institutional differences impact QA effectiveness.

The existing research gaps create a need for the present study, which investigates the impact of QA in instruction on sustainable development at SUCs in Northern Luzon. The study demonstrates that quality assurance in instruction operates as a complex, evolving system that enhances both teaching effectiveness and institutional performance. The implementation of QA policies depends on instructional leadership, while QA systems establish the framework for assessment and ongoing progress. The current research studies face two main problems: they lack a comprehensive scope and fail to connect with sustainability frameworks.

The research needs to demonstrate how QA functions as a quality control system and, at the same time, drives sustainable development in unexplored areas of research, particularly at SUCs in Northern Luzon. The literature supports the idea that effective QA systems, when implemented under strong instructional leadership, lead to improved teaching quality and ultimately contribute to sustainable development outcomes.

The research establishes its foundation on essential theories and concepts that demonstrate how quality assurance (QA) practices in classroom instruction impact teaching effectiveness within the Philippine

G. Framework of the Study

tertiary education system. The study assumes that stronger implementation of QA practices leads to higher teaching effectiveness. The framework establishes its foundation through Constructive Alignment Theory and Continuous Improvement Theory, which uses the PDCA/PDSA Cycle together with the CIPP Evaluation Model and the Outcomes-Based and Typology-Based Quality Assurance framework of Philippine higher education under CHED Memorandum Order No. 46, s. 2012. The present inquiry uses these theories and concepts because they show how instructional supervision and

compliance with teaching standards, together with assessment and feedback methods and professional development activities, affect instructional delivery, classroom management, student engagement, and learning assessment processes. Biggs, J. (1996).

The research study aims to test multiple theories simultaneously rather than studying one theory in isolation. The researchers use existing theories to build a framework that will validate classroom quality and enable ongoing improvements of teaching in Philippine higher education. The research study uses theories to establish its focus on developing a framework, although the proposed relationships can be tested through research methods.

1) Constructive Alignment Theory

Constructive Alignment Theory, developed by John Biggs, asserts that effective teaching occurs when teachers establish learning goals and design learning activities and assessment methods that match those goals. The theory emphasizes that teaching should not merely involve the delivery of content; rather, it should be deliberately designed so that classroom activities and assessments help students achieve the desired learning outcomes. (Biggs J, 1996).

The current study relies on this theory because quality assurance methods assess whether teaching standards, classroom practices, and assessment methods align with curricular objectives. The present framework requires assessing compliance with assessment standards and teaching standards to demonstrate alignment with established requirements. When instruction outcomes and assessment methods work together, teaching becomes more focused and effective and can be measured. QA practices grounded in the Constructive Alignment Theory will enhance educational delivery and the assessment of student learning outcomes.

2) Continuous Improvement Theory through PDCA/PDSA

The PDCA/PDSA cycle, which Deming developed for quality improvement, shows that improvements occur through multiple cycles that begin with planning, continue with performing work, and culminate in implementing necessary changes. (Demings W. Edwards, 2000)

This theory strengthens the present study because QA in classroom instruction is not simply about checking compliance. The organization is dedicated to developing an educational environment that supports teaching methods through planning, ongoing monitoring, and assessment using reliable, evidence-based evaluations to make necessary updates. The framework includes instructional supervision, assessment and feedback, and professional development activities that create a continuous improvement cycle. The process of supervision and feedback enables organizations to advance their operations, while professional development initiatives help teachers use assessment data to improve their teaching. Through this lens, teaching effectiveness is determined by ongoing improvements that use documented evidence to enhance their work.

3) CIPP Evaluation Model

The CIPP model of Stufflebeam evaluates educational systems through four elements: Context, Input, Process, and Product. The model establishes a systematic evaluation

framework that helps decision makers understand needs and conditions, available resources, and the quality of implementation and the outcomes that follow. (Biggs J, 1996).

The CIPP model provides an evaluative structure for understanding classroom QA practices. Context refers to the institutional and instructional conditions present in Philippine tertiary schools. Input includes teacher preparation, standards, and professional development. The process describes how instruction, supervision, and classroom assessment occur. The product assessment examines teaching effectiveness across three areas: instructional delivery, classroom management, and student engagement and assessment of learning. The CIPP model provides a logical framework for the study to examine how QA practices affect teaching performance through its system of organizing variables.

4) Philippine Outcomes-Based and Typology-Based Quality Assurance Framework

The Philippine higher education system requires compliance with CHED Memorandum Order No. 46, issued in 2012, to develop a system for verifying academic quality through an outcomes-based and typology-based quality assessment framework. The policy establishes quality assessment criteria for measuring educational results, institutional mission implementation, and student learning outcomes. (Commission on Higher Education. (2022).

The present study uses this policy framework because it connects classroom teaching with the national quality assurance framework that applies to educational institutions. Philippine tertiary institutions require their faculty members to deliver teaching that meets their outcomes requirements through the implementation of standards and quality assurance methods.

Classroom-level quality assurance practices operate as institutional and national quality standards because they represent how these standards should be implemented in educational settings. The framework includes teaching standards compliance, which CHED uses as its policy framework for implementation. The study establishes its theoretical foundation in Philippine higher education because this framework applies to the local educational context. (Commission on Higher Education. (2022) Synthesis of the Framework.

The study's logical framework gets established through the combined understanding of these theories and concepts. Constructive Alignment Theory explains how quality teaching requires coherence between educational outcomes, teaching methods, and assessment processes. The PDCA/PDSA cycle shows that organizations can improve instructional quality through their ongoing evaluation and action. The CIPP model shows that quality assurance practices can be assessed through a systematic process that begins with an organization's current state and culminates in a comprehensive evaluation of results. The CHED QA framework establishes both national and institutional frameworks, which create relevance for the study within the context of Philippine higher education institutions. (Biggs J, 1996).

The framework establishes that effective teaching occurs when instructors receive proper supervision and adhere to

established standards while using assessment systems and feedback mechanisms that support their ongoing professional development. Enhanced QA practices will result in better instructional quality, leading to more effective classroom management, greater student participation, and improved learning assessment.

