

## Artificial Intelligence (AI) adoption and leadership as predictors of strategic planning effectiveness in select Philippine higher-education institutions

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### ABSTRACT

This study is a quantitative descriptive–correlational examination of the relationships among perceived Artificial Intelligence (AI) adoption, leadership behaviors, and strategic planning effectiveness in selected private higher-education institutions in the Philippines. Anchored on the Technology Acceptance Model (TAM) and the Full Range Leadership Model, the study explored how academic leaders’ perceptions of AI integration and leadership practices are associated with perceived strategic planning outcomes. Data were collected from a total of 76 academic leaders from selected private higher-education institutions in Manila, Philippines, using an adapted self-report questionnaire. Descriptive results indicated moderate levels of AI adoption, leadership behaviors leaning towards transformational leadership, and high perceived strategic planning effectiveness. Tests of correlation revealed significant positive associations among the three variables, with leadership behaviors showing the strongest relationship with perceived strategic planning effectiveness. Multiple regression analysis further indicated that perceived AI adoption and leadership behaviors jointly accounted for a substantial proportion of the variance in perceived strategic planning effectiveness, with leadership behaviors demonstrating a stronger statistical association than AI adoption. The findings suggest that academic leaders who perceive higher levels of AI integration and who report more effective leadership practices also tend to perceive their institutions’ strategic planning processes as more effective. While the results underscore the importance of aligning digital transformation initiatives with leadership practices in higher education, the reliance on self-reported measures warrants cautious interpretation. Future studies may benefit from multi-source and longitudinal designs to further examine these relationships.

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## INTRODUCTION

The rapid advancement of artificial intelligence (AI) is reshaping organizational practices across sectors, including higher education, where data-driven governance, predictive analytics, and intelligent decision-support systems increasingly inform institutional management and strategic planning (Sposato, 2025; Arar et al., 2025). In educational leadership and management, AI is no longer merely a technical innovation but a strategic resource with the potential to enhance institutional effectiveness. Despite the growing global momentum toward AI integration, however, its meaningful adoption within leadership and management practices remains uneven and underexplored, particularly in emerging educational contexts (Fullan et al., 2023; Adams, 2025). This unevenness points to the need to examine not only the presence of AI technologies in institutions but also the organizational and leadership conditions under which they are meaningfully embedded in strategic processes.

Educational leadership itself is a dynamic and evolving construct shaped by increasingly complex, technology-mediated environments (Peng et al., 2024). Contemporary academic leaders are expected to demonstrate not only pedagogical and managerial competence but also technological literacy and strategic foresight in navigating digital transformation (Adams, 2025). This shift necessitates a reconfiguration of leadership practices, as leaders confront new operational, strategic, and ethical dilemmas brought about by AI integration (Karakose & Tulubas, 2024, 2025). Leadership behaviors or styles play a central role in shaping organizational culture, innovation uptake, and institutional planning processes (Bass & Avolio, 1994; Eagly et al., 2023). In technology-mediated educational environments, these leadership orientations acquire renewed significance. Transformational leadership, with its emphasis on vision articulation, intellectual stimulation, and individualized consideration, is especially salient in fostering organizational readiness for digital transformation and in cultivating a climate receptive to experimentation and innovation. Leaders who frame AI integration as part of a broader strategic vision and who encourage reflective and evidence-based practice are more likely to mobilize institutional support for data-informed planning and technology-enabled reforms.

Transactional leadership, while often characterized as more managerial in orientation, remains crucial in translating digital visions into operational realities. Through the clarification of expectations, performance monitoring, and the alignment of incentives with institutional goals, transactional practices can help institutionalize AI-enabled processes within strategic planning routines and governance structures. Such practices are particularly important in contexts where AI adoption is emergent and uneven, as they provide the procedural scaffolding needed to sustain innovation beyond initial experimentation. By contrast, *laissez-faire* leadership orientations warrant more cautious consideration in AI-enabled planning contexts. While selective delegation may support distributed leadership and professional autonomy, limited leader engagement risks fragmenting strategic initiatives, weakening oversight of data governance, and diluting accountability for AI-related decisions. This tension highlights the need for a balanced leadership configuration in digitally transforming institutions: effective leadership in AI-mediated environments is neither purely visionary nor merely procedural, but integrative; combining inspiration, structure, and ethical stewardship.

