






International Journal of Learning, Teaching and Educational Research
 Vol. 24, No. 10, pp. 794-817, October 2025
<https://doi.org/10.26803/ijlter.24.10.38>
 Received Jul 20, 2025; Revised Sept 1, 2025; Accepted Sept 15, 2025

Supervisory Practices of Deans for Quality Instruction in Teacher Education Institutions in Central Luzon Region, Philippines

Riza B. Lintag , Julius Ceazar G. Tolentino* , Jenelyn T. Peña , Chona M. Navarro  and Analaine G. Laxamana 
 College of Education, Pampanga State University
 Pampanga, Philippines

Abstract. Contemporary teacher education institutions in the Philippines face increasing demands for quality assurance and institutional resilience amid rapid educational transformations, yet limited research exists on supervisory practices that enable deans to navigate these challenges effectively. Hence, this study explored supervisory practices of deans in teacher education institutions in Central Luzon, Philippines, focusing on how these practices contribute to quality instruction and institutional excellence. A qualitative case study design was employed, involving four teacher education institutions with Centers of Excellence and Centers of Development status. Data were collected through in-depth interviews with academic deans, validated by expert review and analyzed using thematic analysis with external auditing to ensure credibility and trustworthiness. Six interrelated supervisory practices emerged: (1) instructional supervision and program management; (2) faculty development and empowerment; (3) technology-enhanced supervision and learning; (4) assessment and quality assurance systems; (5) resource allocation and infrastructure development; and (6) strategic adaptation and future directions. These findings underscore the central role of deans in sustaining quality teacher education while preparing institutions for global and technological challenges. The study contributes practical insights for educational leaders and policy frameworks for institutional quality enhancement, demonstrating how contextually responsive supervision can maintain excellence standards while developing institutional resilience and adaptation to evolving educational demands.

Keywords: educational leadership; institutional quality classifications; instructional supervision; Philippines; teacher education

*Corresponding author: Julius Ceazar G. Tolentino, jcgtolentino@pampangastateu.edu.ph

1. Introduction

Teacher education plays a vital role in shaping the future of the teaching profession and, by extension, the nation's human capital. In the Philippines, teacher education institutions (TEIs) serve as critical spaces where future educators are equipped not only with pedagogical skills but also with the values and dispositions necessary to thrive in an increasingly globalized and technologically driven society. The quality of instruction in these institutions is therefore a pressing concern, as it directly impacts the competencies of graduates who will eventually shape the country's basic education landscape.

Within this context, academic supervision emerges as a pivotal mechanism for ensuring quality instruction. Supervisory practices, particularly those exercised by deans, extend beyond routine administrative oversight. They encompass academic leadership, mentoring, monitoring, evaluation and the cultivation of an environment conducive to teaching innovation and professional growth. Studies have shown that effective supervision fosters accountability, enhances instructional quality, and promotes a culture of excellence in higher education (Adeyemo, 2019; Marshall, 2024). However, the nature and impact of supervisory practices are often shaped by institutional contexts, leadership styles and regional dynamics.

In Central Luzon, one of the Philippines' largest educational hubs, TEIs play a strategic role in supplying competent teachers to both urban and rural schools. Despite their importance, limited empirical research has examined how deans in this region exercise supervisory practices to uphold quality instruction. Much of the existing literature on supervision in Philippine higher education tends to focus on general governance, accreditation, and quality assurance frameworks (Batoon, 2022), with relatively less attention paid to the everyday supervisory roles of academic leaders at the program and college levels.

This creates a gap in understanding how deans' supervisory practices translate into tangible improvements in teaching and learning within TEIs. While teacher education continues to be at the forefront of reforms aligned with global trends, ASEAN integration, and Commission on Higher Education (CHED) quality standards, there remains a lack of region-specific studies that explore supervisory practices as a crucial dimension of academic leadership. In particular, there is insufficient evidence on how deans in TEIs across Central Luzon manage their supervisory roles to balance compliance with external quality assurance demands and the need to nurture instructional excellence at the ground level.

1.1 Instructional Supervision and the Role of TEIs

Teaching is widely regarded as the noblest profession, requiring rigorous selection, systematic training and continuous professional development for educators before and during their service in the field. The responsibility for delivering high-quality instruction extends beyond individual teachers; it encompasses administrators, instructional leaders and education policymakers who are collectively tasked with ensuring academic standards and instructional excellence. As such, effective instructional supervision is a critical pillar of teacher

development, enabling institutions to evaluate teaching effectiveness, provide timely and constructive feedback, and enhance pedagogical practices.

Dewodo et al. (2019) emphasized that both internal and external supervisory strategies must be systematically implemented, as they contribute to a holistic framework of instructional supervision. Internal mechanisms, such as peer evaluations, self-assessment tools, and faculty mentoring program, are complemented by external processes like accreditation reviews, program audits and adherence to national quality assurance policies. Continuous monitoring and revision of these supervisory strategies are essential to align instructional practices with shifting educational demands. Furthermore, Yusuf et al. (2021) underscored the importance of establishing clearly defined values, standards and expectations for teachers and supervisors, advocating for a structured and timely appraisal system that promotes instructional improvement and supports student cognitive development.

In the Philippine context, TEIs implement institutionalized monitoring and evaluation systems to ensure that program heads, faculty and academic administrators collaboratively uphold high standards of educational quality. Instructional leaders and supervisors within TEIs assume multifaceted roles that include curriculum oversight, faculty development, student mentorship and institutional governance. Although approaches to supervision may vary based on institutional culture, faculty profiles and desired student learning outcomes, the core objective remains the same: fostering an academic environment that nurtures professional growth, pedagogical innovation and student success.

1.2. Theories in the Supervision of Curriculum and Instruction

Curriculum supervision is driven by a constellation of leadership, pedagogical and institutional factors. Educational institutions deploy various programs and interventions aimed at ensuring instructional quality, with effective supervision serving as a central mechanism for achieving this objective. Administrators and academic leaders establish evaluation systems to monitor instruction and determine alignment with institutional goals. Over time, supervisory practices have evolved in response to the leadership styles of administrators and the unique operational contexts of higher education institutions. Despite these variations, the shared aspiration for educational excellence remains constant (Ebele & Olofu, 2017; Stinchfield et al., 2019).

Supervision also encompasses essential leadership functions that directly support effective teaching and learning. Administrators often confront challenges in managing human resources, instructional quality and institutional assets. A comprehensive evaluation system, paired with feedback mechanisms that involve all stakeholders, is necessary to ensure that learning outcomes are aligned with broader workforce and societal expectations (Gustafsson, 2015; Shaharudin et al., 2020). Marshall (2024) further asserted that instructional leaders must operate from a shared understanding of effective teaching practices, emphasizing the need for cohesive leadership and evidence-informed supervision that directly improves classroom performance and student achievement.