This study is anchored on the relationship between quality assurance in instruction and sustainable development, mediated by instructional leadership and the QA system.

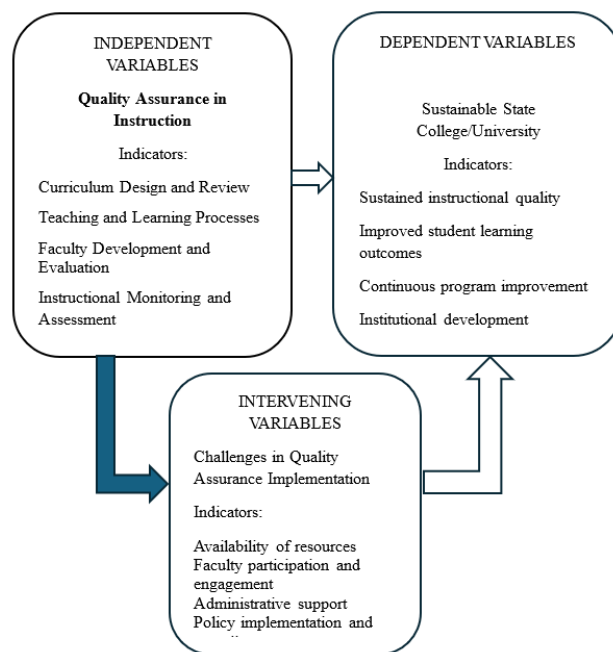


Fig. 1.

The framework assumes that quality assurance practices in instruction influence the sustainability of state colleges and universities. Effective curriculum management, teaching practices, faculty development, and instructional monitoring help maintain instructional quality and improve student outcomes.

However, the relationship between instructional quality assurance and institutional sustainability may be influenced by several challenges, including resource limitations, faculty workload, administrative support, and policy implementation.

H. Statement of the Problem

Quality assurance (QA) in classroom instruction is a critical component in ensuring that teaching practices meet established standards and lead to improved student learning outcomes. Despite the increasing emphasis on QA systems in education, many schools face challenges in consistently implementing instructional supervision, adhering to teaching standards, utilizing effective assessment and feedback mechanisms, and engaging in meaningful professional development. These gaps may limit the continuous improvement of teaching effectiveness.

This study is anchored on a conceptual framework that assumes that quality assurance practices in classroom instruction (independent variables) significantly influence

teaching effectiveness (dependent variable). Specifically, QA practices include instructional supervision, compliance with teaching standards, assessment and feedback mechanisms, and professional development, while teaching effectiveness is reflected in instructional delivery, classroom management, student engagement, and assessment of learning.

Using a descriptive-correlational research design, this study aims to determine the level of implementation of QA practices and examine their relationship with teaching effectiveness.

The study investigates the role of quality assurance in instruction in promoting sustainable state colleges and universities in Northern Luzon.

Specifically, this study seeks to answer the following questions:

1. What quality assurance mechanisms in instruction are currently implemented in the state college/university in terms of:
 - a. curriculum design and review;
 - b. teaching and learning processes;
 - c. faculty development and evaluation; and
 - d. instructional monitoring and assessment.
2. How do faculty members and academic administrators perceive the effectiveness of quality assurance practices in instruction in terms of:
 - a. curriculum design and review;
 - b. teaching and learning processes;
 - c. faculty development and evaluation; and
 - d. instructional monitoring and assessment.
3. What challenges are encountered in the implementation of quality assurance practices in instruction?
4. How do quality assurance practices contribute to sustaining instructional quality and institutional development in the state college/university?
5. What quality assurance enhancement strategies may be proposed to strengthen instructional sustainability in the institution?

I. Hypotheses of the Study

1. There is no significant difference in the perceptions of faculty members and academic administrators regarding the effectiveness of quality assurance practices in instruction in terms of curriculum design and review, teaching and learning processes, faculty development and evaluation, and instructional monitoring and assessment.
2. There is no significant relationship between quality assurance practices in instruction and instructional quality and institutional development.
3. Quality assurance practices in instruction do not significantly predict instructional quality and institutional development.

2. Materials and Methods

A. Research Design

This study employed a descriptive research design to

examine the role of quality assurance in instruction in promoting sustainable state colleges and universities.

The descriptive design is appropriate because it allows the researchers to describe and analyse the existing quality assurance practices in instruction and determine their contribution to institutional sustainability.

B. Respondents of the Study

The study involves faculty members and academic administrators, including deans, program chairs, and department heads, selected based on specific inclusion criteria, such as active involvement in instructional quality assurance. Exclusion criteria include non-participation or administrative roles outside academic oversight, ensuring participants directly influence educational standards and continuous improvement efforts.

C. Sampling Technique

The study used a multi-stage sampling technique to select the respondents from the three participating SUCs in Northern Luzon. Slovin's formula, $n = \frac{N}{1+Ne^2}$, was used to determine the total sample size. Given a total population of 240 and a 5% margin of error, the computed sample size was 150 respondents. This total sample was then distributed proportionately among the three SUCs using the formula. $n_h = \frac{N_h}{N} \text{ times } n$. Based on the population sizes of 90, 80, and 70, the computed sample sizes were 56, 50, and 44, respectively. Simple random sampling was then employed to identify the actual respondents within each SUC.

D. Research Instrument

The primary data-gathering instrument used in this study was a researcher-developed questionnaire designed to assess the role of quality assurance in instruction in promoting sustainable development in State Colleges and Universities (SUCs) in Northern Luzon. The instrument was structured based on the study's problem statements and aligned with the variables under investigation, including quality assurance mechanisms, perceived effectiveness, implementation challenges, instructional outcomes, and proposed enhancement strategies.

The questionnaire consisted of seven parts, each corresponding to a specific aspect of the study.

Part I collected respondents' demographic information, including their role (faculty member or academic administrator), sex, years of service, and highest educational attainment. These variables were used to describe the sample and to determine group differences in perceptions.

Part II focused on the quality assurance mechanisms in instruction and addressed Problem 1 of the study. This section covered four key dimensions: curriculum design and review, teaching and learning processes, faculty development and evaluation, and instructional monitoring and assessment. Respondents were asked to rate the extent to which these mechanisms were implemented using a four-point Likert scale ranging from 1 (Not Implemented) to 4 (Fully Implemented). This section provided data for frequency, percentage, and weighted-mean analyses.

