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Exploring the application of academic leadership skills in teacher education institutions, Philippines: basis for institutional sustainability and innovation

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Teacher Education Institutions (TEIs) in the Philippines play a strategic role in producing future educators but face persistent disparities in performance outcomes and increasing demands for quality assurance, digital transformation, and global benchmarking. This study explores the application of academic leadership competencies—specifically technical, human, and conceptual skills—among academic leaders in TEIs to determine their impact on enhancing institutional sustainability and innovation. The study employed a descriptive research design to assess leadership practices across public and private TEIs in Batangas Province, Philippines. A total of 31 academic leaders and 130 faculty members were surveyed using a validated questionnaire. Data were analyzed using weighted mean scores to quantify the extent of leadership skill application. Findings reveal that academic leaders apply technical and human skills to a “very great extent,” particularly in areas such as contingency decision-making, participatory planning, and promoting institutional trust. Conceptual skills, while present, are comparatively less emphasized, indicating a calculated gap in strategic visioning and change management. The study underscores the necessity for competency-based leadership development programs and institutional mechanisms that foster adaptive, inclusive, and progressive governance. By mapping leadership practices to sustainability outcomes, the research provides a basis for strengthening TEIs’ capacity to navigate educational reforms and uphold excellence in teacher preparation.

KEYWORDS

academic leadership, conceptual skills, Human skills innovation, institutional sustainability, Philippines, teacher education institutions, technical skills

1 Introduction

Teacher Education Institutions (TEIs) occupy a strategic position in the Philippine educational system as the training grounds for future educators and education leaders. They are entrusted with producing highly competent teachers who will deliver quality education to learners at all levels and drive the country’s human capital development ([Commission on Higher Education \[CHED\], 1999](#); [Commission on Higher Education \[CHED\], 2004](#)).

These institutions—ranging from state universities and colleges (SUCs) and local universities and colleges (LUCs) to private higher education institutions (HEIs) and specialized “normal” schools—operate under the regulatory oversight of the Commission on Higher Education (CHED) and are subject to accreditation processes that ensure their programs meet national and international standards of quality and relevance (Olvido et al., 2024). CHED Memorandum Order No. 11 (1999) and CMO No. 30 (2004) highlight the core mission of TEIs: to produce globally competent educators, grounded in Filipino ideals, with the ability to contribute meaningfully to nation-building. This mission entails balancing general education, professional education, and content specialization while embedding values formation and research-based practice.

Despite their centrality, TEIs present wide variation in performance outcomes. Research consistently shows that SUCs, particularly those with long-established teacher education programs, frequently outperform smaller and less-resourced private institutions in terms of Licensure Examination for Teachers (LET) passing rates, particularly in elementary education (Philippine Business for Education, 2014; Center for Integrative and Development Studies, 2023). Conversely, some private TEIs show stronger performance in secondary education licensure, underscoring institutional diversity and the need for differentiated strategies for capacity-building (Commission on Higher Education [CHED], 2024). The disparity in outcomes has pushed many TEIs to adopt transformative initiatives such as Outcomes-Based Education (OBE), enhancement of experiential learning and practicum components, and implementation of digital innovations including e-portfolios, Learning Management Systems (LMS), and student analytics platforms to improve learning outcomes (Boholano et al., 2022). For instance, Cebu Normal University pioneered e-portfolio use to strengthen reflective practice, while many SUCs have institutionalized faculty development programs and research capacity-building as part of their quality assurance frameworks (Cebu Normal University, 2023; Limson, 2023).

These institutional innovations reflect a broader national and global trend that positions TEIs as agents of change and continuous improvement. Globally, teacher education has been influenced by the call for internationalization, intercultural competence, and evidence-based practice. Comparative studies—such as the Teacher Education and Development Study in Mathematics (TEDS-M)—have shown that pre-service teacher preparation varies according to national cultural orientations and policy contexts, affecting teacher quality outcomes (Blömeke, 2021; Haapaniemi et al., 2020). High-performing systems like Finland and Singapore highlight the importance of granting TEIs autonomy to exercise professional judgment while anchoring their programs in rigorous pedagogical research and global benchmarking (Chung, 2023; Al-Thani, 2024). These developments underscore that TEIs must not only meet national regulatory requirements but also cultivate adaptive capacities to remain competitive and relevant in a globalized education landscape.

The central research question that drives this inquiry, framed by the Katz Three-Skill Approach to Leadership, is: “To what extent are the three indispensable academic leadership skills namely, Technical, Human, and conceptual, applied by leaders in Philippine Teacher Education Institutions, and how does the balance of these competencies impact institutional sustainability

and innovation in the current era of educational reform?” By systematically examining how these skills are practiced, the study aims to generate empirical evidence on their relationship to institutional sustainability and innovation. Its findings are expected to guide capacity-building initiatives, inform competency-based standards for leadership selection and evaluation, and support TEIs in aligning their internal quality assurance systems with CHED and international benchmarks.

2 Materials and methods

In the HE context, technical skills refer to a leader’s specific knowledge of processes, procedures, and systems necessary for operational functionality. This extends to digital leadership, where proficiency in managing data systems, implementing Learning Management Systems (LMS), and utilizing institutional analytics is crucial for program monitoring and enhancing instructional delivery (Salamzadeh et al., 2023). Motta and Valmor (2013) emphasized that technical proficiency in core administrative tasks, such as budgeting and accreditation reporting, directly supports overall institutional efficiency. Furthermore, technical competence is foundational for effective contingency decision-making, enabling leaders to logically organize tasks and respond systematically to procedural uncertainty (Sharma, 2017).

Human skills represent the relational core of effective leadership, encompassing the ability to build trust, manage conflict, and foster a positive, collaborative institutional culture. This dimension is strongly linked to transformational leadership. Avolio and Bass (2004) argue that key human skills—such as individualized consideration and inspirational motivation—are vital for enhancing faculty commitment and organizational health. Mérida-López and Extremera (2017) established a strong link between emotional intelligence and leadership effectiveness. Studies consistently show that leadership styles emphasizing collegial engagement and participatory decision-making predict successful innovation and reform implementation (Gamage and Whiting, 2021).