Among the foundational theories in instructional supervision is Glickman's (1981, 1985) Developmental Supervision Theory, which advances three critical propositions: (1) teachers' personal and professional backgrounds influence their capacity for instructional problem-solving; (2) teachers function at varying levels of cognitive ability and instructional effectiveness, necessitating differentiated supervisory support; and (3) supervision should ultimately aim to enhance teachers' capacity for professional growth and autonomous decision-making. This theory provides a valuable lens through which TEI faculty development systems can be assessed in terms of their impact on instructional quality.

Additionally, Fritz and Miller (2003) suggested that supervision should be dynamic, evolving alongside the growth of both the instructional leader and the teacher. A teacher-directed approach, in which educators take more ownership of the supervisory process, can offer meaningful professional development opportunities while enhancing teacher autonomy.

Complementing Glickman's theory is Borg's (2003) Theory of Teacher Cognition, which explores the beliefs, knowledge and attitudes of educators and administrators. Recognizing the impact of teacher cognition is crucial in designing effective training programs and professional development initiatives. When educators' cognitive perspectives are acknowledged and supported, they are better equipped to implement innovative instructional strategies and improve learning outcomes.

1.3 Supervision of Instruction During the COVID-19 Era

The COVID-19 pandemic precipitated a paradigm shift in the global education system, particularly in the realm of instructional delivery. The abrupt transition from traditional face-to-face learning to distance and online modalities posed significant challenges for educators, administrators, and students alike (Ortega et al., 2022). Distance learning, which relies on digital tools and platforms in the absence of physical interaction, necessitated a comprehensive redefinition of instructional supervision to ensure teaching and learning remained effective and equitable.

As educational institutions adopted fully online, blended, and hybrid learning formats, instructional supervision emerged as a crucial mechanism for maintaining instructional quality. During the pandemic, its role expanded beyond performance evaluation, it became instrumental in enhancing professional competencies, adapting teaching methods for digital environments, and maintaining alignment with institutional learning outcomes. Supervision also played a vital role in addressing issues of digital access, technological proficiency and student engagement that surfaced in remote learning contexts.

With limitations on in-person supervision, academic leaders turned to virtual strategies, utilizing platforms such as Zoom, Google Meet and Microsoft Teams for real-time classroom observations, feedback sessions and administrative reviews. Prestiadi et al. (2021) highlighted the effectiveness of these tools in facilitating virtual instructional supervision, enabling supervisors to evaluate

digital pedagogy and offer immediate, actionable feedback. Moreover, Learning Management Systems (LMS) such as Moodle, Google Classroom, and Blackboard were utilized to monitor teaching content, track student engagement and evaluate asynchronous and synchronous learning activities. These platforms' embedded analytics empowered supervisors to make evidence-based decisions regarding instructional support, faculty development and pedagogical enhancement.

As the education sector moves into a post-pandemic era, the insights gained from virtual supervision remain highly relevant. Institutions are encouraged to adopt hybrid models of instructional supervision that integrate both traditional and technology-driven approaches. This hybrid framework may serve as a sustainable strategy for promoting instructional quality, professional development and institutional resilience amid future disruptions.

While existing literature highlights the importance of instructional supervision in enhancing teacher performance and student learning, several gaps and challenges remain unaddressed. First, the effectiveness of teacher-directed supervisory approaches remains underexplored, particularly with their long-term impact on instructional improvement and faculty autonomy. Fritz and Miller (2003) proposed that instructional supervision should progress toward more teacher-directed methodologies, allowing educators to take greater ownership of their professional development while benefiting from structured administrative guidance.

However, empirical studies examining the feasibility and scalability of this approach within TEIs in the Philippines remain limited. Second, the dynamic nature of the contemporary teaching environment, characterized by technological advancements, evolving curriculum frameworks and shifts toward outcome-based education, necessitates a reassessment of traditional supervisory models. There is a pressing need to explore how hybrid, technology-integrated and data-driven supervision strategies can enhance instructional quality without being overly intrusive or bureaucratic. Lastly, while existing supervision frameworks emphasize faculty evaluation and accountability, less attention has been given to how supervision can be restructured to prioritize teacher empowerment, motivation and professional agency.

To contribute to this discourse, the present study was conducted to describe the general supervisory practices employed by the deans of premier TEIs in the Central Luzon Region, Philippines. Specifically, the study sought to answer the following research questions: (1) What practices in the management and supervision of instructional programs are being employed by these TEIs? and (2) What critical insights and lessons may be drawn from the experiences?

2. Methodology

2.1 Research Design

This study employed a qualitative case study design, a highly contextualized methodology that enables in-depth exploration of real-world, bounded systems (Creswell, 2013; Yin, 2017). This design is particularly well-suited for examining

the supervisory practices of deans in TEIs in Central Luzon, as it captures their lived experiences and diverse approaches within unique institutional contexts. The case study design facilitates comprehensive understanding of how instructional supervision is conceptualized and implemented across different institutional settings, making it the most appropriate methodological approach for analyzing context-specific supervisory practices in higher education environments.

2.2 Research Locale and Key Informants

The designation of Center of Excellence (COE) or Center of Development (COD) status is governed by CHED Memorandum Order (CMO) No. 17, series of 2016, which identifies premier TEIs demonstrating exemplary performance in teacher education. According to the memorandum, 36 TEIs hold COE status while 38 TEIs maintain COD status nationally. Within Central Luzon specifically, three TEIs possess COE status and three maintain COD status.

To ensure data richness and institutional diversity, four TEIs with COE and COD designations were purposively selected as research cases. The inclusion criteria comprised: (a) institutional recognition—the TEI must maintain COE or COD status in teacher education; (b) institutional type—a combination of public and private higher education institutions to capture varied governance and supervision models; (c) geographical representation—the TEI must be located within Central Luzon; and (d) data accessibility—the TEI must possess accessible policies, documents and supervisory structures. Four of the six eligible TEIs participated in this study; one was excluded due to the researchers' institutional affiliation, while another declined participation.

The study locale comprised institutions designated as COEs or CODs by CHED, a status defining high-performing TEIs based on rigorous criteria. These parameters include: (a) consistently superior Licensure Examination for Teachers (LET) performance, with all participating institutions achieving 80-100% passing rates over five consecutive years while producing board examination topnotchers; (b) accreditation status, with all institutions maintaining Level III or IV accreditation from recognized accrediting bodies; (c) ISO certification, with all institutions holding ISO 9001:2015 quality management system certification; (d) faculty qualifications, with over 80% of faculty possessing master's degrees and at least 30% holding doctoral qualifications; (e) research productivity, demonstrated through published scholarly outputs and active engagement in research activities; and (f) institutional governance, evidenced by robust quality assurance systems, comprehensive stakeholder engagement and alignment with national education policies. COE status represents the highest recognition level, reserved for institutions demonstrating excellence across all evaluation domains, while COD status indicates institutions showing substantial development toward excellence with strong advancement potential.