Part III examined the perceived effectiveness of quality assurance practices in instruction, aligned with Problem 2. It included indicators related to curriculum quality, teaching strategies, faculty development, instructional monitoring, and student learning outcomes. Responses were measured on a 4-point scale from 1 (Not Effective) to 4 (Highly Effective). The data generated in this section were analyzed using weighted means and standard deviations. They were further subjected to an inferential analysis (independent-samples t-test) to determine differences in perceptions between faculty members and academic administrators.

Part IV identified the challenges encountered in implementing quality assurance practices in instruction and addressed Problem 3. This section included common institutional and instructional barriers, such as insufficient funding, inadequate training, resistance to implementation, and weak monitoring systems. Respondents rated each item on a 4-point scale from 1 (Low Challenge) to 4 (Very High Challenge). The results were analyzed using frequency, percentage, and weighted mean.

Part V measured the perceived outcomes of quality assurance practices on instructional quality and institutional development, corresponding to Problem 4. The items assessed improvements in teaching quality, student performance, institutional growth, and sustainability initiatives. Responses were obtained using a four-point agreement scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). The data from this section were used for correlation and regression analyses to determine the relationship and predictive influence of quality assurance practices.

Part VI presented the proposed quality assurance enhancement strategies to strengthen instructional sustainability and address Problem 5. Respondents evaluated the acceptability and feasibility of each proposed strategy on a 4-point scale from 1 (Not Acceptable) to 4 (Highly Acceptable). The weighted mean was used to determine the overall level of acceptability.

Finally, Part VII included open-ended questions that allowed respondents to provide qualitative insights regarding the challenges they encountered and the strategies they recommend for improving quality assurance in instruction. This section supplemented the quantitative findings and provided a deeper contextual understanding of the issues under study.

Overall, the questionnaire was designed to align with the study's objectives and statistical analyses, combining quantitative and qualitative data to provide a comprehensive analysis of quality assurance practices in instruction.

E. Validity of the Instrument

The research instrument measured the study variables after the researchers tested its content and face validity through their

examination of the questionnaire. The instrument's first draft emerged from the study's problem statements, the relevant literature, and quality assurance frameworks in educational instruction. The study developed its assessment items to measure eight core dimensions, which included: curriculum design and review, teaching and learning processes, faculty development and evaluation, instructional monitoring and assessment, perceived effectiveness, implementation challenges, instructional outcomes, and proposed enhancement strategies.

The experts in educational management, quality assurance, and research methodology assessed the instrument. The validators assessed the questionnaire for clarity, relevance, coherence, and item appropriateness. The team used their suggestions and recommendations to enhance the instrument by revising its wording, structure, and content. The researchers implemented three major changes, including two activities to improve research objectives and another to enhance the response scale through uniformity.

Researchers established face validity by testing the revised questionnaire with a group of respondents who matched the target population to confirm that they understood the test items as intended. The team made small changes to the text based on their feedback, which improved the document's clarity and comprehension.

F. Reliability of the Instrument

To determine the questionnaire's internal consistency, a pilot test was conducted with a group of respondents comparable to the study's actual participants but not included in the final sample. The responses were subjected to reliability analysis using Cronbach's alpha.

The overall reliability of the instrument yielded a Cronbach's alpha of 0.91, indicating excellent internal consistency. This suggests that the questionnaire items consistently measure the intended constructs.

The reliability coefficients for each section of the instrument are presented as follows:

According to established standards, researchers accept a Cronbach's alpha value of 0.70 as an acceptable threshold; values above 0.80 indicate strong reliability, and those above 0.90 indicate excellent reliability. The results of the study demonstrate that the instrument maintains its reliability, enabling researchers to use it for data collection. The validation and reliability testing results demonstrate that the questionnaire effectively measures quality assurance practices in State Colleges and Universities' instructional programs, thereby contributing to sustainable development. The research team determined that the instrument became suitable for their study.

Table 1

Section	Cronbach's Alpha	Interpretation
Quality Assurance Mechanisms in Instruction	0.90	Excellent
Perceived Effectiveness of QA Practices	0.88	Good
Challenges in QA Implementation	0.87	Good
Instructional Quality and Institutional Development	0.89	Good
Proposed QA Enhancement Strategies	0.91	Excellent
Overall Instrument	0.91	Excellent

G. Data Gathering Procedure

The data gathering process for this study was conducted systematically to ensure the accuracy, reliability, and integrity of the collected data.

Before administering the questionnaire, the researchers obtained the necessary approvals from the relevant authorities. A formal request letter was submitted to the presidents or designated officials of the selected State Colleges and Universities (SUCs) in Northern Luzon, seeking authorization to conduct the study. Upon obtaining approval, coordination was established with the respective deans, program heads, or office heads to facilitate the distribution of the questionnaires to the identified parties' respondents.

Before the actual data collection, a pilot test was conducted among thirty (30) respondents with similar characteristics to the target population to establish the reliability and clarity of the instrument. Necessary revisions were made based on the pilot test results.

For the actual data collection, the researchers administered the questionnaire to faculty members and academic administrators using either printed copies or electronic forms, depending on accessibility and institutional preference. Clear instructions were provided to ensure that respondents understood how to answer each section of the questionnaire.

Respondents were given adequate time to complete the instrument. The researchers ensured proper follow-up through personal visits, email, and messaging platforms to maximise the questionnaire retrieval rate. Completed questionnaires were then collected, checked for completeness, and organised for data processing. After all responses were retrieved, the data were encoded, tabulated, and analysed using appropriate statistical methods, including frequency and percentage, weighted mean and standard deviation, Pearson correlation, t-tests, and regression analysis. The results were then interpreted in accordance with the study's objectives.

H. Data Analysis

The data gathered in this study were subjected to appropriate statistical treatments in accordance with the specific problems posed.