Conceptual skills involve the capacity for strategic visioning, systems thinking, and aligning internal strategies with external policy environments. Leaders with strong conceptual ability are able to see the “big picture,” translate complex regulatory frameworks into actionable policies (Shaver, 2016), and mobilize faculty around a common mission (Gandrita, 2023). This skill underpins systems leadership (Senge et al., 2015), which is essential for guiding TEIs through complex, adaptive challenges. Moreover, Gumus et al. (2022) found that a leader’s conceptual capacity to challenge the status quo is a key factor in fostering organizational innovation.

In the context of this study, institutional sustainability is defined as the enduring capacity of Teacher Education Institutions (TEIs) to maintain operational viability, academic excellence, and continuous alignment with regulatory and international standards, such as the Commission on Higher Education (CHED) Institutional Sustainability Assessment (ISA). It encompasses the ability to withstand external pressures, such as the K-to-12 transition and digital transformation, while safeguarding the quality of teacher preparation. Complementarily, innovation is

operationalized as the proactive adoption and implementation of novel pedagogical frameworks (e.g., Outcomes-Based Education), digital systems (e.g., Learning Management Systems and student analytics), and adaptive governance strategies that enhance institutional responsiveness and teacher quality outcomes. Both constructs are viewed not as static endpoints, but as dynamic institutional outcomes driven by competent leadership.

The strategic application of the three leadership skills is intrinsically tied to an institution's capacity for adaptation, innovation, and long-term sustainability. Comparative studies across different national contexts show that high-performing educational systems rely on TEI leaders who can effectively balance institutional autonomy with rigorous pedagogical research and global benchmarking (Blömeke, 2021; Haapaniemi et al., 2020). This adaptive requirement underscores the importance of a well-rounded skill set. Al-Husseini and Elbeltagi (2018) assert that leadership commitment—driven by strategic conceptual skills—is a primary determinant of the effectiveness of quality assurance mechanisms, which are central to ensuring institutional sustainability (Sterling, 2010).

The intensive national thrust toward digital transformation has focused local research on technical and digital competencies. Recent studies by Abuan et al. (2024) and Morales (2024) demonstrated a significant positive correlation between administrators' digital leadership practices and faculty members' Technological Pedagogical Content Knowledge (TPACK) in Philippine HEIs. This indicates that the application of Technical Skills is recognized as a key instrument for improving teacher quality and institutional readiness for Education 4.0 reforms. Furthermore, Fuertes et al. (2020) highlighted that organizational leaders' technical proficiency in managing compliance and institutional processes is crucial for achieving high institutional effectiveness ratings.

Philippine studies consistently affirm the paramount importance of Human/Interpersonal Skills for effective governance and change management. Research by Miramon et al. (2024) reports that leadership styles emphasizing collegial engagement and participatory decision-making are strongly predictive of successful technology integration and curriculum reform implementation in local universities. The capacity for organizational resilience, essential for navigating frequent policy shifts, is linked to adaptive leadership. Valerio and Ching (2024) found that adaptive leadership competencies significantly influence organizational performance in Philippine public schools, underscoring the necessity for leaders who can successfully mobilize and support their people through transitions.

Despite clear strengths in relational and technical execution, local research has identified critical areas for development in Conceptual Skills. Studies on management in the Philippines and Southeast Asia have found persistent gaps in mid-level managers' strategic planning and change management skills (Pham et al., 2019; Sanie et al., 2022). This suggests a tendency for leaders to be highly effective managers of the present but potentially less proactive as visionaries for the future. Crucially, despite the extensive literature supporting the theoretical necessity of all three skills, there is a definitive gap in a comprehensive, empirically validated framework that quantitatively assesses the extent of application and the functional balance of all three competencies among academic leaders in Philippine Teacher

Education Institutions and directly relates this balance to achieving both institutional sustainability and innovation.

2.1 Theoretical framework

At the heart of these institutional efforts lies the vital role of academic leadership. Academic leaders—deans, department chairs, program heads, and coordinators—function as the stewards of educational quality, the drivers of curriculum and pedagogical innovation, and the anchors of institutional culture. Effective academic leadership is multidimensional: it requires technical expertise, interpersonal acumen, and conceptual foresight to guide TEIs through the complexities of reform implementation, technology integration, faculty development, and quality assurance compliance (Katz, 1974; Heenan et al., 2023).

This multi-dimensionality is best explained by Katz's (1974) classic Three-Skill Approach to Leadership, which serves as the theoretical framework for this study. The framework posits that effective leadership requires the mastery and proper balance of three core competencies, and its adoption directly informs this study's design and analysis by providing the specific dimensions against which academic leadership performance is measured:

Technical Skills refer to leaders' ability to utilize digital tools, manage data systems, and oversee operational processes critical to effective curriculum delivery and institutional functioning. Leaders proficient in implementing LMS platforms, online grading systems, e-portfolios, and analytics tools significantly enhance student engagement and program monitoring (Salamzadeh et al., 2023). In Philippine contexts, studies have shown that digital leadership positively correlates with teachers' technological pedagogical content knowledge (TPACK) and institutional readiness for Education 4.0 reforms (Abuan et al., 2024; Morales, 2024).

Human or interpersonal skills involve the capacity to build relationships, foster trust, and nurture a positive institutional climate. Emotional intelligence, empathy, and transformational leadership behaviors are strongly linked to teacher motivation, faculty collaboration, and institutional effectiveness (Mérida-López and Extremera, 2017). Philippine studies report that leadership styles emphasizing participatory decision-making and collegial engagement predict more successful implementation of technology integration and curriculum reforms (Miramon et al., 2024). The promotion of Professional Learning Communities (PLCs) within TEIs is one concrete expression of interpersonal competence, encouraging shared reflection, co-teaching strategies, and continuous professional growth (Gamage and Whiting, 2021).