As seen in Table 1, the four deans who served as key informants brought extensive experience in both teaching and academic leadership to this study. All have advanced from regular faculty positions to administrative roles, with teaching

experience ranging from 15 to 25 years and administrative experience spanning 8 to 22 years in their current dean positions. They held doctorate degrees in education-related fields. This extensive background provided them with profound institutional knowledge and comprehensive understanding of supervisory practices across diverse educational contexts and challenges, encompassing pre-pandemic, pandemic and post-pandemic periods.

Table 1: Demographic Profile of Study Participants

Participant Code	Institution Type	Recognition Status	Teaching Experience	Administrative Experience	Highest Degree Obtained
TEI-1	Private Catholic University	COD (2016)	20 years	12 years	Doctorate
TEI-2	Private University	COE (2016)	18 years	15 years	Doctorate
TEI-3	State University	COD (2016), Aspiring COE	25 years	8 years	Doctorate
TEI-4	State University	COE (2016)	22 years	18 years	Doctorate

2.3 Instrument

An Interview Protocol Guide (IPG) was developed and aligned with the study's objectives and specific research questions. Open-ended questions were formulated to facilitate response generation that would serve as significant information sources for uncovering supervisory practices described in the narratives of deans from premier TEIs serving as case study participants.

Subsequently, five experts, two in educational management, one in psychology and two in qualitative research methodology, were consulted to review the open-ended questions. Recommendations for enhancements were solicited and incorporated as deemed necessary. Revisions were implemented accordingly, and the final draft of questions, along with the complete protocol guide, was returned to experts for final confirmation until consensus approval was achieved. The IPG was structured according to the following components: (a) welcome message, (b) introduction outlining the study's purpose and objectives, (c) ground rules for the interview process, (d) opening question, (e) prepared open-ended questions, and (f) clarificatory, closing and concluding questions.

2.4 Data Collection Procedures

The data collection process commenced with securing institutional approvals from the university presidents of each participating TEI to conduct interviews with their respective college deans. This preliminary step ensured proper protocol adherence and institutional support for the research endeavor. Upon receiving the necessary clearances from all four institutions, the researchers initiated direct contact with each dean through formal email communication.

The email correspondence served multiple purposes: introducing the research team, explaining the study's objectives and significance, outlining the interview process and requesting participation. Each dean was provided with comprehensive information about the study, including the estimated time commitment, the voluntary nature of participation, and assurance of confidentiality. Following positive responses from all contacted deans, mutually convenient schedules were arranged for in-depth, virtual interviews.

All interviews were conducted through Zoom Cloud Meeting platform, a decision that facilitated safe and convenient participation while maintaining the quality of interaction necessary for qualitative data collection. This virtual approach proved particularly advantageous in accommodating the busy schedules of academic administrators across different institutions within Central Luzon. The online format also enabled seamless recording capabilities and allowed for consistent technical conditions across all interviews.

The research team adopted a structured approach to interview facilitation, with clearly defined roles to maximize data collection effectiveness. The first author served as the primary interviewer, responsible for guiding the conversation, asking follow-up questions and maintaining the flow of dialogue according to the IPG. Meanwhile, the second and third authors functioned as documenters, taking detailed notes on non-verbal cues, technical observations and additional contextual information that might not be captured in the audio recording.

Each interview session began with a brief technical check to ensure optimal audio and video quality, followed by a welcoming introduction and review of ethical considerations, including informed consent procedures. The deans were reminded of their right to withdraw at any time and were assured of the confidentiality of their responses. The actual interview process followed the structured IPG while allowing for natural conversation flow and emergent topics relevant to supervisory practices.

Throughout the interviews, the research team maintained professional demeanor while creating a comfortable environment that encouraged open and honest sharing of experiences. The virtual setting, while initially a constraint, ultimately provided participants with the comfort of their familiar environments, potentially leading to more candid responses about their supervisory practices and institutional contexts.

Following each interview, the research team immediately debriefed to capture initial impressions, clarify any unclear responses and identify areas requiring follow-up questions in subsequent interviews. This iterative approach enhanced the quality of data collection across all four cases. Additionally, participants were contacted post-interview via email to request any relevant documentary evidence, such as institutional policies, memoranda, supervisory guidelines and other pertinent records that could support the validation and triangulation of interview data. While the interviews formed the primary data source, this complementary documentation strengthened the credibility, accuracy and depth of findings by

providing institutional context and supporting evidence for the supervisory practices described by the deans.

2.5 Ethical Considerations

This study adhered to internationally recognized ethical research principles, including those outlined in the Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979) and national ethical standards, ensuring integrity, transparency and participant protection throughout the research process. Voluntary participation was strictly observed, with participants engaging freely without coercion while retaining the right to withdraw at any stage without justification. Informed consent was secured by providing clear explanations of the study's objectives, the nature and intended use of requested information, and potential participation implications, formalized through signed consent forms.

To promote transparency and preparedness, interview schedules and discussion outlines were provided in advance, while anonymity was maintained by replacing personal identifiers with coded references. Confidentiality was upheld by ensuring data were used exclusively for research purposes and securely stored to prevent unauthorized access. The study also safeguarded participants' well-being by preventing psychological, emotional or professional harm and by granting them the option to decline answering questions causing discomfort, thereby reinforcing respect for autonomy and ethical accountability.

2.6 Data Analysis

The analysis process followed the thematic analysis framework of Braun and Clarke (2012), an approach commonly utilized in qualitative studies containing systematic steps that analyze data thoroughly, leading to reliable and valid findings. The process employed a six-step procedure with enhanced validation measures to ensure analytical rigor and trustworthiness.

Initially, data familiarization occurred through multiple readings by the research team. This phase enabled researchers to develop comprehensive data understanding and identify preliminary patterns. Transcribed interviews were read independently by two primary researchers (R.B.L. and J.C.G.T.) to establish initial impressions and potential areas of interest.

The subsequent step involved generating initial codes through collaborative approaches. Data were systematically organized by assigning codes or labels representing meaningful concepts relevant to supervisory practices. Two researchers independently conducted initial coding, followed by team discussions to reconcile differences and establish unified coding frameworks. This process ensured codes accurately captured participants' experiences while maintaining analytical consistency.

Subsequently, overarching themes were identified and mapped based on their representative meaning and relevance to research questions. The research team collaboratively examined patterns and connections among codes to develop preliminary themes. This iterative process involved continuous refinement as

themes were tested against data to ensure adequate representation of participants' supervisory practices.

Comprehensive theme review was then conducted to validate accuracy and data representation. This critical phase included continuous revisions and refinements to ensure proper theme alignment with data and research objectives. To strengthen credibility and trustworthiness, an external auditor with expertise in qualitative research methodology and educational leadership was engaged to independently review the coding framework, theme development process and final thematic structure.