For Problem 1, which seeks to determine the quality assurance mechanisms in instruction currently implemented across curriculum design and review, teaching and learning processes, faculty development and evaluation, and instructional monitoring and assessment, the data were analysed using descriptive statistics. Frequency and percentage were used to assess the presence and distribution of the identified mechanisms. In contrast, the weighted mean was used to assess the extent of their implementation across the specified dimensions.

For Problem 2, which examines faculty members' and

academic administrators' perceptions of the effectiveness of quality assurance practices in instruction, both descriptive and inferential statistical tools were applied. The weighted mean and standard deviation were used to determine the level and variability of perceived effectiveness. To test for significant differences in perceptions between faculty members and academic administrators, an independent-samples t-test was also used.

For Problem 3, which focuses on identifying the challenges encountered in implementing quality assurance practices in instruction, a combination of quantitative and qualitative analyses was conducted. Frequency and percentage were used to determine the most common challenges, while the weighted mean was used to assess their level or severity.

For Problem 4, which investigates the contribution of quality assurance practices to sustaining instructional quality and institutional development, the study employed inferential statistical techniques. The Pearson Product-Moment Correlation Coefficient (Pearson r) was used to determine the degree and direction of the relationship between quality assurance practices and indicators of instructional quality and institutional development. Furthermore, linear regression analysis was utilized to determine the extent to which quality assurance practices significantly predict or influence these outcome variables.

For Problem 5, which aims to propose quality assurance enhancement strategies to strengthen instructional sustainability, a qualitative-descriptive approach was adopted. The weighted mean was used to determine the acceptability and feasibility of the proposed strategies, as assessed by the respondents.

Table 2
Scale interpretation (4-point Likert)

Scale	Interpretation
3.26 – 4.00	Very High/Highly Effective/Highly Acceptable
2.51 – 3.25	High/Effective/Acceptable
1.76 – 2.50	Moderate
1.00 – 1.75	Low

3. Results and Discussions

A. The Quality Assurance Mechanisms in Instruction Are Currently Implemented Across Curriculum Design and Review, Teaching and Learning Processes

1) Curriculum Design and Review

The findings demonstrate that participating institutions have established quality assurance practices that protect their curriculum design and review processes. Most survey participants confirmed that their institutions follow national standards through their ongoing curriculum assessments, thus demonstrating institutional dedication to program quality and regulatory compliance.

Table 3
Quality assurance mechanisms in instruction

Mechanisms	Frequency (n=150)	Percentage (%)	Weighted Mean	Interpretation
Regular curriculum review and updating	132	88.00%	3.58	Very High
Alignment with CHED/standards	140	93.33%	3.65	Very High
Stakeholder involvement in curriculum development	118	78.67%	3.40	High
Outcomes-based curriculum implementation	125	83.33%	3.47	High

Table 4
Teaching and learning processes

Mechanisms	Frequency	Percentage (%)	Weighted Mean	Interpretation
Use of varied teaching strategies	130	86.67%	3.52	Very High
Integration of technology in teaching	120	80.00%	3.38	High
Student-centered learning approaches	128	85.33%	3.45	High
Regular assessment of student learning outcomes	135	90.00%	3.60	Very High

Table 5
Faculty development and evaluation

Mechanisms	Frequency	Percentage (%)	Weighted Mean	Interpretation
Participation in training and seminars	138	92.00%	3.63	Very High
Faculty performance evaluation systems	126	84.00%	3.49	High
Peer evaluation and mentoring	110	73.33%	3.2	High
Research and professional development support	115	76.67%	3.32	High

Table 6
Instructional monitoring and assessment

Mechanisms	Frequency	Percentage (%)	Weighted Mean	Interpretation
Classroom observation by supervisors	122	81.33%	3.44	High
Use of feedback mechanisms (students/admin)	130	86.67%	3.50	Very High
Regular monitoring of teaching performance	128	85.33%	3.46	High
Use of data for instructional improvement	118	78.67%	3.35	High

The research shows that quality assurance goes beyond meeting standards because it requires programs to maintain their current value and adaptability to current needs, as Ruiz and Junio-Sabio (2012) note.

At the same time, the strong emphasis on curriculum alignment and regular updating supports the view that QA functions as a continuous improvement process rather than a one-time activity. As noted by Pham and Håkansson Lindqvist (2025), effective QA systems ensure that curricula evolve in response to societal and industry needs, thereby maintaining educational relevance.

Nevertheless, stakeholder engagement was rated comparatively lower. This indicates that although institutions possess robust internal procedures, they might not be fully leveraging external contributions, such as those from industry partners or the community. This observation concurs with findings that quality assurance (QA) systems become more effective when they integrate broader stakeholder perspectives, thereby facilitating contextualised and responsive curriculum development (Samhita Ankareddy et al 2025).

2) Teaching and Learning Processes

The findings demonstrate that educational institutions effectively carry out quality assurance standards for their teaching and learning processes. The high rating for regular assessment of student learning outcomes suggests that institutions place strong emphasis on measuring whether students are achieving the intended competencies. The study demonstrates that assessment is an essential element that educational quality assurance systems require to collect data to advance their teaching and learning activities (Javed 2023).

In addition, the use of varied teaching strategies and student-centred approaches reflects a shift toward more flexible and learner-focused instruction. This is consistent with current trends in higher education, where teaching is expected to adapt to diverse learner needs and promote active engagement.

According to Mahrishi et al. (2025), adaptive teaching practices and continuous assessment are essential components of quality assurance that contribute to meaningful learning outcomes.

However, the slightly lower rating for technology integration suggests that digital tools are not yet fully maximised in instructional delivery. This supports UNESCO's (2023) observations that, while many institutions have begun integrating technology, challenges such as infrastructure, training, and accessibility often limit its full implementation.

3) Faculty Development and Evaluation

The findings highlight that faculty development is one of the strongest aspects of QA implementation, particularly in terms of participation in training and seminars. This indicates that institutions recognize the importance of investing in faculty competence as a key driver of instructional quality. As emphasized by Javed and Alenezi (2023), continuous professional development is essential for maintaining high teaching standards and ensuring that educators can adapt to changing educational demands.