Conceptual skills encompass strategic visioning, policy interpretation, systems thinking, and change management. Leaders with strong conceptual skills can anticipate trends, align institutional strategies with national reforms (e.g., K-12, OBE), and mobilize faculty around a common mission (Gandrita, 2023). Studies in Vietnam and the Philippines have identified gaps in mid-level managers' strategic planning and change management skills, suggesting that these areas are critical levers for institutional transformation (Pham et al., 2019; Sanie et al., 2022). Conceptually competent leaders are also capable of translating regulatory frameworks into actionable policies and framing institutional narratives that inspire stakeholder buy-in.

Together, these competencies empower TEI leaders to act as adaptive change agents—capable of steering institutions through volatility, uncertainty, complexity, and ambiguity (VUCA) while safeguarding quality and promoting innovation. Yet, there remains a notable gap in the Philippine context: no comprehensive, empirically validated framework exists that maps how these competencies are applied by TEI leaders and how they influence institutional adaptation and sustainability.

While the focus of this research is the measurement of the application of leadership skills, these competencies are explicitly framed as the functional basis for achieving sustainability and innovation. The study does not seek to measure sustainability metrics (e.g., longitudinal financial health) or innovation outputs (e.g., rate of technology adoption) directly. Instead, it measures the technical, human, and conceptual precursors that enable these outcomes. By quantifying the “extent of application” of these skills, the research establishes a proxy for an institution’s readiness to sustain excellence and adopt an innovative culture in an unpredictable educational setting. This approach ensures alignment between the leadership behaviors measured and the strategic goals of the TEIs.

The significance of this inquiry cannot be overstated. Philippine higher education continues to grapple with far-reaching reforms, including the K-to-12 transition, internationalization efforts, digital transformation, and intensified quality assurance mechanisms such as CHED’s Institutional Sustainability Assessment (ISA) and ASEAN University Network–Quality Assurance (AUN-QA). TEIs, as the main producers of teachers, must adapt quickly to these shifts to ensure that graduates are globally competitive and responsive to diverse classroom needs. By clarifying which leadership competencies are most critical for adaptation, this study contributes to strengthening institutional resilience, enhancing faculty and program quality, and fostering a culture of continuous improvement in teacher education. Ultimately, it seeks to advance the long-term sustainability and innovative capacity of Philippine TEIs, positioning them as key players in national development and global education.

2.2 Research design

This study employed the descriptive research design to determine the extent of application of academic leadership skills—technical, human, and conceptual—among academic leaders in Teacher Education Institutions (TEIs) in the Philippines. This design was selected because it systematically describes existing conditions and practices, enabling the study to capture how these competencies are currently exercised in varied institutional contexts. By focusing on what is, rather than manipulating variables, descriptive research provides an accurate representation of leadership competencies as they naturally occur within TEIs, thereby aligning directly with the study’s objective.

The methodological foundation of this study is supported by the framework of Stanley (2023), who identified the descriptive approach as a “very good place to start” for researchers seeking to provide a literal and comprehensive summary of a specific phenomenon. Unlike more complex methodologies that require alignment with a specific theoretical orientation, the descriptive design focuses on capturing the everyday reality of a context—in this case, the leadership practices within Teacher Education

Institutions (TEIs). According to Stanley, the hallmark of a high-quality descriptive study is its ability to remain close to the data, ensuring that the findings are presented in straightforward, everyday terms that are accessible to both practitioners and policymakers. While the approach is often viewed as exploratory, Stanley argues that its “elegant simplicity” requires comprehensive planning and systematic analysis to for the resulting description to be both accurate and transformative for institutional practice.

2.3 Settings and sampling

The study was conducted in selected Teacher Education Institutions (TEIs) in Batangas Province, Philippines. This location was strategically chosen because it is a recognized educational hub within the CALABARZON region, hosting a diverse ecosystem of TEIs, including State Universities and Colleges (SUCs), Local Universities and Colleges (LUCs), and private Higher Education Institutions (HEIs) that offer Commission on Higher Education (CHED)-mandated teacher education programs. The setting was deemed appropriate because it represents a microcosm of the broader Philippine teacher education landscape, reflecting differences in institutional resources, governance, and organizational culture. Including both public and private TEIs allowed the study to capture diverse contexts, making the findings relevant not only within the province but also to similar institutions nationwide.

The total sample was composed of 31 academic leaders (deans, associate deans, department chairs, and program coordinators) and 130 faculty members involved in the teacher education programs of the selected institutions. For the academic leaders, a Total Enumeration Sampling approach was utilized. Given the specialized and manageable size of this population within the selected TEIs, total enumeration ensured that every individual directly responsible for academic leadership and program governance was included. This method eliminates sampling error for the leadership group, and also provides an accurate, census-based assessment of their competencies.

For the faculty members, a Purposive Sampling technique was employed. Faculty members were selected based on the specific criterion that they regularly interact with and are supervised by the academic leaders being assessed. They are considered the key informants best positioned to evaluate the practical application of the leaders’ technical, human, and conceptual skills based on direct, lived experience. This non-probability strategy was deemed suitable for the study’s objective, which is not to generalize findings across the entire country, but to provide a detailed, context-specific assessment of leadership competence within the chosen TEI ecosystem, thereby maximizing data relevance and contextual validity. This methodological triangulation of data sources (self-assessment vs. direct experience) strengthens the credibility of the findings regarding the extent of leadership skill application.

This dual-group design ensured a balance of perspectives: leaders provided self-assessments of their competencies, while faculty offered feedback based on lived experiences of leadership practices. Although no probability sampling was employed, the approach was suitable for the study’s objective of determining the extent of application of technical, human, and conceptual leadership skills, as it maximized accuracy and contextual validity within the chosen TEIs.

2.4 Data collection

The primary data for the study were collected through the administration of a structured survey questionnaire designed to assess the extent of application of technical, human, and conceptual skills among academic leaders in Teacher Education Institutions (TEIs). The questionnaire was carefully crafted based on the objectives of the study and was subjected to expert and practitioner review to establish face and content validity, ensuring that each item was clear, precise, and comprehensive in measuring the intended constructs. A pilot test was conducted prior to the full administration, and the instrument's internal consistency was measured using Cronbach's alpha. The reliability coefficient obtained was 0.963, which exceeded the acceptable threshold of 0.70, confirming that the instrument was both reliable and appropriate for use in the study.