From a technology adoption standpoint, the effective integration of AI in higher education depends not only on technical capacity but also on leaders' perceptions of its usefulness and ease of use. The Technology Acceptance Model (TAM) (Davis, 1989) offers a robust framework for examining how AI is perceived and taken up in academic institutions, particularly in leadership-driven functions such as strategic planning. Empirical studies affirm TAM's relevance in higher education, showing that organizational, technological, and user-related factors jointly shape AI adoption intentions and practices (Abulail et al., 2025). Consequently, leaders' perceptions play a pivotal role in determining how AI is embedded within institutional planning and governance processes. These perceptions are further shaped by leaders' strategic orientations, prior experiences with digital technologies, and beliefs about organizational readiness for change. Leaders who perceive AI as strategically useful for enhancing planning accuracy, forecasting, and decision support are more likely to champion its integration into core institutional processes, allocate resources for AI-related initiatives, and signal organizational commitment to digital transformation. Conversely, skepticism regarding the practicality, reliability, or ethical implications of AI may

constrain adoption to peripheral or symbolic uses, limiting its potential contribution to strategic planning effectiveness.

TAM's emphasis on perceived usefulness and ease of use can thus be situated within broader organizational dynamics, wherein leadership behaviors influence how AI is framed, communicated, and normalized within institutional cultures. When leaders actively model technology use, provide professional development opportunities, and establish supportive governance structures, they help lower perceived barriers to adoption and enhance collective efficacy in engaging with AI-enabled systems. In this sense, leadership functions as the social and organizational conduit through which individual-level technology acceptance translates into institution-wide adoption patterns. This integration of TAM with leadership perspectives reinforces the view that AI adoption and leadership practices are interdependent dimensions of digital transformation, jointly shaping how strategic planning processes evolve in higher-education institutions. Relatedly, leadership styles are increasingly recognized not only as independent influences on organizational outcomes but also as mechanisms through which technological initiatives translate into strategic effectiveness. Leadership behaviors shape how trust in AI systems is built, how innovation is fostered, and how technological tools are aligned with institutional goals. Recent theoretical models suggest that leadership may moderate or mediate the effects of AI-related perceptions on organizational outcomes, underscoring the importance of leadership behavior in converting technological capability into strategic value (Zhang et al., 2025).

In the Philippine context, both research and policy implementation concerning AI in educational leadership and management remain limited (Funa & Gabay, 2025; Co, 2025; Toquero, 2025; Amado et al., 2024). Academic leaders in the country manage increasingly complex responsibilities that extend beyond formal administrative roles, requiring coordination among multiple stakeholders to support institutional goals (Toquero & Ramos, 2024). Despite the growing global momentum toward AI in education, its realization at the level of school administration in an emerging economy such as the Philippines remains uneven and, for many institutions, aspirational (Clorion et al., 2025). Some scholars have even characterized AI in education as a “first-world problem” in such contexts (Rodrigo, 2023). Nevertheless, a steadily increasing number of Philippine universities has begun initiating or embracing AI-enabled initiatives in various forms, signalling a gradual but notable shift toward digital transformation (Toquero, 2025; Giray et al., 2024; Caracut, 2024; Pascual, 2023).

Despite international advances in theorizing AI-driven leadership, there remains a notable lack of context-sensitive empirical evidence in Philippine higher education examining how perceived AI adoption and leadership behaviors jointly relate to strategic planning effectiveness. Much of the existing literature treats AI adoption and leadership as parallel but separate domains, thereby obscuring their combined influence on core leadership functions such as planning and institutional direction-setting. This gap limits the development of contextualized frameworks that can guide academic leaders in navigating digital transformation in emerging economies.