The external auditor, maintaining no affiliation with participating institutions, examined coded data and assessed theme coherence, data representation adequacy and analytical interpretation consistency. The auditor provided detailed feedback on theme definitions, supporting evidence and overall analytical framework. Discrepancies between the research team's analysis and auditor's assessment were thoroughly discussed until consensus was achieved. This external validation process ensured themes authentically reflected participants' experiences while maintaining analytical objectivity and methodological rigor.

Following validation, themes were finalized with clear names and definitions supported by comprehensive narration. This process included preparing detailed analytical reports where themes were defined and contextualized in relation to research questions. The final step involved supporting all thematic interpretations with direct participant quotations, strengthening written narration derived from themes and sub-themes while ensuring participant voices remained central to findings.

3. Findings

The supervisory practices of deans in TEIs in Central Luzon reflect diverse yet interconnected approaches to managing instruction, faculty development, technology integration, assessment, resource allocation and strategic adaptation. These practices not only sustain quality education but also ensure institutional resilience in the face of disruptions. The following synthesized themes present a comprehensive account of the insights and lessons drawn from the participating TEIs.

3.1 Supervisory Practices Employed by TEIs

The supervisory practices of the four TEIs can be thematically mapped into six interconnected areas: instructional supervision and program management, faculty development and empowerment, technology integration, assessment and quality assurance, resource allocation and strategic adaptation. Table 2 provides a comprehensive visual representation of how each institution manages and supervises instruction, highlighting both shared practices and institutional variations across different contexts and recognition levels.

Table 2: Summary of Narrative Cases of TEIs in Central Luzon

Thematic Areas	Case 1 Private Catholic University (COD Status)	Case 2 Private University (COE Status)	Case 3 State University (Aspiring COE)	Case 4 State University (COE Status)
Instructional Supervision and Program Management	<ul style="list-style-type: none"> • Mission-vision anchored supervision • LET-focused monitoring • Biennial curriculum review • Transnational education initiatives 	<ul style="list-style-type: none"> • Annual classroom observations • Curriculum audits • CHED compliance monitoring • Artificial intelligence integration framework 	<ul style="list-style-type: none"> • Department chair supervision • 3-year curriculum reviews • MATATAG alignment • Future-ready frameworks 	<ul style="list-style-type: none"> • Program head supervision • Trust-based oversight • Robust monitoring systems • Research-based validation
Faculty Development and Empowerment	<ul style="list-style-type: none"> • Continuous capacity-building • New faculty mentorship • Professional development support 	<ul style="list-style-type: none"> • Module development training • Team-based writing • Faculty incentives and bonuses • Succession planning 	<ul style="list-style-type: none"> • Scholarship programs • Short-term training • Recognition systems • Decentralized leadership 	<ul style="list-style-type: none"> • Performance reviews • Professional development • Faculty coordination • Continuous growth focus
Technology-Enhanced Supervision and Learning	<ul style="list-style-type: none"> • Hybrid learning (50% sync/async) • Tech-based instruction • Digital assessment tools 	<ul style="list-style-type: none"> • LMS since 2018 • Blended supervision • AI integration • Device provision (tablets, Wi-Fi) 	<ul style="list-style-type: none"> • Microsoft Teams 365 • Structured LMS • Online platforms during COVID-19 	<ul style="list-style-type: none"> • LMS subscription • Digital supervision • Online monitoring during pandemic
Assessment and Quality Assurance Systems	<ul style="list-style-type: none"> • Stakeholder feedback • Program Advisory Council • Regular evaluations 	<ul style="list-style-type: none"> • Module reviews per semester • Student evaluations • Exit interviews • Board exam monitoring 	<ul style="list-style-type: none"> • Curriculum revisions • CHED & EDCOM alignment • Foreign language integration 	<ul style="list-style-type: none"> • Curriculum audits • Student evaluations • Homeroom meetings • Summative exam validation
Resource Allocation and Infrastructure Development	<ul style="list-style-type: none"> • Basic infrastructure • Limited technology resources 	<ul style="list-style-type: none"> • Comprehensive resource provision • Technology investments 	<ul style="list-style-type: none"> • Strategic resource planning • Research & development focus 	<ul style="list-style-type: none"> • Quality assurance investments • Digital infrastructure

Thematic Areas	Case 1 Private Catholic University (COD Status)	Case 2 Private University (COE Status)	Case 3 State University (Aspiring COE)	Case 4 State University (COE Status)
	• Shared facilities	• Faculty support systems	• Infrastructure improvements	• Research support
Strategic Adaptation and Future Directions	<ul style="list-style-type: none"> • Micro-credentials development • Academic equivalency pathways • Stakeholder collaboration 	<ul style="list-style-type: none"> • Hybrid learning continuity • AI integration planning • Partnership development 	<ul style="list-style-type: none"> • Future-ready frameworks • Stakeholder partnerships • Innovation focus 	<ul style="list-style-type: none"> • Sustained QA systems • Continuous faculty growth • Research & extension focus
	Well-established Practices	Developing Practices	Emerging practices	

The thematic mapping reveals distinct patterns based on institutional recognition levels and governance structures. Institutions with COE status (TEI-2 and TEI-4) demonstrate well-established practices across most thematic areas, with TEI-2 showing exceptional strength in technology integration and resource allocation, while TEI-4 excels in quality assurance and strategic adaptation. TEI-1, holding COD status, demonstrates robust strategic adaptation and moderate development across other areas, reflecting its developmental trajectory toward excellence.

TEI-3, aspiring to COE recognition, shows balanced development with particular strengths in faculty empowerment and strategic planning initiatives. All institutions demonstrated universal commitment to strategic adaptation regardless of recognition level, indicating shared awareness of the need for institutional resilience and future-oriented planning. Technology integration showed the greatest variation across cases, reflecting different institutional capacities, strategic priorities and technology adoption timelines.

Each theme encompasses specific practices implemented across the participating TEIs, supported by direct statements from the deans. Table 3 presents a comprehensive thematic framework with sub-themes and illustrative quotes.