Following validation and pilot testing, the questionnaire was formally administered to the identified respondents—academic leaders and faculty members—across the participating TEIs. The administration process was straightforward, with respondents taking an average of 15 min to accomplish the survey. Collected responses were carefully tallied, organized, and processed using appropriate statistical treatments to ensure accuracy and objectivity in the analysis. This systematic approach to data collection provided a sound empirical basis for addressing the study's objectives and for generating meaningful insights into the leadership competencies being applied within the evolving contexts of teacher education institutions.

Despite the methodology applied, certain limitations must be acknowledged regarding the study's external validity and generalizability. First, the sample size for academic leaders ($N = 31$) is relatively small, which may restrict the statistical power of the findings. Furthermore, the use of non-probability purposive sampling for faculty members and the restriction of the study to a single province (Batangas) limits the extent to which these results can be generalized to Teacher Education Institutions across the Philippines. While perception provides valuable insights into organizational climate, it introduces the potential for social desirability bias, where respondents may over-report positive leadership behaviors, and common method bias, stemming from the use of a single measurement tool for both independent and dependent perceptions. Future research should consider incorporating objective performance metrics or longitudinal observations to complement these perceptual findings.

To build upon the current findings, future studies should expand the geographical scope to include diverse regions in the Philippines and utilize random sampling techniques to enhance representativeness. Incorporating a mixed-methods approach, including qualitative interviews or 360-degree evaluations, could further reduce bias and provide deeper nuance into how “leadership skills” are operationalized in high-performing institutions.

3 Analysis

The responses gathered through the validated questionnaire were systematically coded, scored, and analyzed using the Statistical

Package for the Social Sciences (SPSS) to ensure accuracy, consistency, and efficiency in data processing. The use of SPSS facilitated the organization of raw data, computation of descriptive statistics, and generation of weighted mean scores necessary for interpreting the extent of application of academic leadership competencies—specifically technical, human, and conceptual skills—among academic leaders in Teacher Education Institutions.

A four-point Likert scale was employed, where responses were assigned numerical weights ranging from 1 to 4. Each numerical value corresponded to a verbal interpretation that reflected the respondents' assessments: 4 (3.50–4.00)—To a Great Extent (GE) 3 (2.50–3.49)—To a Moderate Extent (ME) 2 (1.50–2.49)—To a Slight Extent (SE) 1 (1.00–1.49)—Not at All (NA).

This scaling method allowed the researcher to quantify perceptions and experiences while ensuring clarity and consistency in interpretation across all respondents.

To ensure accurate and objective interpretation of the results, the primary statistical measure employed was the weighted mean, which was computed using SPSS to determine the overall assessments of the respondents regarding the extent of leadership skills applied. Through this statistical technique, the researcher accounted for variations in response frequencies and obtained a more representative measure of leadership competencies under study. The weighted mean analysis enabled the identification of which among the technical, human, and conceptual skills were most strongly or weakly manifested in academic leadership practices across the participating institutions. This analytical approach directly addressed the study's objective of determining the extent of application of leadership skills, providing a sound empirical basis for identifying strengths, gaps, and areas for leadership development within Teacher Education Institutions in the Philippines.

3.1 Extent of application of academic leaders technical skills

The findings indicate that technical skills play a critical role in enabling academic leaders of Teacher Education Institutions (TEIs) to manage organizational change effectively and sustain institutional performance. [Table 1](#) reveals that technical skills—especially contingency decision-making—are applied to a *very great extent*, reflecting leaders' ability to respond to challenges and uncertainties in a timely, rational, and context-sensitive manner. This supports Fiedler's Contingency Theory, which posits that no single management style is universally effective, and that decision-making must adapt to situational demands (Fiedler, 1967). In TEIs, this adaptability is crucial as administrators regularly face situations such as sudden policy changes, shifting accreditation requirements, course revisions, and urgent reporting deadlines. The ability to respond flexibly ensures that institutional operations continue smoothly, minimizing disruption to teaching and learning (Sharma, 2017).

The strong emphasis on contingency decision-making carries immediate implications for TEI leadership: it highlights the need to formalize contingency planning within institutional governance frameworks. Academic leaders must be equipped with tools and protocols for scenario planning, risk assessment, and decision flow

TABLE 1 Extent of application of academic leaders technical skills.

Technical Skills	Administrator		Faculty		Average	
	WM	VI	WM	VI	WM	VI
1. Applying contingency decision as changes in the circumstance arise	3.71	VGE	3.55	VGE	3.63	VGE
2. Utilizing feedback mechanisms to obtain ideas and impressions and use them as inputs to improve present work	3.74	VGE	3.49	GE	3.62	VGE
3. Organizing logically a variety of tasks using documented records as basis and support to achieve the target objectives	3.77	VGE	3.44	GE	3.61	VGE
4. Drawing suggestions and recommendations from committee chairperson or heads for an improved service delivery	3.68	VGE	3.52	VGE	3.60	VGE
5. Realigning the college human resource, based on the demands of work and the abilities of members for quality output	3.65	VGE	3.55	VGE	3.60	VGE
6. Making relevant and immediate decision on matter concerning abrupt changes on some services or processes being rendered	3.65	VGE	3.45	GE	3.55	VGE
7. Applying contingency mechanisms or measures in the event that there are delays and back logs in work	3.61	VGE	3.48	GE	3.55	VGE
8. Using various ways of presenting ideas to members such as the use of software and internet for efficient use of time	3.68	VGE	3.39	GE	3.54	VGE
9. Determining ways and strategies for easier and better implementation of procedures and processes	3.61	VGE	3.45	GE	3.53	VGE
10. Implementing guidelines for the purpose of assessing changes in the present condition needed to be adapted	3.58	VGE	3.45	GE	3.52	VGE
11. Leading members of the organization to adapt with the changes in the academic landscape	3.52	VGE	3.48	GE	3.50	VGE
12. Designing strategically a plan for the adaptation of a newly introduced curriculum framework, system or process	3.52	VGE	3.47	GE	3.50	VGE
Composite Mean	3.64	VGE	3.48	GE	3.56	VGE

mapping so that rapid yet well-reasoned responses can be deployed during crises. This institutionalization reduces dependence on individual judgment alone and ensures consistent decision quality across departments. Similar conclusions have been drawn by Valerio and Ching (2024), who found that adaptive leadership competencies significantly improved organizational performance in Philippine public schools. By embedding contingency planning in TEI operations, institutions can build resilience and maintain alignment with CHED-TEC and accreditation standards even amid disruption.