Against this backdrop, the present study examines the relationships among perceived AI adoption, leadership behaviors, and perceived strategic planning effectiveness among academic leaders in selected private higher-education institutions in the Philippines. Anchored on the Technology Acceptance Model (Davis, 1989) and the Full Range Leadership Model (Bass & Avolio, 1994), the study seeks to generate empirical evidence on how leaders' perceptions of AI integration and their leadership practices are associated with strategic planning outcomes. By situating AI adoption within leadership theory and local institutional realities, the study aims to contribute to a more contextualized understanding of digital leadership and strategic planning in Philippine higher education.

## **OBJECTIVES OF THE STUDY**

The present study sought to accomplish the following research objectives:

1. determine the level of perceived AI adoption among academic leaders in selected private higher-education institutions in the Philippines;
2. identify the prevailing leadership behaviors (transformational, transactional, and laissez-faire) exhibited by academic leaders in selected private higher-education institutions;
3. assess the level of perceived strategic planning effectiveness in selected private higher-education institutions;
4. examine the relationships among perceived AI adoption, leadership behaviors, and perceived strategic planning effectiveness in selected private higher-education institutions; and
5. determine the extent to which perceived AI adoption and leadership behaviors predict perceived strategic planning effectiveness among academic leaders.

*Hypotheses:*

*H<sub>1</sub> There is a significant relationship between perceived AI adoption and leadership behavior.*

*H<sub>2</sub> There is a significant relationship between perceived AI adoption and strategic planning effectiveness.*

*H<sub>3</sub> Perceived AI adoption significantly predicts strategic planning effectiveness.*

*H<sub>4</sub> Perceived leadership behavior significantly predicts strategic planning effectiveness.*

## **METHODS**

The study employed a quantitative descriptive–correlational research design to examine the relationships among perceived AI adoption, leadership behaviors, and perceived strategic planning effectiveness in selected private higher-education institutions in the Philippines. This design was appropriate as it enabled the systematic description of key variables and the examination of statistical associations among them without implying causal relationships (Creswell & Creswell, 2018).

The study was conducted among selected private higher-education institutions in the City of Manila, Philippines, which have begun integrating AI-enabled tools and digital systems in administrative and planning-related functions. The locale was selected due to the concentration of private universities in the area and their relatively higher exposure to digital transformation initiatives in higher education. The participants consisted of 76 academic leaders who were directly involved in institutional planning and decision-making processes, including department heads, program chairs, and academic supervisors. These participants were considered appropriate respondents as they occupy leadership roles that influence both the adoption of digital technologies and the formulation and implementation of strategic plans within their respective institutions.

Data were collected using a self-administered structured questionnaire designed to measure perceived AI adoption, leadership behaviors, and perceived strategic planning effectiveness. The instrument consisted of 17 items adapted from established constructs drawn from the TAM (Davis, 1989) and the Full Range Leadership Model (Bass & Avolio, 1994). All items were measured using a five-point Likert scale to capture respondents' perceptions and self-reported practices. Prior to full-scale administration, the instrument underwent pilot testing, and reliability analysis yielded a Cronbach's alpha coefficient of .916, indicating excellent internal consistency (Gliem & Gliem, 2003).

The study adhered to established ethical standards in social science research. Prior to data collection, participants were informed of the study's purpose, procedures, and the voluntary nature of participation. Informed consent was obtained from all respondents, and participants were assured of their right to withdraw from the study at any time without penalty. To protect confidentiality and anonymity, no personally identifiable information was collected, and all responses were anonymized, securely stored, and used solely for academic and research purposes.

Participation was free from coercion or undue influence, in accordance with ethical guidelines for research involving human participants (American Psychological Association, 2017).

The collected data were encoded and organized using Microsoft Excel and subsequently analyzed using IBM SPSS Version 21.0. Descriptive statistics, including mean, composite mean, and standard deviation, were computed to describe the levels of perceived AI adoption, leadership behaviors, and perceived strategic planning effectiveness. Mean scores were interpreted using the following scale: 4.50–5.00 (Always), 3.50–4.49 (Often), 2.50–3.49 (Occasionally), 1.50–2.49 (Seldom), and 0.00–1.49 (Never). Pearson’s product–moment correlation coefficient (*r*) was employed to examine the relationships among perceived AI adoption, leadership behaviors, and perceived strategic planning effectiveness, given the continuous nature of the composite scores and the study’s focus on linear associations (Field, 2018). Multiple regression analysis was further conducted to determine the extent to which perceived AI adoption and leadership behaviors jointly predicted perceived strategic planning effectiveness and to compare their relative contributions while controlling for the influence of the other predictor (Aiken et al., 2013). The results of these analyses were interpreted in light of the study’s theoretical anchors and research objectives, with no causal claims made due to the correlational nature of the research design.