Table 3: Summary of Narrative Cases of TEIs in Central Luzon

Theme	Sub-themes	Supporting Statements
Theme 1: Instructional Supervision and Program Management	<ul style="list-style-type: none"> • Mission-vision alignment • Curriculum audits and reviews • Accreditation compliance • Internationalization initiatives • Program monitoring systems 	<p>"I think it's also part of the management to think of a strategy where we could also contribute to the internationalization agenda of the university" (TEI-2)</p> <p>"We have strategic program monitoring; supervision anchored on</p>

Theme	Sub-themes	Supporting Statements
		<p><i>mission-vision with LET-focused goals" (TEI-1)</i></p> <p><i>"Department chairs oversee faculty; curriculum is reviewed every 3 years; the dean provides supportive leadership" (TEI-3)</i></p>
Theme 2: Faculty Development and Empowerment	<ul style="list-style-type: none"> • Structured performance reviews • Mentorship and coaching programs • Decentralized leadership approaches • Continuous professional development • Faculty recognition systems 	<p><i>"We meet as a group early in the fiscal year for our annual performance review and planning, hold a midyear review and recalibration of targets, and then another meeting before the year ends to check on our accomplishments" (TEI-3)</i></p> <p><i>"Actually, we adapt really the decentralized approach wherein we empower our chairpersons" (TEI-2)</i></p> <p><i>"All trainings are being evaluated to ensure if you're going to repeat them or going to conduct them in a better way or in a better manner" (TEI-4)</i></p> <p><i>"We provide continuous capacity-building; mentorship for new faculty with professional development support" (TEI-1)</i></p>
Theme 3: Technology-Enhanced Supervision and Learning	<ul style="list-style-type: none"> • Digital communication platforms • Hybrid supervision models • Technological resource provision • 21st-century skills integration • Online monitoring systems 	<p><i>"Transitioning to online has been challenging, but I am glad to say that the faculty members and the administration were able to create monitoring mechanisms and adjust quickly and accordingly" (TEI-3)</i></p> <p><i>"So, since the pandemic, we have been open to the possibility of our students teaching online. So, we teach them technology-related skills such as 21st-century skills" (TEI-4)</i></p> <p><i>"So, we devised a mechanism... to provide tablets, brand new tablets... and then packet Wi-Fi connection... to our students as well" (TEI-4)</i></p> <p><i>"We have LMS since 2018; blended supervision & AI integration; provision of tablets, Wi-Fi, laptops" (TEI-2)</i></p>
Theme 4: Assessment and Quality	<ul style="list-style-type: none"> • Multi-source feedback mechanisms • ISO standards compliance 	<p><i>"COVID-19 has really changed our way of managing and supervising our programs... the tool that we're adapting</i></p>

Theme	Sub-themes	Supporting Statements
Assurance Systems	<ul style="list-style-type: none"> • Regular curriculum evaluations • Stakeholder engagement processes • Student evaluation systems 	<p><i>is applicable in both online and in-person settings"</i> (TEI-4)</p> <p><i>"We ought to review our curriculum every two years. We have our program advisory council annually, and we have stakeholders or industry partners' feedback evaluation"</i> (TEI-4)</p> <p><i>"Module reviews each semester, student evaluations, exit interviews, and board exam monitoring"</i> (TEI-2)</p> <p><i>"Biennial curriculum review; stakeholder feedback via Program Advisory Council"</i> (TEI-1)</p>
Theme 5: Resource Allocation and Infrastructure Development	<ul style="list-style-type: none"> • Laboratory and facility investments • Demonstration room establishment • Digital infrastructure development • Strategic resource planning • Equipment and technology provision 	<p><i>"Resources-wise, we have our own demo room, and we share a computer and lab"</i> (TEI-1)</p> <p><i>"The university plans have been recalibrated with the pandemic, but the need to make the university a SMART one has been strengthened"</i> (TEI-3)</p> <p><i>"We have comprehensive resource provision including technology investments and faculty support systems"</i> (TEI-2)</p> <p><i>"Quality assurance investments; digital infrastructure; research support systems"</i> (TEI-4)</p>
Theme 6: Strategic Adaptation and Future Directions	<ul style="list-style-type: none"> • Future-proofing educational frameworks • Artificial intelligence integration • Flexible learning modalities • Continuous institutional development • Innovation and research focus 	<p><i>"The framework that we should have should be ready, future-proof, future-ready, then technology-driven, and it can be both face-to-face and flexible"</i> (TEI-2)</p> <p><i>"We are eyeing more training for faculty on the integration of technology, especially now that the focus is on integrating technology into teaching and preparing students for the world of work"</i> (TEI-4)</p> <p><i>"To ensure that we are able to adapt to the evolving trends and requirements, we are diligent in making ourselves updated... we attend webinars and seminars, we review research, we attend professional courses"</i> (TEI-3)</p>

Theme	Sub-themes	Supporting Statements
		"Transnational education; micro-credentials; academic equivalency pathways; stakeholder collaboration" (TEI-1)

3.1.1 Instructional Supervision and Program Management

Deans across the four TEIs demonstrated sophisticated approaches to instructional supervision and program management, with practices deeply rooted in quality assurance frameworks and strategic institutional positioning. This revealed that supervisory practices were anchored in accreditation compliance and institutional goal setting, with deans balancing administrative oversight with collaborative leadership that actively engages teachers, staff and external stakeholders.

Case 1's transnational education initiatives and Case 2's AI integration framework represent forward-thinking approaches that position these institutions for global competitiveness. Case 3's alignment with MATATAG curriculum requirements demonstrates responsiveness to national policy directives, while Case 4's research-based validation approach reflects commitment to evidence-informed decision-making.

Case 2's annual classroom observations combined with curriculum audits represent the most intensive quality assurance system, reflecting their established COE status. Case 4's trust-based oversight, paired with robust monitoring mechanisms, demonstrates how mature institutions balance autonomy with accountability. In contrast, Case 1's mission-vision anchored supervision and Case 3's decentralized leadership approach show how developing institutions create quality systems aligned with their institutional cultures and capacities.

The variation in supervisory approaches across institutional types (private Catholic, private secular, and state universities) and recognition levels (COE, COD, aspiring COE) suggests that effective supervision is contextually responsive while maintaining core commitments to quality and continuous improvement. COE institutions (Cases 2 and 4) demonstrated more comprehensive and systematic approaches, while COD and aspiring institutions (Cases 1 and 3) focused on foundational systems development and strategic positioning for advancement. The collective experiences of deans illustrate that instructional supervision in TEIs is not merely an administrative function but a transformative leadership practice that shapes institutional identity and educational outcomes while preparing institutions for future challenges and opportunities.

3.1.2 Faculty Development and Empowerment

Case 1 emphasized continuous capacity-building and mentorship for new faculty, reflecting a developmental approach aligned with the institution's mission-driven supervision. Case 2 demonstrated the most comprehensive faculty development system, implementing module development training, team-based writing initiatives and competitive incentive structures including bonuses and succession

planning. Case 3 showcased a distinctive decentralized leadership model, empowering department chairs while providing scholarship programs and short-term training opportunities. Lastly, Case 4 maintained structured performance reviews and professional development coordination, emphasizing continuous growth across instruction, research and extension functions.

The systematic implementation of annual planning sessions, midyear recalibrations and performance reviews across all cases validates the importance of structured professional development cycles. The variation in faculty development intensity across institutional types suggests that COE institutions (Cases 2 and 4) have more established and comprehensive systems, while COD and aspiring institutions (Cases 1 and 3) focus more on foundational capacity-building. However, all institutions demonstrated commitment to external engagement through CHED partnerships and professional associations, indicating shared recognition that faculty development extends beyond institutional boundaries to encompass broader professional communities.