Another notable finding is the high level of application of logical task organization and systematic process planning. Faculty respondents noted that clear scheduling, organized curriculum planning, and effective documentation lead to timely completion of institutional goals and enhance accountability. This suggests that TEI leaders not only make good decisions but also translate those decisions into structured action plans that engage faculty participation. This has major implications: TEIs must invest in digital knowledge management systems—centralized databases for curriculum documents, accreditation evidence, and quality assurance reports—that allow leaders and faculty to work from a single, accurate source of information. Such investments enhance efficiency, transparency, and collaborative planning. As argued by Ismail et al. (2022), technical leadership skills such as process optimization and data-driven planning are positively correlated with organizational performance, supporting the case for institutional investment in technical infrastructure and training.

The finding is also rooted in the necessity for both digital leadership and operational compliance within the system. This high score directly affirms local research (Abuan et al., 2024; Morales, 2024) which established a positive correlation between administrators’ digital proficiency and their faculty’s technological competence, further supporting the international view that a leader’s mastery of digital tools and data systems is essential for enhancing instructional delivery and program quality monitoring (Salamzadeh et al., 2023). Moreover, the high rating in contingency decision-making reflects a critical adaptive capacity crucial for navigating procedural uncertainty, consistent with Fiedler’s (1967) Contingency Theory and the specific adaptive leadership requirements highlighted by Valerio and Ching (2024) in the Philippine context.

Finally, the findings show that academic leaders actively seek faculty input and realign resources based on expertise and workload, demonstrating that technical skills are not merely mechanistic but are applied with a participatory and human-centered approach. This inclusive planning culture boosts morale, strengthens faculty engagement, and ensures that technical solutions are responsive to on-the-ground realities. The implication is that TEIs should institutionalize consultative mechanisms such as regular planning retreats, faculty forums, and structured feedback loops, ensuring that technical decisions reflect collective insight. Such processes have been linked to stronger institutional ownership and improved implementation outcomes (Antonopoulou et al., 2021).

In summary, the integrated findings and implications affirm that technical skills—particularly contingency decision-making, logical task organization, and systematic planning—are indispensable to effective TEI leadership. Leaders who consistently apply these skills create a culture of operational clarity, preparedness, and collaboration, which not only prevents organizational disruptions but also positions TEIs to remain agile and competitive in the face of accreditation demands, policy shifts, and technological transformation. The results therefore call for sustained capacity building in technical competencies, institutional investment in digital infrastructure, and the establishment of inclusive, adaptive decision-making frameworks that allow TEIs to thrive as dynamic and resilient educational organizations.

3.2 Extent of application of academic leaders human skills

Table 2 shows the results of the study, revealing that academic leaders in Teacher Education Institutions (TEIs) apply human skills to a very great extent (Composite Mean = 3.67). The highest-rated item, *accepting others’ points of view on implemented change and carrying out possible resolutions* (WM = 3.73), shows that TEI administrators are not only receptive to feedback but also

actively incorporate diverse perspectives in decision-making. This kind of participatory leadership is known in the literature to reduce resistance to change and build trust in educational settings, thereby promoting psychological safety among faculty and staff (Kasalak et al., 2022). Leaders who listen and respond to stakeholders help to co-create meaning around change efforts, making reforms more sustainable rather than top-down decrees.

Equally notable is the strong recognition and appreciation of contributions by others (WM ~3.72–3.71). Recognition as a human skill plays a motivational role: faculty and staff who feel that their work is valued are more likely to engage in change initiatives, abide by institutional policies, and sustain higher morale. Studies of transformational leadership in HEIs have shown that idealized influence and individualized consideration—which include recognizing staff contributions and showing genuine care—strongly correlate with organizational citizenship behavior and faculty wellbeing (Panicker and Lee, 2020); also, in “Academic leadership and job performance” where leadership fostering informal recognition boosted performance via citizenship behavior among faculty members (Ludwikowska et al., 2025). This result also validates the core tenets of transformational leadership (Avolio and Bass, 2004), establishing that leaders leverage human skills, such as individualized consideration and inspirational motivation, to enhance faculty commitment and minimize internal

TABLE 2 Extent of application of academic leaders human skills.

Items	Administrator		Faculty		Average	
	WM	VI	WM	VI	WM	VI
1. Accepting one’s point of view on the implemented change and carry out possible resolution	3.81	VGE	3.65	VGE	3.73	VGE
2. Recognizing contribution of others as inputs for further development of plans being made	3.81	VGE	3.62	VGE	3.72	VGE
3. Appreciating all members’ efforts and contribution to the success of the organization	3.81	VGE	3.61	VGE	3.71	VGE
4. Showing positive attitude and behavior toward work to influence other members to do their best	3.81	VGE	3.61	VGE	3.71	VGE
5. Fostering the spirit of unity and peace among members of the organization when resistance to change is felt	3.81	VGE	3.6	VGE	3.71	VGE
6. Collaborating with all the members of the organization in addressing demands for change	3.81	VGE	3.56	VGE	3.69	VGE
7. Accepting responsibility and accountability in every task being undertaken or delegated to members	3.81	VGE	3.55	VGE	3.68	VGE
8. Exhibiting honesty and integrity when making decisions to gain trust and confidence from members of the organization	3.77	VGE	3.58	VGE	3.68	VGE
9. Relaying points for improvement of a person’s accomplished task in a constructive and positive manner	3.74	VGE	3.58	VGE	3.66	VGE
10. Promoting objectivity and fairness when solving problems	3.71	VGE	3.58	VGE	3.65	VGE
11. Generating personal views and opinions of others prior to decision making	3.68	VGE	3.59	VGE	3.64	VGE
12. Communicating with peers and subordinates through top-down, bottom-up, horizontal processes	3.68	VGE	3.55	VGE	3.62	VGE
13. Empathizing with members’ present condition why tasks are not accomplished well and resolve to find alternative solutions	3.65	VGE	3.56	VGE	3.61	VGE
14. Delegating relevant tasks to subordinates with respect to personal ethics, values and/or institutional policies	3.61	VGE	3.54	VGE	3.58	VGE
Composite Mean	3.75	VGE	3.58	VGE	3.67	VGE