At the same time, the presence of evaluation systems and mentoring practices suggests that institutions are making efforts to monitor and improve teaching performance. However, the lower ratings for mentoring and research support suggest these areas may not be consistently implemented. This aligns with the findings of Stukalo and Lytvyn (2021), who argue that while training programs are common, sustained support systems such as mentoring and research engagement are often underdeveloped.

Furthermore, support for research and professional growth is important not only for teaching quality but also for institutional sustainability. Universities play a critical role in knowledge creation and innovation, and strengthening research capacity can enhance their contribution to sustainable development (Munaro et al., 2025).

4) Instructional Monitoring and Assessment

The findings show that instructional monitoring and assessment practices are consistently applied, particularly through feedback mechanisms and classroom observations. This suggests that institutions have established systems for evaluating teaching performance and ensuring accountability. According to Sanga, Nyoni, and Sanga (2023), regular observation and feedback are essential in translating QA

policies into actual classroom improvements.

However, the use of data for instructional improvement, although rated high, remains relatively lower than other indicators. This suggests that while data is collected, it may not always be fully utilized for decision-making. This supports the observation that QA systems often focus on documentation rather than meaningful data analysis and application (Ormillá & Dupra, 2023).

The findings imply that institutions can further strengthen QA practices by improving data utilization and promoting evidence-based decision-making. Doing so would allow them to move beyond monitoring to continuous, informed instructional improvement.

B. Perceptions of the Effectiveness of Quality Assurance Practices in Instruction Examined Faculty Members' and Academic Administrators' Perceptions of the Effectiveness of Quality Assurance Practices in Instruction

The results show that both faculty members and academic administrators perceive QA practices as effective, though administrators rate them more favorably. Faculty members recognise the role of QA in improving curriculum alignment, teaching strategies, and monitoring processes, indicating that these systems are positively influencing classroom practices.

On the other hand, academic administrators view QA practices as highly effective, likely because of their involvement in planning and evaluation. This difference in perception reflects the idea that QA is experienced differently at various institutional levels. As noted by Ancho (2023), educational leaders often have a broader understanding of QA systems, while teachers experience them more directly in their day-to-day responsibilities.

The significant difference between the two groups suggests a gap between policy and practice. While QA systems may appear effective at the institutional level, faculty members may face practical challenges in implementing them. This highlights the need for better alignment between administrative expectations and classroom realities.

The findings indicate that both faculty members and academic administrators generally perceive quality assurance practices in instruction as effective. Among faculty members, the overall weighted mean of 3.36 and standard deviation of

0.65 suggest that they view quality assurance practices as effective, with relatively moderate variability in responses. This means that although most faculty members share a positive perception, their views are not entirely uniform. The highest-rated indicator among faculty members was that quality assurance practices improve curriculum relevance and alignment (WM = 3.42, SD = 0.61), followed by strengthening instructional monitoring and feedback (WM = 3.39, SD = 0.63). This suggests that faculty members most strongly recognize the value of QA in maintaining curriculum standards and improving instructional oversight.

Recent scholarship affirms that quality assurance in higher education is an essential mechanism for ensuring instructional excellence, continuous improvement, and alignment with broader sustainable development goals.

It finds that QA practices directly resonate with faculty perceptions, thereby enhancing curriculum relevance, teaching strategies, professional development, monitoring, and assessment. Globally, quality assurance has been recognized as a strategic priority for strengthening academic standards, fostering institutional accountability, and increasing responsiveness to societal and labor market needs—all of which contribute to sustainable development outcomes through education, research, and community impact. (UNESCO, 2023)

Aquino, JMDR (2025) also underscores the role of QA in sustaining instructional leadership and evidence-based improvement, where frameworks that integrate QA processes with leadership structures systematically elevate teaching quality, institutional performance, and continuous enhancement of learning outcomes — mirroring your table's findings that faculty view QA as effective across key instructional domains.

In the Philippine context, QA mechanisms (such as accreditation and Institutional Sustainability Assessments) have been shown to strengthen instructional quality and institutional sustainability, encouraging alignment with national standards and international benchmarks while addressing local needs in underserved regions — critical for Northern Luzon SUCs striving to produce graduates who can contribute to regional development and sustainable progress. (Ramos, D.L.T. 2026).

Taken together, these studies imply that robust quality

Table 7
Perceived effectiveness of quality assurance practices in instruction
Faculty members' perceptions (n = 120)

Indicators	Weighted Mean	Standard Deviation	Interpretation
QA practices improve curriculum relevance and alignment	3.42	0.61	Effective
QA practices enhance teaching strategies and classroom delivery	3.36	0.65	Effective
QA practices support faculty professional development	3.31	0.68	Effective
QA practices strengthen instructional monitoring and feedback	3.39	0.63	Effective
QA practices improve student learning assessment	3.34	0.66	Effective
Overall	3.36	0.65	Effective

Table 8
Academic administrators' perceptions (n = 30)

Indicators	Weighted Mean	Standard Deviation	Interpretation
QA practices improve curriculum relevance and alignment	3.61	0.49	Highly Effective
QA practices enhance teaching strategies and classroom delivery	3.54	0.52	Highly Effective
QA practices support faculty professional development	3.48	0.57	Effective
QA practices strengthen instructional monitoring and feedback	3.58	0.50	Highly Effective
QA practices improve student learning assessment	3.50	0.55	Highly Effective
Overall	3.54	0.53	Highly Effective

Table 9
Test of difference in perceptions between faculty members and academic administrators

Group	n	Mean	SD
Faculty Members	120	3.36	0.65
Academic Administrators	30	3.54	0.53
Test Statistic		Value	
t-value		-2.01	
df		148	
p-value		0.046	
Decision		Reject Ho	
Interpretation		Significant difference	

assurance practices do more than maintain academic standards; they drive institutional transformation, equip learners with competencies needed for sustainable socio-economic development, and reinforce universities' roles as agents of innovation, inclusivity, and community empowerment outcomes that support your faculty data showing meaningful instructional improvement through QA. (Ramos, D.L.T. 2026).