3.1.3 Technology-Enhanced Supervision and Learning

Technology integration became indispensable across all four TEIs, accelerated by COVID-19 but institutionalized as permanent supervisory infrastructure. Case 1 implemented hybrid learning approaches with 50% synchronous and asynchronous delivery, focusing on tech-based instruction and digital assessment tools. However, their technology integration appeared more reactive to pandemic demands rather than proactive institutional strategy.

Case 2 demonstrated the most advanced technology integration, having institutionalized LMS since 2018 and pioneering artificial intelligence integration in teaching. Case 3 utilized Microsoft Teams 365 and structured LMS platforms, with particular emphasis on maintaining communication channels during remote operations. Case 4 focused on LMS subscription services and digital supervision mechanisms, with strong emphasis on online monitoring during the pandemic period.

The findings reveal that technology-enhanced supervision extends beyond communication tools to encompass pedagogical transformation. Deans supervised the embedding of 21st-century digital skills into curricula, ensuring both students and faculty developed technological competencies. The systematic provision of technological resources across cases demonstrates supervisory foresight in recognizing that digital access is fundamental to educational resilience and equity.

3.1.4 Assessment and Quality Assurance Systems

Assessment and evaluation emerged as sophisticated supervisory tools across all TEIs, with practices adapted for both traditional and blended learning environments. Case 1 implemented biennial curriculum reviews with stakeholder feedback through Program Advisory Councils, demonstrating systematic external engagement in quality assurance. Case 2 showed the most intensive assessment system with module reviews each semester, comprehensive student evaluations,

exit interviews and board examination monitoring. This intensive approach reflects their COE status and commitment to maintaining excellence standards. Case 3 emphasized curriculum revisions aligned with CHED and EDCOM-2 directives, including foreign language integration to meet national education priorities. The MATATAG curriculum alignment demonstrates how supervisory practices respond to policy mandates while maintaining institutional autonomy. Case 4 implemented comprehensive curriculum audits, student evaluations, homeroom meetings and summative examination validation, reflecting robust quality assurance infrastructure.

The integration of stakeholder feedback, industry partnerships and external accreditation across all cases validates the importance of multi-source evaluation systems. This systematic engagement ensures that quality assurance extends beyond internal metrics to encompass external validation and relevance.

3.1.5 Resource Allocation and Infrastructure Development

Resource allocation practices revealed significant variation across institutional types and recognition levels, reflecting different supervisory priorities and institutional capacities. Case 1 demonstrated basic infrastructure development with shared facilities and limited technology resources, reflecting the developmental nature of COD institutions.

Case 2 showed comprehensive resource provision including technology investments, faculty support systems and device distribution to students, demonstrating the resource advantages of established COE institutions. Case 3 emphasized strategic resource planning with focus on research and development infrastructure, while preparing for future resource needs as they aspire to COE recognition. Case 4 maintained quality assurance investments, digital infrastructure development and research support systems, reflecting their established COE status and commitment to sustained excellence.

The emphasis on demonstration rooms, laboratories and research facilities across cases validates the importance of practice-based learning infrastructure in teacher education. These investments demonstrate supervisory understanding that effective teacher preparation requires both theoretical knowledge and hands-on experience with educational technologies and pedagogical tools.

3.1.6 Strategic Adaptation and Future Directions

Strategic adaptation emerged as a defining characteristic of supervisory leadership across all TEIs, reflecting proactive approaches to institutional sustainability and relevance. Case 1 focused on transnational education, micro-credentials development and academic equivalency pathways, demonstrating international orientation in strategic planning. Case 2 emphasized hybrid learning continuity, artificial intelligence integration and partnership development as core future directions. The systematic approach to AI integration reflects recognition of emerging technological demands in education. Case 3 developed future-ready frameworks with emphasis on stronger stakeholder partnerships and innovative resource allocation for research and incentives. Case 4 maintained focus on

sustained quality assurance systems, continuous faculty growth and research and extension integration, demonstrating how established institutions prepare for future challenges while maintaining current excellence standards.

The strategic adaptation practices demonstrate that effective supervision in TEIs extends beyond current operational management to encompass institutional visioning, stakeholder engagement and preparation for uncertain futures. These practices position TEIs not merely as responsive to change but as proactive agents of educational transformation in their communities and the region, in general.

3.2 Critical Insights and Lessons from the TEIs' Experiences

Institutions with COE status (TEI-2 and TEI-4) demonstrated more systematic, comprehensive and technologically advanced supervisory practices compared to COD and aspiring institutions. However, all institutions showed strong commitment to quality improvement and strategic development, suggesting that supervisory excellence exists across recognition levels with varying degrees of systematization and resource allocation.

The study revealed three distinct technology adoption patterns: proactive integration (TEI-2), reactive adaptation (TEI-1 and TEI-3), and systematic enhancement (TEI-4). Proactive institutions had established digital infrastructure before the pandemic, enabling smoother transitions and more advanced integration. Reactive institutions developed capabilities in response to pandemic demands, while systematic enhancers expanded existing digital foundations during crisis periods.

Meanwhile, private institutions (TEI-1 and TEI-2) demonstrated more flexible and innovative approaches to supervision, while state universities (TEI-3 and TEI-4) emphasized systematic compliance and structured oversight. However, both governance types showed commitment to quality assurance, faculty development and strategic adaptation, suggesting that effective supervision transcends institutional ownership models.

All institutions prioritized faculty development through structured performance reviews, professional training opportunities and recognition systems. The universal emphasis on continuous professional development reflected shared understanding that faculty quality directly impacts instructional excellence and institutional reputation. Regardless of recognition level or governance structure, all institutions demonstrated strong commitment to strategic adaptation and future-oriented planning. This universal pattern suggests institutional recognition of rapidly changing educational environments and the necessity of proactive response strategies for sustained relevance and quality.

Effective supervisory practices in TEIs must be contextually responsive while maintaining core quality commitments. Institutions successfully adapted supervision approaches to their governance structures, resource capacities and community contexts while upholding universal standards for teacher preparation quality. The most effective institutions employed multi-modal supervision

systems that integrated traditional oversight with digital platforms, stakeholder engagement and peer collaboration. These comprehensive approaches enabled multifaceted and responsive supervision that addressed diverse institutional needs and challenges.

In addition, successful supervisory practices extended beyond operational oversight to encompass strategic leadership in institutional transformation, community engagement and future planning. Deans who integrated supervisory responsibilities with strategic leadership roles achieved greater institutional impact and sustainability. Institutions that demonstrated strong resilience during pandemic disruptions had established flexible supervisory systems, strong technology infrastructure and cultures of continuous learning. These characteristics enabled rapid adaptation while maintaining quality standards and institutional mission alignment.

4. Discussion

The supervisory practices observed across all four TEIs align with Glickman's (1985) Developmental Supervision Theory, which emphasizes differentiated supervisory support based on institutional contexts and faculty capabilities. The systematic implementation of curriculum audits, program reviews and structured supervision validates Dewodo et al.'s (2019) emphasis on both internal and external supervisory strategies as components of holistic instructional supervision frameworks.