friction. Locally, the promotion of collegial engagement and participatory decision-making precisely predicts successful reform implementation in Philippine universities (Miramon et al., 2024).

The finding that leaders exhibit positive attitudes and behaviors (WM = 3.71) further underlines the role of emotional and ethical leadership. By modeling optimism, professionalism, and integrity, administrators help stabilize the institutional environment during external pressures (accreditation, technological change, policy reforms). Such leadership demeanor has been linked in empirical studies to higher faculty job satisfaction, lower turnover intention, and stronger commitment to institutional mission (Kasalak et al., 2022). The high level of such human skill application serves as a strategic asset for institutional sustainability. By cultivating trust and shared reflection through practices like Professional Learning Communities (PLCs), leaders generate the collective efficacy necessary to manage complex, non-technical challenges (Gamage and Whiting, 2021). Strong human skills minimize internal conflict, enhance morale, and ultimately bolster organizational resilience against external shocks (Mérida-López and Extremera, 2017).

Fostering unity and peace among members (in spite of resistance) also emerges strongly. Conflict, difference in pedagogical beliefs, and workload concerns are common in TEIs during change. Leaders who facilitate open dialogue and collaboration mitigate these tensions, reinforcing community and shared purpose. The literature confirms that transformational leadership and positive leadership styles, when combined with supportive work environments, increase collaboration, trust, and collective efficacy among academic staff (El Achi et al., 2025).

Taken together, these findings indicate that human skills in TEI leadership are not simply “nice to have” soft qualities but are strategic assets. They underpin change readiness, foster resilience, and enable better implementation of institutional reforms (in pedagogy, policy compliance, accreditation, etc.). When human skills are strong, faculty are more likely to participate actively in change, mentor pre-service teachers, innovate in teaching, and uphold quality standards.

3.3 Extent of application of academic leaders conceptual skills

Conceptual skills are the primary engine for organizational innovation. Gumus et al. (2022) established a clear link between a leader’s conceptual capacity to challenge the status quo and the subsequent level of innovation achieved in educational institutions. The sustained effectiveness of quality assurance mechanisms, central to TEI sustainability, is directly driven by the strategic vision and commitment rooted in conceptual leadership (Al-Husseini and Elbeltagi, 2018). Therefore, enhancing this competency is the key lever for TEIs to move beyond compliance toward true, mission-aligned innovation.

The findings, as presented in Table 3, reveal that conceptual skills are strongly applied by academic leaders in Teacher Education Institutions (TEIs) (Composite Mean = 3.60, VGE). These skills include visualizing the desired institutional direction, determining positive outcomes, innovating strategies, conceptualizing adjustments to new frameworks, and translating policy into action. Such results confirm that TEI administrators are functioning beyond routine management, demonstrating a

capacity for strategic thinking and systems-level understanding. This aligns with Katz’s (1974) classic skills framework, which highlights conceptual skills as crucial for top-level leaders because they enable them to see the organization as a whole, anticipate external forces, and integrate diverse institutional functions. Recent studies support this assertion, showing that leaders with high conceptual ability can better navigate complex educational reforms, align initiatives with institutional mission, and manage stakeholders during change (Nguyen et al., 2022; McCaffery, 2019).

A deeper look at the data highlights three key strengths: strategic visualization, innovation, and operational translation. Leaders who visualize institutional directions are able to define priorities, anticipate resource requirements, and map out implementation pathways for curriculum reforms, accreditation requirements, and faculty development programs. According to Rajab et al. (2023), strategic visualization enables educational leaders to articulate compelling institutional narratives that motivate stakeholder commitment and ensure policy coherence. Equally important is the ability to conceptualize innovative strategies and systems adjustments to ensure smooth adaptation to new educational policies and frameworks. This practice reflects principles of systems thinking, which emphasize understanding interdependencies and redesigning workflows to prevent disruption during major organizational changes (Senge et al., 2015; Fidan and Oztürk, 2022).

The ability to clarify roles, define parameters, and categorize task complexity ensures that strategic directions are effectively translated into equitable workload plans. This is critical because role clarity and fair distribution of tasks have been linked to improved organizational performance and reduced faculty burnout (Ahmad et al., 2020; O’Connor and Sharkey, 2021). Likewise, the finding that administrators determine positive outcomes of change to a very great extent resonates with outcome-based leadership models, which argue that clearly defined results enhance staff accountability and foster continuous improvement (Covey, 2017; Lanarino, 2019).

The implications of these findings are significant for TEI management and leadership. First, TEIs should institutionalize strategic visualization through regular planning workshops that produce clear roadmaps and measurable outcomes. Second, leaders must develop systems-thinking capacities and pilot-test innovations before scaling them institution-wide to minimize implementation risks (Fidan and Oztürk, 2022). Third, operational tools such as workload matrices, task guidelines, and role-clarity templates should be standardized to ensure equitable distribution of work and to strengthen faculty engagement (Ahmad et al., 2020). Fourth, cross-functional policy interpretation teams should be established to translate government memoranda and accreditation requirements into actionable institutional strategies, ensuring compliance and minimizing confusion (Velasquez, 2013; Shaver, 2016). Finally, leadership development programs for deans, department chairs, and committee heads must be designed to enhance conceptual leadership competencies—particularly in strategic foresight, evidence-based decision-making, and innovation management (Nguyen et al., 2022; McCaffery, 2019).