**RESULTS AND DISCUSSION**

AI has enormous potential to make a transformative impact in multiple fields. It has made significant strides in higher education by reshaping traditional administrative processes, learning, leadership, and teaching (Khairullah et al., 2025). Understanding how AI adoption and leadership styles influence strategic planning effectiveness in academic institutions is critical. By analyzing the extent of AI integration, the prevailing leadership behaviors, and their combined impact on strategic outcomes, the results offer empirical insights that address the identified gaps in Philippine higher education and contribute to the development of a contextualized framework for digital transformation and leadership development.

After examining the interplay between technological adoption and human leadership, the results offer insights into how institutions can strategically position themselves for innovation, adaptability, and long-term success. The statistical data suggest the following.

Table 1. Extent of AI adoption

Indicators	Std. Dev.	Mean	Int.
To what extent does your organization integrate AI tools in its strategic planning processes?	1.04	3.41	Occasionally
How frequently does your organization use AI-driven data analysis to inform strategic decisions?	1.11	3.30	Occasionally
How often does your organization invest in AI technologies to enhance strategic planning?	1.16	3.26	Occasionally
To what degree does your organization rely on AI to forecast market trends in its strategic planning?	1.09	3.22	Occasionally
How frequent does your organization automate repetitive strategic planning tasks using AI tools?	1.12	3.29	Occasionally
Composite Mean	0.99	3.30	Occasionally

Table 1 indicates that the overall level of perceived AI adoption in strategic planning among the participating private higher-education institutions is moderate (composite M = 3.30, interpreted as “Occasionally”). This suggests that while AI tools are being introduced into planning-related processes, their use remains uneven and

not yet institutionalized across functions. Among the indicators, the integration of AI tools in strategic planning processes registered the highest mean ( $M = 3.41$ ), pointing to early-stage engagement with AI-enabled practices such as data analytics and task automation. In contrast, relatively lower means for investment in AI technologies ( $M = 3.26$ ) and reliance on AI for forecasting market trends ( $M = 3.22$ ) reflect constraints in sustained resourcing and the limited embedding of AI in forward-looking planning functions.

These findings align with earlier observations that AI integration in Philippine higher education is emergent and shaped by barriers related to infrastructure readiness, staff capability, and institutional policy support (Donasco & Oliveros, 2024). Consistent with the broader literature on AI in educational management, the results suggest that AI adoption is still in a formative phase and requires clearer governance frameworks and leadership sponsorship to move beyond episodic use toward strategic integration (Arar et al., 2025). Interpreted through the Technology Acceptance Model (Davis, 1989), the moderate uptake may reflect variability in leaders’ perceptions of AI’s usefulness for planning and the perceived ease of integrating AI into existing workflows. This pattern underscores that technological availability alone does not guarantee systematic adoption; institutional commitment and leadership alignment remain critical to advancing AI-enabled strategic planning.

Table 2. Self-reported leadership behavior and style

Indicators	Std. Dev.	Mean	Int.
How often does your leader inspire employees with a clear vision for the organization’s strategic goals?	0.99	3.99	Often
To what extent does your leader encourage innovative thinking to improve strategic planning processes?	0.86	4.24	Often
How frequently does your leader provide individualized support to team members during strategic planning?	1.10	3.86	Often
How often does your leader set clear expectations and rewards for achieving strategic planning objectives?	0.90	4.01	Often
To what extent does your leader monitor progress and correct deviations during strategic planning activities?	0.86	4.00	Often
How frequently does your leader take a hands-off approach, allowing the team to make strategic planning decisions independently?	0.87	3.83	Often
To what extent does your leader avoid direct involvement in resolving strategic planning challenges?	1.23	3.12	Often
Composite Mean	0.70	3.86	Often