Among academic administrators, the overall weighted mean of 3.54 and standard deviation of 0.53 indicate that they perceive quality assurance practices as highly effective, with responses showing less variation than those of faculty members. Their highest-rated indicator was that quality assurance practices improve curriculum relevance and alignment (WM = 3.61, SD = 0.49), followed closely by strengthening instructional monitoring and feedback (WM = 3.58, SD = 0.50). These results suggest that academic administrators have a stronger, more consistent belief in the effectiveness of QA practices, likely because they are more directly involved in planning, implementation, and evaluation.

Empirical research further indicates that Quality Assurance (QA) systems are essential in assisting universities and colleges to systematically monitor and evaluate teaching, learning, and institutional performance. This process ensures the alignment of educational offerings with development objectives, such as the United Nations' Sustainable Development Goal 4, which aims to provide quality education for all. In the Philippines, ongoing evaluations of higher education quality reveal that robust QA mechanisms are associated with continuous improvements in teaching and learning quality, outcomes that are vital for fostering graduates who can contribute to equitable and sustainable community development. (José Ramón G. Albert et al., 2023).

Moreover, Velankar YP, Marreh S, Badjie O, Yeboah G, Ncube B (2025;), emphasize QA's role in operationalizing sustainable development within institutional policies, curricula, and partnerships, suggesting that institutions that embed sustainability within QA practices tend to exhibit greater engagement in research, community linkages, and stakeholder collaboration that support sustainable innovation and social responsibility.

Such scholarship reinforces the notion that QA is not merely an administrative function but a strategic lever for institutional transformation that advances both academic quality and social impact, particularly crucial for state colleges and universities in Northern Luzon, which aim to enhance regional development through responsive higher education.

To determine whether the two groups' perceptions differed significantly, an independent-samples t-test was conducted.

The results showed a t-value of -2.01 with 148 degrees of freedom and a p-value of 0.046, which is lower than the 0.05 level of significance. This indicates a significant difference in perceptions between faculty members and academic administrators. Thus, the null hypothesis stating that there is no significant difference in perceptions between the two groups is rejected.

The findings indicate that while both groups recognize the efficacy of quality assurance practices in education, academic administrators tend to rate them more favorably than faculty members do. This discrepancy may be ascribed to the administrators' increased exposure to policy development, monitoring systems, and institutional outcomes. On the contrary, faculty members may assess effectiveness more on the basis of daily classroom realities, workload, and implementation challenges. Nonetheless, the overall results affirm that both groups hold a positive perception of quality assurance practices and that these practices contribute significantly to instructional enhancement.

The perceived effectiveness of quality assurance practices in instruction was assessed using weighted mean and standard deviation. In contrast, an independent-samples t-test was used to test differences between faculty members and academic administrators. Results showed that faculty members perceived quality assurance practices as effective (M = 3.36, SD = 0.65), while academic administrators perceived them as highly effective (M = 3.54, SD = 0.53).

Both groups rated curriculum relevance and instructional monitoring as the most effective aspects of quality assurance. Moreover, the independent-samples t-test revealed a significant difference in perceptions between the two groups, $t(148) = -2.01$, $p = 0.046$, indicating that academic administrators had a more favorable assessment of the effectiveness of quality assurance practices than faculty members.

C. The Challenges Encountered in Implementing Quality Assurance Practices in Instruction

The findings reveal that several challenges affect the implementation of QA practices, with insufficient funding emerging as the most significant. This highlights the reality that financial constraints can limit institutions' ability to sustain QA initiatives. As noted by Ormilla and Dupra (2023), resource limitations remain a major barrier to the effective implementation of quality assurance systems.

The lack of faculty training is another critical issue, suggesting that some educators may not be fully prepared to implement QA practices. This aligns with the findings of Oke, Adewole, and Adesope (2022), who emphasize that teacher

Table 10
Challenges in QA implementation

Challenges	Frequency (n=150)	Percentage (%)	Weighted Mean	Verbal Interpretation
Insufficient funding and resources	118	78.67%	3.62	Very High
Lack of faculty training on QA processes	112	74.67%	3.55	Very High
Resistance to change among faculty	105	70.00%	3.41	High
Limited administrative support	98	65.33%	3.28	High
Inadequate monitoring and evaluation systems	94	62.67%	3.22	High
Excessive documentation requirements	90	60.00%	3.15	High
Poor integration of QA into teaching practices	85	56.67%	3.08	Moderate
Lack of technological support	80	53.33%	3.01	Moderate

Table 11
Relationship between QA Practices and institutional sustainability

Variables	r	p-value	Interpretation
Quality Assurance Practices and Instructional Quality	.68	< .001	Strong positive relationship
Quality Assurance Practices and Institutional Development	.61	< .001	Moderate to strong positive relationship

effectiveness is closely linked to effective training and support systems.

In addition, resistance to change and limited administrative support reflect organizational challenges that can hinder the adoption of QA systems. According to Sanga et al. (2023), successful QA implementation requires not only policies but also a supportive institutional culture and leadership commitment.

Other issues, such as excessive documentation and weak monitoring systems, further indicate that QA processes can become burdensome if not properly managed. These challenges suggest that QA should focus more on improvement rather than compliance.

D. The Contribution of Quality Assurance Practices to Sustaining Instructional Quality and Institutional Development

The results clearly demonstrate that QA practices have a strong and significant relationship with both instructional quality and institutional development. This confirms that QA is not just a regulatory requirement but a key factor in improving educational outcomes.

The strong relationship between QA practices and instructional quality supports the idea that structured monitoring, evaluation, and feedback systems improve teaching performance. Similarly, the positive relationship with institutional development suggests that QA contributes to broader organizational growth and sustainability.

The table presents the contribution of quality assurance practices to sustaining instructional quality and institutional development; inferential statistical techniques were employed. Using the Pearson Product-Moment Correlation Coefficient, the analysis revealed a strong positive relationship between quality assurance practices and instructional quality, $r = .68$, $p < .001$. This indicates that as quality assurance practices are implemented, instructional quality tends to improve. Similarly, a moderate to strong positive relationship was found between quality assurance practices and institutional development, $r = .61$, $p < .001$, suggesting that stronger quality assurance practices are also associated with better institutional development outcomes.