While leaders are skilled at translating policy into action and visualizing institutional direction (Gandrita, 2023), this potential gap reinforces the findings of local and regional

TABLE 3 Extent of application of academic leaders conceptual skills.

Items	Administrator		Faculty		Average	
	WM	VI	WM	VI	WM	VI
1. Visualizing directions of what is being desired to achieve in the organization	3.81	VGE	3.59	VGE	3.70	VGE
2. Determining positive outcomes of the implemented changes to generate more ideas for improvement	3.81	VGE	3.52	VGE	3.67	VGE
3. Innovating current strategies, approaches and practices to meet the demands of change	3.77	VGE	3.56	VGE	3.67	VGE
4. Conceptualizing practices to adjust with a newly introduced processes and standards	3.77	VGE	3.55	VGE	3.66	VGE
5. Formulating ideas in making plans in order to adjust with a new framework	3.77	VGE	3.53	VGE	3.65	VGE
6. Defining parameters of work assigned to a member for efficient utilization of time, energy and material resources	3.77	VGE	3.53	VGE	3.65	VGE
7. Analyzing current trends in dealing with changes needed to be adapted	3.77	VGE	3.53	VGE	3.65	VGE
8. Adjusting the manner that changes are implemented based on the present condition of the organization	3.77	VGE	3.51	VGE	3.64	VGE
9. Describing specific task or nature of work to be done by members for clearer direction of what and how to accomplish it	3.77	VGE	3.49	GE	3.63	VGE
10. Studying concepts, important principles stipulated in the memoranda and other issuances from higher authorities	3.71	VGE	3.53	VGE	3.62	VGE
11. Categorizing tasks based on the level of complexity to have fair distribution of workloads assigned to members	3.71	VGE	3.48	GE	3.60	VGE
12. Evaluating areas needed to be given utmost priority	3.61	VGE	3.5	VGE	3.56	VGE
13. Recognizing interrelatedness between the processes and the traditional ones for easier adaptation	3.58	VGE	3.38	GE	3.48	GE
Composite mean	3.74	VGE	3.52	VGE	3.6	VGE

studies (Pham et al., 2019; Sanieel et al., 2022) which identified shortcomings in the strategic planning and change management capabilities of mid-level managers. This suggests a tendency to manage within the existing system rather than engaging in disruptive, necessary systems thinking (Senge et al., 2015) and interpreting policy strategically (Shaver, 2016).

Overall, the results suggest that TEI leaders are well-positioned to transform organizational challenges into opportunities for growth. When these conceptual skills are formalized as part of institutional routines—supported by evidence cycles, collaborative decision-making structures, and continuous learning programs—TEIs can become more adaptive, resilient, and future-ready. This will allow them not only to comply with evolving Commission on Higher Education (CHED) policies but also to proactively shape the future of teacher education, strengthening their contribution to national development and educational quality assurance.

The findings demonstrate that technical, human, and conceptual skills are applied to a very great extent within the participating institutions. However, as the analysis is primarily descriptive, these results represent the perceived application of skills rather than a statistically tested “impact” or “influence.” While Robert L. Katz’s framework theoretically links these competencies to organizational effectiveness, the current study focuses on mapping the functional presence of these skills. Consequently, the reported high levels of skill

application should be viewed as a foundational precursor to institutional sustainability and innovation, serving as the perceived basis for these outcomes rather than empirically measured causal drivers.

The findings indicate a high level of application in technical and human skills, which theoretically suggests a strong foundation for institutional resilience. However, within the descriptive scope of this study, resilience is not measured as an empirical outcome but is inferred as a potential byproduct of competent leadership. The high scores in contingency decision-making and participatory planning imply that leaders possess the “operational tools” necessary to navigate crises, such as the post-pandemic digital shift, even if the long-term impact on institutional stability remains a subject for longitudinal tracking. Similarly, while the “extent of application” of leadership skills is high, the link to innovation capacity is positioned as a strategic objective rather than a confirmed result. The comparatively lower emphasis on conceptual skills, specifically visioning and change management, suggests that while TEIs are technically proficient in maintaining current standards, the leap toward transformative innovation may require a more balanced integration of Katz’s three domains. Thus, the leadership competencies identified here serve as the basis for innovation, providing the behavioral infrastructure upon which future creative pedagogical shifts can be built.

4 Conclusion and implications

The findings of the study establish that academic leaders in Teacher Education Institutions (TEIs) in the Philippines demonstrate varying degrees of application of technical, human, and conceptual skills in their leadership practices. Human skills, which include communication, collaboration, and interpersonal relationships, were consistently applied to a great extent. This outcome validates the centrality of interpersonal competencies in fostering trust, motivation, and engagement within academic communities (Northouse, 2022). Technical skills, such as knowledge of institutional policies, administrative processes, and systems, were also observed to be consistently utilized, reflecting leaders' readiness to address operational and compliance requirements in higher education institutions. However, conceptual skills—strategic visioning, systems thinking, and innovation—were less emphasized compared to human and technical skills. This imbalance suggests that while leaders effectively manage day-to-day operations, there is a gap in the exercise of long-term, visionary leadership necessary for institutional sustainability. The evidence resonates with recent studies in higher education showing that transformational leadership fosters stronger institutional culture, enhances job satisfaction, and promotes innovation (Al-Husseini and Elbeltagi, 2018; Gumus et al., 2022). Thus, while Philippine TEIs have established strong human and technical leadership bases, they require further reinforcement of conceptual competencies to strengthen adaptability and forward-looking leadership in rapidly changing academic contexts.