Table 2 shows that academic leaders frequently exhibit leadership behaviors supportive of strategic planning (composite  $M = 3.86$ , “Often”). Transformational leadership indicators were particularly salient, with encouraging innovative thinking registering the highest mean ( $M = 4.24$ ), followed by articulating a clear strategic vision ( $M = 3.99$ ) and providing individualized support ( $M = 3.86$ ). These patterns indicate that leaders are perceived to foster creativity, vision, and staff development; capabilities that are central to navigating change in digitally mediated environments.

Transactional behaviors were also strongly endorsed, as reflected in high means for setting clear expectations and rewards ( $M = 4.01$ ) and monitoring progress ( $M = 4.00$ ). This combination suggests a pragmatic leadership profile in which inspiration and innovation are complemented by accountability and performance management—an orientation well suited to the demands of strategic planning, where both adaptability and

procedural discipline are required. By contrast, laissez-faire tendencies were comparatively less pronounced, particularly with respect to avoidance of direct involvement in resolving strategic challenges (M = 3.12), indicating that leaders generally remain engaged in guiding planning processes.

These findings are consistent with prior research highlighting the role of transformational leadership in fostering innovation, adaptability, and openness to technological change in educational contexts (Bhakuni et al., 2024; Karakose & Tulubas, 2024). The blended leadership profile observed here provides a plausible organizational condition for supporting AI adoption: transformational behaviors cultivate readiness for innovation, while transactional practices provide the structures needed to operationalize strategic initiatives. This leadership configuration anticipates the study’s later findings that leadership behaviors exhibit a stronger association with strategic planning effectiveness than AI adoption alone.

Table 3. Perceived strategic planning effectiveness

Indicators	Std. Dev.	Mean	Int.
How often does your organization achieve its strategic goals (e.g., market share increase, revenue growth) within the planned timeframe?	0.87	3.91	Often
To what extent does your organization meet or exceed its projected revenue growth targets	0.85	3.79	Often
How frequently does your organization complete strategic projects on time and within budget?	0.89	3.83	Often
To what degree do your organization’s strategic plans result in measurable improvements in market share?	0.82	3.79	Often
How often does your organization adapt its strategic plans effectively to meet changing market conditions?	0.88	3.84	Often
Composite Mean	0.74	3.83	Often

Table 3 indicates that institutions frequently perceive their strategic planning processes as effective (composite M = 3.83, “Often”). The highest-rated indicator was achieving strategic goals within planned timeframes (M = 3.91), suggesting relatively strong execution capacity. Similarly, adapting plans to changing conditions (M = 3.84) and completing projects on time and within budget (M = 3.83) reflect a degree of organizational agility and operational discipline. However, comparatively lower means for meeting revenue growth targets (M = 3.79) and improving market share (M = 3.79) point to a modest gap between process effectiveness and longer-term performance outcomes.

This pattern suggests that while planning processes are perceived as functioning effectively at the operational level, translating plans into sustained performance gains remains more challenging. The literature indicates that trust in leadership and technological empowerment can enhance institutional effectiveness, but enduring strategic impact depends on sustained digital integration and iterative evaluation (Laufer et al., 2025). In the context of AI-enabled planning, these findings imply that early gains in efficiency and adaptability may not immediately translate into broader institutional performance outcomes unless AI use is deepened and systematically aligned with strategic priorities over time.

Table 4. Tests of correlation among the variables

Relationships	r-value	strength	significance
AI Adoption ↔ Leadership	1	0.462	0.556
AI Adoption ↔ Strategic Planning	0.462	1	0.781

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Leadership ↔ Strategic Planning	0.556	0.781	1
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The correlation analysis reveals significant positive associations among the three core constructs. The moderate positive relationship between perceived AI adoption and leadership behaviors ( $r = .462, p < .01$ ) suggests that institutions reporting higher levels of AI integration also tend to report stronger leadership practices. This pattern is consistent with the view that leadership capacity both enables and is reinforced by digital transformation initiatives, as leaders who articulate a clear technological vision and mobilize organizational resources are more likely to foster AI uptake (Sposato, 2025).