The results imply that quality assurance practices serve as a meaningful institutional mechanism in promoting both effective instruction and organizational growth.

The positive correlations and significant regression outcomes

support the idea that when quality assurance systems are consistently implemented, they help maintain academic standards, improve teaching processes, and foster long-term institutional progress.

Aquino JMDR (2025) affirms the table's findings by linking QA in instruction to enhanced sustainability in Philippine higher education, especially in Luzon state universities. A 2025 Luzon-based study on high-performing HEIs, including state universities and colleges (SUCs), developed a quality-assured instructional leadership framework from best practices, emphasizing QA's role in sustaining accreditation, improving teaching, and fostering continuous institutional advancement across SUCs. Similarly, a 2017 case study (republished and cited in recent contexts up to 2025) on Northern and Central Luzon SUCs, such as Pangasinan State University and Central Luzon State University, showed that TQM/ISO 9001 QA implementations streamlined instructional and administrative processes, boosting service quality and long-term viability through senior leadership commitment and employee internalization. These align directly with the table's r -values, indicating that QA drives instructional excellence ($r=0.68$) and broader development ($r=0.61$) for sustainability.

Robust quality assurance practices in instruction, as evidenced by the table's correlations and corroborated by Luzon State University College (SUC) studies, position state universities as pivotal engines for sustainable development by integrating continuous improvement into teaching and operational processes. This fosters resilient institutions capable of aligning with national objectives, such as the Commission on Higher Education's (CHED) Institutional Sustainability Assessment, where quality assurance enhances governance, resource management, and adaptability in response to evolving demands, including Sustainable Development Goal 4 (quality education). Policymakers and administrators in Northern Luzon should prioritize scaling quality assurance efforts through ISO-aligned frameworks and leadership development initiatives to amplify instructional outcomes, reduce inefficiencies, and promote equitable, long-term growth in underserved regions. Ultimately, these connections empower SUCs to transcend accreditation standards, cultivating innovative and globally competitive graduates who contribute to sustainable societal progress (Aquino JMDR, 2025).

To further examine the predictive influence of quality

Table 12
Relationship between instructional quality and institutional development

Dependent Variable	R	R ²	F	Beta (β)	t	p-value	Interpretation
Instructional Quality	.68	.46	126.44	.68	11.24	< .001	Significant positive predictor
Institutional Development	.61	.37	87.31	.61	9.35	< .001	Significant positive predictor

Table 13
Acceptability and feasibility of proposed quality assurance enhancement strategies

Proposed Strategies	Weighted Mean	Standard Deviation	Interpretation
Strengthening faculty development programs focused on QA practices	3.68	0.52	Highly Acceptable and Feasible
Institutionalizing regular curriculum review with stakeholder involvement	3.72	0.48	Highly Acceptable and Feasible
Enhancing instructional monitoring through technology-based systems	3.55	0.60	Highly Acceptable and Feasible
Increasing funding allocation for QA-related initiatives	3.61	0.57	Highly Acceptable and Feasible
Establishing a structured mentoring and peer evaluation system	3.49	0.63	Acceptable and Feasible
Strengthening data-driven decision-making in instruction	3.58	0.55	Highly Acceptable and Feasible
Providing continuous training on outcomes-based education (OBE)	3.66	0.50	Highly Acceptable and Feasible
Developing centralized QA monitoring and feedback systems	3.53	0.58	Highly Acceptable and Feasible

assurance practices, linear regression analysis was conducted. Results showed that quality assurance practices significantly predicted instructional quality, $F(1, 148) = 126.44$, $p < .001$, with an R^2 of .46, indicating that approximately 46% of the variance in instructional quality is explained by quality assurance practices. The regression coefficient further indicated that quality assurance practices had a significant positive effect on instructional quality, $\beta = .68$, $t = 11.24$, $p < .001$.

In terms of institutional development, regression analysis likewise showed that quality assurance practices significantly predicted institutional development, $F(1, 148) = 87.31$, $p < .001$, with an $R^2 = .37$. This implies that about 37% of the variance in institutional development is explained by quality assurance practices. The standardized coefficient showed a positive and significant influence, $\beta = .61$, $t = 9.35$, $p < .001$. These findings suggest that quality assurance practices make an important contribution not only to sustaining instructional quality but also to strengthening institutional development.

Ormilla & Dupra (2023) underscore the significance of institutional sustainability and quality assurance in ensuring that higher education institutions are adequately prepared to address emerging educational demands and challenges. The robust correlations presented in the table between quality assurance and instructional outcomes align with the findings of Ormilla and Dupra, who contend that ongoing quality enhancement via structured quality assurance processes not only improves teaching standards but also fosters overall institutional growth and adaptability, essential for sustainable development within the state universities.

The findings in the table underscore the pivotal role of Quality Assurance (QA) in shaping both instructional quality and institutional development, thereby directly contributing to sustainable growth within higher education institutions in Northern Luzon. The strong positive correlations between these variables suggest that institutions that prioritize and integrate robust QA systems will see significant improvements in teaching effectiveness and overall institutional performance.

In conclusion, the strong correlation between QA in instruction and both instructional quality and institutional development in Northern Luzon's state colleges and universities demonstrates that QA is not just a regulatory tool but a transformative mechanism that can drive sustainability, innovation, and regional development. Moving forward, enhancing these QA systems will enable Northern Luzon's

SUCs to provide high-quality education, contribute to sustainable regional development, and elevate their position within the broader national educational landscape.

E. The Quality Assurance Enhancement Strategies to Strengthen Instructional Sustainability

The findings indicate that the proposed Quality Assurance (QA) enhancement strategies are highly acceptable and feasible, demonstrating robust support from respondents. The strategy with the highest rating, involving regular curriculum review and stakeholder engagement, corroborates the earlier finding that stakeholder involvement is essential to strengthen.

Faculty development and ongoing training were also highly endorsed, emphasizing the significance of enhancing faculty capacity to uphold Quality Assurance (QA) practices. This corresponds with the findings of Lintag et al. (2025), which underscore the vital importance of instructional leadership and faculty development in sustaining quality education. Strategies for funding and data-driven decision-making were prominently rated, reflecting respondents' recognition of the need for both resources and evidence-based approaches. Conversely, mentoring systems received marginally lower evaluations, potentially due to concerns about implementation challenges, such as workload and time constraints.