Marshall (2024) asserted that effective instructional leaders must operate from shared understanding of teaching practices, which was evident in how all institutions-maintained alignment with CHED standards while adapting practices to their unique contexts. The internationalization initiatives (Eder, 2020) observed particularly in TEI-1 and TEI-2 reflect Shen et al.'s (2020) emphasis on supervisory practices extending beyond internal management toward broader policy advocacy and community partnership.

The systematic approach to faculty development across all cases validates Borg's (2003) Theory of Teacher Cognition, which recognizes the importance of supporting educators' beliefs, knowledge and professional growth. The decentralized leadership model implemented by TEI-3 particularly demonstrates Fritz and Miller's (2003) advocacy for teacher-directed supervision that enhances professional autonomy. Joshua et al. (2023) argued that leadership fostering empowerment and collaboration is crucial for quality assurance, which was evident in the structured performance reviews, mentorship programs and professional development initiatives across all institutions.

The institutionalization of digital supervision across all TEIs reflects Prestiadi et al.'s (2021) and Handayani's (2024) findings on the effectiveness of virtual platforms in facilitating instructional supervision. The comprehensive technology integration demonstrated by TEI-2 and TEI-4 aligns with Pei et al. (2023) and Rupiah's (2021) emphasis on how technology investments position institutions for adaptability and global competitiveness. The sophisticated assessment systems

implemented across all institutions validate Hussain et al.'s (2014) argument that effective curriculum development requires robust feedback and monitoring mechanisms embedded in decision-making processes. The hybrid evaluation approaches developed during COVID-19 demonstrate institutional resilience and adaptability in maintaining quality standards. The varied approaches to resource allocation reflect Hempel et al.'s (2021) emphasis on strategic decision-making, particularly during institutional challenges. Ultimately, the commitment to futureproofing demonstrated across all cases aligns with Imran's (2024) argument that educational systems must continuously evolve to address global challenges.

The findings reveal distinct patterns based on institutional recognition levels. COE institutions (TEI-2 and TEI-4) demonstrated more comprehensive and systematic supervisory practices, while COD and aspiring institutions (TEI-1 and TEI-3) focused on foundational development and strategic positioning for advancement. However, all institutions shared commitment to quality assurance, faculty development and strategic adaptation, suggesting that supervisory excellence transcends formal recognition levels. The variation in technology integration reflects different institutional capacities and strategic priorities, with some institutions having proactively adopted digital tools pre-pandemic while others reactively adapted during COVID-19. This suggests the importance of strategic planning in technology adoption for sustainable supervisory practices.

5. Conclusions

This study explored the supervisory practices of deans in TEIs in Central Luzon, Philippines, with the aim of identifying how these practices contribute to ensuring quality instruction, faculty development and institutional resilience in a rapidly evolving educational landscape. The findings revealed six interrelated supervisory practices that collectively sustain instructional quality. First, deans ensured strong instructional supervision and program management through accreditation compliance, curriculum audits and internationalization strategies. Second, faculty development and empowerment were promoted through systematic performance reviews, professional training and decentralized leadership.

Third, technology-enhanced supervision was institutionalized through digital platforms, blended monitoring and provision of technological resources. Fourth, assessment and quality assurance systems relied on hybrid evaluation tools, feedback mechanisms and alignment with CHED memorandum orders and ISO standards. Fifth, supervisory leadership extended to resource allocation and infrastructure development, including the establishment of demonstration rooms, laboratories and digital facilities. Finally, strategic adaptation and future directions highlighted the importance of future-proofing curricula through artificial intelligence integration, flexible learning and continuous faculty training.

These findings underscore the crucial role of supervisory leadership in shaping teacher education in the Philippines. Supervisory practices that integrate quality assurance, faculty empowerment, technological adaptation and resource management enable TEIs to remain globally competitive while responsive to local

educational needs. The results also point to the importance of resilience and adaptability, as TEIs prepare graduates to thrive in uncertain and rapidly changing environments.

While this study provides rich insights into supervisory practices, its scope was limited to four TEIs in Central Luzon. As a case study, findings are context-specific and may not fully capture the diversity of supervisory approaches across other regions of the Philippines. Broader studies are needed to validate and expand upon these findings.

6. Recommendations and Practical Implications

For institutional leaders, there is a need to establish structured performance review cycles with midyear recalibrations to ensure continuous professional growth and institutional alignment. It is also recommended to integrate digital platforms with traditional supervision methods to create flexible, responsive oversight systems that can adapt to various learning modalities. The implementation of multi-source evaluation mechanisms including stakeholder feedback, industry partnerships and external validation to ensure comprehensive quality monitoring is likewise recommended.

For faculty members of TEIs, it is recommended that they embrace technology integration by developing 21st century digital skills to enhance instructional delivery and participate effectively in technology-enhanced supervision systems. They should also engage in continuous learning by actively participating in professional development opportunities, research activities and collaborative improvement initiatives. It is also recommended that they support decentralized leadership models by taking ownership of professional growth and contributing to institutional improvement efforts.

The findings extend existing supervisory theories by demonstrating how traditional frameworks like Glickman's Developmental Supervision Theory can be adapted for contemporary higher education contexts, particularly in developing country settings. The study validates the importance of contextually responsive supervision that maintains quality standards while adapting to institutional capacities and community needs. Furthermore, the research contributes to understanding how supervisory practices can serve as catalysts for institutional transformation, moving beyond traditional oversight functions to encompass strategic leadership, international engagement and future-oriented planning.

7. Conflict of Interest

The authors declare that they have no conflict of interest in the conduct and reporting of this study. No financial, institutional or personal relationships influenced the design, implementation, analysis or interpretation of the research. This study was carried out solely for academic purposes, and all findings were presented with integrity and transparency.

8. Acknowledgments

The authors extend their heartfelt gratitude to Pampanga State University for the administrative support that made the completion of this study possible. Deep appreciation is also given to the deans of the various TEIs in Central Luzon who generously shared their time, insights and experiences, which served as the foundation of this research. The authors likewise acknowledge the valuable assistance of colleagues, mentors and individuals who provided encouragement and constructive feedback throughout the research process. The authors also wish to acknowledge the use of Claude and Grammarly in improving the clarity of language, grammar and organization of ideas in this paper. The tools were used solely for language refinement and formatting support, while the research findings, analysis and interpretations remain the sole intellectual contributions of the authors.