Perceived AI adoption was also moderately associated with perceived strategic planning effectiveness ( $r = .556, p < .01$ ), indicating that institutions making greater use of AI in planning-related functions tend to report more effective planning outcomes. This aligns with arguments that AI-enabled analytics support data-informed decision-making and strategic agility in higher education (Arar et al., 2025). Notably, the strongest relationship observed was between leadership behaviors and strategic planning effectiveness ( $r = .781, p < .01$ ), underscoring the centrality of leadership in shaping planning outcomes. Taken together, these associations suggest that while AI adoption contributes meaningfully to planning effectiveness, leadership behaviors remain more strongly linked to how effectively institutions plan and execute strategic initiatives.

Table 5. Predicting strategic planning effectiveness

Predictors	B	SE	$\beta$ (Beta)	t	Sig. (p)	Summary	value
Constant	0.350	0.266	—	1.32	0.191	R	0.836
AI Adoption	0.248	0.048	0.343	5.17	< .001	R <sup>2</sup>	0.700
Leadership Style	0.680	0.056	0.710	12.14	< .001	Adjusted R <sup>2</sup>	0.693
						F(2, 73)	84.17
						Sig. (p)	< .001

The multiple regression model demonstrates that perceived AI adoption and leadership behaviors jointly account for a substantial proportion of the variance in perceived strategic planning effectiveness ( $R^2 = .700$ ), with the model achieving strong overall fit,  $F(2, 73) = 84.17, p < .001$ . At the individual predictor level, both AI adoption ( $\beta = .343, p < .001$ ) and leadership behaviors ( $\beta = .710, p < .001$ ) emerged as significant predictors, with leadership exhibiting a markedly stronger standardized effect. This finding substantiates the study’s central proposition that technological and leadership factors jointly shape strategic planning outcomes, while also highlighting the comparatively greater salience of leadership behaviors.

The results reinforce arguments that AI-enabled systems can enhance planning efficiency and evidence-based decision-making (Arar et al., 2025), yet technological capacity alone is insufficient to ensure effective strategic outcomes. Consistent with Karakose and Tulubas (2024), leadership in AI-mediated contexts requires the integration of visionary direction with technological fluency to translate digital tools into coherent strategy. Broader perspectives on digital transformation in higher education similarly emphasize that leadership capacity to align technology with institutional mission, ethical governance, and organizational readiness is central to realizing strategic value (Educause, 2025). In the Philippine private higher-education context, the findings suggest that investments in AI infrastructure should be complemented by leadership development initiatives that cultivate digital competence, change management capabilities, and ethical stewardship. Together, these results underscore the interdependence of leadership and AI adoption in advancing institutional resilience, strategic agility, and long-term competitiveness.

## CONCLUSION AND IMPLICATIONS

This study examined the relationships among perceived AI adoption, leadership behaviors, and perceived strategic planning effectiveness in selected private higher-education institutions in the Philippines. The findings indicate that both perceived AI adoption and leadership behaviors are positively and significantly associated with perceived

strategic planning effectiveness. Consistent with the correlational and regression analyses, transformational and transactional leadership styles or behaviors demonstrated a stronger statistical association with strategic planning effectiveness than perceived AI adoption. This pattern suggests that while AI-related initiatives contribute to data-informed decision-making and organizational adaptability, leadership practices play a more central role in translating technological capacity into meaningful strategic outcomes.

Although the level of perceived AI adoption among the participating institutions was moderate, its contribution to institutional planning processes is evident, particularly in supporting evidence-based decision-making and responsiveness to changing organizational demands. However, the findings underscore that the strategic value of AI is contingent upon leadership quality. Academic leaders who articulate clear directions, encourage innovation, and uphold accountability appear better positioned to embed AI-enabled tools within coherent strategic planning processes. In this regard, digital transformation in higher education is not merely a matter of technological uptake but is fundamentally shaped by leadership behaviors that align technological initiatives with institutional priorities and governance structures.