Munaro et al. (2025) underscore the significance of technology in monitoring teaching effectiveness and delivering data-informed feedback that facilitates ongoing improvement. This research validates the approach of enhancing instructional oversight via technology-based systems as both practical and highly acceptable, in harmony with the expanding integration of digital tools to improve instructional quality and promote sustainability in education.

Ruiz & Junio-Sabio (2012) discuss how centralized QA monitoring can streamline feedback mechanisms, improve transparency, and ensure continuous improvements in teaching quality. This strategy, rated highly feasible in the study, is vital for maintaining accountability and ensuring that QA practices are effectively implemented across various institutions.

The findings from the table, along with the corroborating studies, suggest that quality assurance systems in higher education are not merely administrative functions but essential drivers of institutional sustainability. The strategies proposed in the table are in accordance with contemporary research, emphasizing the significance of faculty development,

curriculum review, and technology integration as fundamental components in fostering quality education and sustainable development.

In conclusion, these strategies not only enhance instructional quality but also contribute to the development of resilient, innovative, and responsive institutions capable of addressing both local and global challenges. For Northern Luzon state colleges and universities, these strategies present an opportunity to position themselves as leaders in sustainable higher education by integrating future-ready quality assurance systems aligned with the SDGs.

4. Conclusions

Based on the summary of findings, the study concludes that:

1. Institutions rigorously implement quality assurance in curriculum design, review, and teaching, ensuring high standards. They adhere to CHED and institutional standards, conduct regular curriculum reviews, and evaluate student outcomes using diverse strategies to enhance instructional effectiveness and student success..
2. Quality assurance (QA) practices in instruction are viewed as effective by faculty and administrators, emphasizing their role in improving curriculum, monitoring, and teaching methods. Faculty recognize their value, though opinions vary moderately. Administrators generally have a more consistent and positive view, noting QA's contribution to curriculum alignment, oversight, and student assessment.
3. The implementation of quality assurance (QA) practices in instruction is significantly hindered by a range of critical challenges, most of which are rated as high to very high. Among these, insufficient funding and resources, along with the lack of faculty training in QA processes, emerged as the most pressing barriers, underscoring the need for stronger institutional investment and capacity-building efforts.
4. Quality assurance (QA) practices are crucial in educational instruction, significantly improving teaching quality and institutional development. Effective QA mechanisms enhance teaching efficacy, curriculum relevance, and student outcomes, supporting sustainable growth..
5. The proposed QA strategies are well-supported and feasible, emphasizing curriculum review, faculty development, and continuous training in outcomes-based education. High ratings for funding, data-driven decision-making, and technology-based monitoring highlight the importance of institutional support and innovation in strengthening instructional quality.

5. Recommendations

Based on the conclusions, the following recommendations were drawn.

1. Stakeholder involvement and outcomes-based education need strengthening to ensure broader

participation and alignment with educational demands. Student-centered approaches and technology integration require more consistent implementation. While quality assurance practices are effective, ongoing improvements are essential to enhance inclusivity, innovation, and adaptability, thereby strengthening the sustainability of higher education institutions.

2. Both groups recognize the need to improve faculty development and student assessment. While QA practices are effective, support systems for teaching and faculty growth require enhancement. A significant perception gap exists: administrators view QA more favorably than faculty, likely due to their greater involvement in planning and evaluation. Overall, QA helps improve instructional quality, but efforts must continue to address perceptual differences and implementation challenges at the instructional level.
3. Organizational challenges such as resistance to change and limited support highlight the importance of leadership and a supportive culture in maintaining effective quality assurance (QA). Structural issues like inadequate monitoring and excessive documentation hinder implementation, affecting efficiency and workload. While integration of QA into teaching and technological support are moderate concerns, they point to areas needing improvement. Overall, resource constraints, training gaps, resistance, and systemic inefficiencies limit QA effectiveness. Addressing these through better support, systems, and professional development is essential for sustainable QA practices.
4. The regression analysis confirms that QA practices are key predictors of instructional quality and institutional growth. Improving QA systems can significantly enhance teaching methods and organizational effectiveness, underscoring their importance in promoting educational excellence and sustainability. Strengthening these practices is vital for continuous improvement, innovation, and long-term development of higher education institutions..
5. While mentoring and peer evaluation systems received lower ratings, they are still considered acceptable, indicating a need for further support and planning. Overall, the strategies proposed are practical and can improve instructional sustainability and institutional performance, helping colleges and universities maintain quality and achieve long-term goals.
6. Greater emphasis should be placed on engaging external stakeholders, including industry leaders and community representatives, in the curriculum development process. This can be achieved through partnerships, advisory boards, or collaborative projects to ensure curricula meet the evolving needs of the workforce and society.
7. Investments in infrastructure and training are essential to realize the potential of digital tools in teaching fully. Universities should consider integrating learning

management systems (LMS), educational apps, and digital classrooms into everyday teaching practices. Additionally, faculty training on technology use should be a continuous process to ensure all teachers are comfortable and capable with digital tools.

8. Strengthening faculty mentoring and peer evaluation systems could enhance instructional practices. Mentoring programs should be formalized, offering continuous feedback and support, especially for new faculty members. Peer evaluations can foster collaboration and knowledge sharing among faculty.
9. Bridging the perception gap between faculty members and administrators should be a priority. Regular feedback sessions and open communication channels can help ensure that QA policies align with the practical needs and challenges faculty face. Administrators should consider involving faculty more in the planning and decision-making for QA systems.
10. Ensuring adequate funding and resources is critical to sustaining QA practices. Universities should increase their budget allocations for QA-related initiatives, particularly for faculty development, technology adoption, and infrastructure improvements. Partnerships with external funding agencies or government support can help alleviate financial constraints.

By applying the recommended improvements, institutions in Northern Luzon can further improve the quality and sustainability of their educational programs. This would align with both national and global trends in higher education quality assurance and sustainability development.

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