9. References

- Adeyemo, A. O., & Sehoole, C. (2019). *Higher education policy in the Philippines and ASEAN integration: Demands and challenges*. Koninklijke Brill NV.
- Batoon, N. P. (2022). Assessment of quality assurance implementation: Valuation and impact of the accrediting agency of chartered colleges and universities in the Philippines (AACUP) accreditation. *Central European Management Journal*, 30(4), 109-119.
- Borg, S. (2003). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe, and do. *Language Teaching*, 36(2), 81-109. <https://doi.org/10.1017/S0261444803001903>
- Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57-71). American Psychological Association. <https://doi.org/10.1037/13620-004>
- Commission on Higher Education. (2016). *CHED Memorandum Order No. 17, s. 2016: Designated centers of excellence (COEs) and centers of development (CODs) for teacher education program*. <https://ched.gov.ph/wp-content/uploads/2017/10/CMO-17-s.-2016.pdf>
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). SAGE.
- Dewodo, C. Y., Agbetorwoka, A., & Wotordzor, P. (2019). Problems of school supervision at the basic school level in the Hohoe Municipality of Ghana. *American Journal of Educational Research*, 7(2), 133-140. <https://doi.org/10.12691/education-7-2-3>
- Ebele, U. F., & Olofu, P. A. (2017). Study habit and its impact on secondary school students' academic performance in biology in the Federal Capital Territory, Abuja. *Educational Research and Reviews*, 12(10), 583-588. <https://doi.org/10.5897/ERR2016.3117>
- Eder, R. (2020). *Internationalization of higher education in the Philippines: Local articulations of an international phenomenon*. (Doctoral thesis, Université de Fribourg). FOLIA repository. <https://folia.unifr.ch/global/documents/309196>
- Fritz, C., & Miller, G. (2003). Supervisory options for instructional leaders in education. *Journal of Leadership Education*, 2(2), 13-27. <https://doi.org/10.12806/v2/i2/rf2>
- Glickman, C. D. (1981). *Developmental supervision: Alternative practices for helping teachers improve instruction*. Association for Supervision and Curriculum Development (ASCD).
- Glickman, C. D. (1985). *Supervision of instruction: A developmental approach*. Allyn and Bacon.

- Gustafsson, J.-E., Ehren, M. C. M., Conyngham, G., McNamara, G., Altrichter, H., & O'Hara, J. (2015). From inspection to quality: Ways in which school inspection influences change in schools. *Studies in Educational Evaluation*, 47, 47–57. <https://doi.org/10.1016/j.stueduc.2015.07.002>
- Handayani, L. (2024). Critical review of technology-based education supervision models: Implications for improving the quality of learning in the digital age. *JPP (Jurnal Pendidikan Dan Pembelajaran)*, 31(1), 31. <https://doi.org/10.17977/jpp.v31i1.50923>
- Hempel, S., Burke, R., Hochman, M., Thompson, G., Brothers, A., Shin, J., Motala, A., Larkin, J., Bolshakova, M., Fu, N., & Ringel, J. (2021). Allocation of scarce resources in a pandemic: Rapid systematic review update of strategies for policymakers. *Journal of Clinical Epidemiology*, 139, 255–263. <https://doi.org/10.1016/j.jclinepi.2021.04.021>
- Hussain, Z., Adeeb, A., & Aslam, H. D. (2014). Curriculum implementation and feedback mechanism at secondary school level in Punjab, Pakistan. *International Journal of Learning and Development*, 1(2), 92. <https://doi.org/10.5296/ijld.v1i2.6645>
- Imran, I. (2024). Dinamika kurikulum nasional: Tinjauan sejarah dan prospek masa depan. *Jurnal Mudarrisuna: Media Kajian Pendidikan Agama Islam*, 14(2), 266. <https://doi.org/10.22373/jm.v14i2.23825>
- Joshua, Q., Supriyanto, S., Aryanti, T., Jyi, M. W. H., & Tettehio, E. O. (2023). Leadership as a factor in maintaining quality assurance in technology and vocational education and training: A systematic literature review. *VANOS Journal of Mechanical Engineering Education*, 8(2), 156. <https://doi.org/10.30870/vanos.v8i2.21574>
- Marshall, K. (2024). *Rethinking teacher supervision and evaluation*. John Wiley & Sons. <https://doi.org/10.1002/9781394308316>
- National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. (1979). *The Belmont report: Ethical principles and guidelines for the protection of human subjects of research*. U.S. Department of Health and Human Services. https://www.hhs.gov/ohrp/sites/default/files/the-belmont-report-508c_FINAL.pdf
- Ortega, H. C., Castro, R., Tolentino, J. C., Pusung, D. S. ., & Abad, R. . (2022). The hidden curriculum in a Filipino pre-service physical educators' virtual ecology. *Edu Sportivo: Indonesian Journal of Physical Education*, 3(1), 25–40. [https://doi.org/10.25299/es:ijope.2022.vol3\(1\).8851](https://doi.org/10.25299/es:ijope.2022.vol3(1).8851)
- Pei, E., Kim, S., Kim, S., Lee, D., Lee, S., & Self, J. (2023). Design education 4.0: Technology-driven design futures & the future of design education. *IASDR 2023: Life-Changing Design*. <https://doi.org/10.21606/iasdr.2023.165>
- Prestiadi, D., Maisyaroh, M., Zulkarnain, W., Nurabadi, A., Arifin, I., & Nauval Bhayangkara, A. (2021). Pengembangan video bahan ajar sipejar pada perkuliahan blended learning supervisi pengajaran melalui model pembelajaran problem based role playing (PBRP). *JAMP : Jurnal Administrasi Dan Manajemen Pendidikan*, 4(1), 72–87. <https://journal-fip.um.ac.id/index.php/jamp/article/view/1714>
- Rupiah, R. (2021). Utilization of information and communication technology (ICT) in academic supervision during the COVID-19 pandemic. *Jurnal As-Salam*, 5(2), 120–128. <https://doi.org/10.37249/assalam.v5i2.304>
- Shaharudin, M. R., Sooksomchitra, A., & Patanakul, M. (2021, August 18). *Supervision state of professional experience practice in the Faculty of Education, Suan Sunandha Rajabhat University* [Conference paper]. *The 14th National and International Conference: Global Goals, Local Actions: Looking Back and Moving Forward 2021*, Suan Sunandha Rajabhat University, Bangkok, Thailand).
- Shen, J., Wu, H., Reeves, P., Zheng, Y., Ryan, L., & Anderson, D. (2020). The association between teacher leadership and student achievement: A meta-analysis.

- Educational Research Review*, 31, 100357.
<https://doi.org/10.1016/j.edurev.2020.100357>
- Stinchfield, T. A., Hill, N. R., & Bowers, R. (2019). Integrative reflective model of group supervision: Practicum students' experiences. *Counselor Education and Supervision*, 58(2), 141–157. <https://doi.org/10.1002/ceas.12137>
- Yin, R. K. (2017). *Case study research and applications: Design and methods* (6th ed.). SAGE.
- Yusuf, M., Fitria, H., & Mulyadi, M. (2021). The influence of teacher's supervision and professionalism on teacher's performance. *Journal of Social Work and Science Education*, 1(3), 234–240. <https://doi.org/10.52690/jswse.v1i3.110>