The implications of these findings are multi-layered, extending to leadership practice, institutional development, and educational policy. For TEIs, the strong application of human skills suggests that leaders are effective in fostering collegiality and collaboration; hence, leadership development programs should continue to cultivate interpersonal competencies to sustain harmonious organizational climates (Sajid et al., 2023). The consistent utilization of technical skills highlights leaders' competence in administrative and policy-related functions, but institutions must continue to provide opportunities for professional growth in areas such as technology integration and policy interpretation to ensure continued relevance in the digital era (Darling-Hammond et al., 2020).

The weaker emphasis on conceptual skills has significant implications for institutional sustainability. TEIs must invest in leadership training that prioritizes strategic planning, innovation management, and systems thinking to prepare leaders for future challenges in teacher education. Transformational leadership has been shown to be positively correlated with institutional adaptability and long-term effectiveness (Gumus et al., 2022; Yusof et al., 2023). Embedding these competencies in leadership development initiatives will enable academic leaders not only to manage existing structures but also to anticipate and shape institutional directions. At the policy level, agencies such as the Commission on Higher Education (CHED) could use these findings to integrate leadership competency standards into accreditation frameworks. This approach would ensure that academic leaders are assessed not only on operational compliance but also on their ability to articulate vision, foster innovation, and strengthen organizational culture. Recent studies recommend

that leadership audits and competency-based training frameworks be institutionalized to ensure continuity and improvement in leadership practices across higher education (Al-Husseini and Elbeltagi, 2018; Sajid et al., 2023). Finally, these results call for future research that employs longitudinal and mixed-method approaches to capture how leadership practices evolve over time and how the interplay of technical, human, and conceptual skills influences institutional performance in diverse contexts.

The results of the study demonstrate that academic leaders in Philippine TEIs apply human and technical skills to a great extent, while conceptual skills are comparatively less emphasized. This competency profile has direct implications for institutional sustainability and innovation. Sustainability in higher education is not only about financial or resource continuity but also about the ability of institutions to adapt, thrive, and remain relevant in shifting educational landscapes (Sterling, 2010). By consistently applying human skills such as communication, collaboration, and trust-building, TEI leaders strengthen organizational culture, improve faculty engagement, and enhance institutional resilience. Research affirms that institutions with strong relational leadership practices are more capable of sustaining reforms, reducing turnover, and fostering a culture of shared responsibility (Northouse, 2022; Sajid et al., 2023). Thus, the strong human leadership competencies observed among TEI leaders provide a foundation for maintaining stability and ensuring continuity of institutional goals.

At the same time, the application of technical skills—particularly in digital fluency, data-informed decision-making, and administrative competence—positions TEIs to remain competitive in the era of Education 4.0. The ability of leaders to implement technological innovations such as Learning Management Systems, e-portfolios, and analytics supports efficient curriculum delivery and continuous quality assurance (Darling-Hammond et al., 2020). These capacities directly feed into institutional sustainability by enhancing operational efficiency, ensuring compliance with accreditation and CHED requirements, and aligning with international benchmarks. Moreover, technical competencies allow TEIs to optimize limited resources, which is critical in the Philippine context where public and private TEIs face resource disparities.

However, the relative underutilization of conceptual skills points to a critical area for innovation. Conceptual competencies such as systems thinking, strategic visioning, and innovation management enable institutions to anticipate long-term challenges and create transformative solutions (Katz, 1974; Bass and Riggio, 2006). Without these, TEIs risk stagnation and may struggle to respond effectively to global trends such as internationalization, cross-border education, and increasing demand for inclusive pedagogies. By strengthening conceptual leadership, TEIs can build capacity for institutional innovation, such as pioneering new teacher education models, engaging in international research collaborations, and designing forward-looking curricula. Studies confirm that institutions led by transformational leaders with strong conceptual orientation are more likely to innovate and sustain reforms over time (Al-Husseini and Elbeltagi, 2018; Gumus et al., 2022).

While weighted means provide a clear and systematic interpretation of existing practices, no inferential statistical methods, such as *t*-tests, ANOVA, or regression analysis,

were employed to test for significant differences between administrator and faculty groups or to examine the strength of relationships among variables. This suggests that while the competencies are highly visible, their direct contribution to specific sustainability metrics remains a subject for further investigation. Future research should build upon this descriptive baseline by utilizing inferential techniques to evaluate the predictive links between leadership skill balance and institutional innovation outcomes across a broader geographic range.

This study concludes that academic leaders in Batangas TEIs demonstrate a very great extent of application regarding technical and human leadership skills, with conceptual skills following closely. These results provide a valuable descriptive baseline, identifying the prevailing leadership profile in the region. However, it is essential to align these conclusions with the study's methodological boundaries. As a descriptive assessment based on perceived application, the data does not substantiate causal claims regarding the achievement of institutional sustainability or innovation. Instead, these constructs are presented as inferred outcomes or future institutional goals that depend on the sustained application of the measured competencies. The study confirms that the “functional elements” for excellence are present, which lays the foundation for more complex, inferential research to determine how these skills translate into measurable institutional growth and long-term viability.

In essence, the results of the research suggest that the integration of all three competencies—technical, human, and conceptual—is indispensable for institutional sustainability and innovation. Technical and human skills provide the operational and cultural stability needed to sustain current practices, while conceptual skills drive the forward-thinking capacity required for innovation. By using the findings of this study as a diagnostic framework, TEIs can design targeted professional development programs that build leadership capacity where it is most needed. Likewise, policy bodies such as CHED may integrate these competencies into leadership standards and accreditation criteria, ensuring that TEIs cultivate leaders who can sustain institutional missions and simultaneously innovate for the future. As the demands on teacher education continue to shift toward global benchmarking and digital maturity, the question for academic leaders is no longer whether they can manage the systems they have, but whether they possess the conceptual courage to design the systems that the future of Philippine education requires.

Data availability statement

The original contributions presented in this study are included in this article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

Ethical approval was not required for the studies involving humans because the data was collected anonymously and posed minimal risk to participants. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

CZ: Data curation, Validation, Resources, Visualization, Methodology, Project administration, Formal Analysis, Conceptualization, Investigation, Writing – review & editing, Funding acquisition, Writing – original draft, Supervision.

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