From a policy perspective, the results suggest that national and institutional digital transformation agenda in Philippine higher education would benefit from adopting a leadership-centered approach to AI integration. Policies that prioritize technological acquisition without similar investments in leadership capacity risk underutilizing digital tools and weakening strategic coherence. Regulatory and quality assurance frameworks may therefore consider embedding digital leadership competencies, ethical AI governance, and strategic foresight into leadership standards, accreditation processes, and capacity-building programs. Such directions recognize that AI adoption in education constitutes not only a technical reform but also a governance and leadership challenge requiring coordinated institutional stewardship.

At the level of institutional practice, the findings point to a dual focus for strengthening strategic planning effectiveness. On the one hand, sustained investments in AI-related infrastructure, professional development, and organizational readiness can support the purposeful integration of AI into planning and governance processes. On the other hand, leadership development initiatives that cultivate digital competence, change management capabilities, and ethical stewardship among academic leaders are equally, if not more, critical. In resource-constrained contexts such as Philippine private higher education, aligning limited technological investments with clear strategic priorities and leadership practices may help ensure that AI initiatives yield tangible planning benefits rather than remaining fragmented or symbolic.

Overall, the study contributes to the hopeful body of literature on educational and digital leadership in higher education by providing context-sensitive empirical evidence from the Philippine setting. By demonstrating the joint and comparatively stronger role of leadership behaviors alongside AI adoption in shaping strategic planning effectiveness, the findings underscore the importance of aligning digital transformation initiatives with leadership practices. Nevertheless, given the reliance on self-reported measures, purposive sampling, and a cross-sectional design, the conclusions should be interpreted with caution. The study offers a grounded basis for future research and practice, while underscoring the need for multi-source, longitudinal, and institutionally diverse investigations to further clarify how leadership and AI adoption co-evolve in shaping strategic planning outcomes in higher-education environments.

## REFERENCES

- Abdelazim, A., Al Breiki, M., & Khlaif, Z. N. (2025). AI in education: The mediating role of perceived trust in adoption decisions of school leaders. *Education and Information Technologies*, 30, 20943-20975. <https://doi.org/10.1007/s10639-025-13596-4>
- Abulail, R. N., Badran, O. N., Shkoukani, M. A., & Omeish, F. (2025). Exploring the factors influencing AI adoption intentions in higher education: An integrated model of DOI, TOE, and TAM. *Computers*, 14(6), 230. <https://doi.org/10.3390/computers14060230>

- Adams, D. (2025). Transforming school leadership with artificial intelligence: Applications, implications, and future directions. *Leadership and Policy in Schools*, 24(1), 77-79. <https://doi.org/10.1080/15700763.2024.2411295>
- Aiken, L. S., West, S. G., Pitts, S. C., Baraldi, A. N., & Wurpts, I. C. (2013). Multiple linear regression. In J. A. Schinka, W. F. Velicer, & I. B. Weiner (Eds.), *Handbook of psychology: Research methods in psychology* (2nd ed., pp. 511–542). John Wiley & Sons, Inc. <https://psycnet.apa.org/record/2012-27075-018>
- Amado, J. A., Dayson, C. J. P., Gipaya, P. N., Hipos, A. M. G., Ortile, F. F., & Digo, G. S. (2024). Assessing the impact of AI generative tools on administrative and supervisory practices in education. *Asia Pacific Journal of Management and Sustainable Development*, 12(1), 32-40. <https://research.lpubatangas.edu.ph/wp-content/uploads/2024/07/3.-APJMSD-2024-06.pdf>
- American Psychological Association. (2017). Ethical principles of psychologists and code of conduct (2002, amended effective June 1, 2010, and January 1, 2017). <https://www.apa.org/ethics/code>
- Arar, K., Tlili, A., Schunka, L., Salha, S., & Saiti, A. (2025). Reimagining educational leadership and management through artificial intelligence: An integrative systematic review. *Leadership and Policy in Schools*, 1-23. <https://doi.org/10.1080/15700763.2025.2451982>
- Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Thousand Oaks, CA: Sage Publications.
- Bhakuni, S., Pal, R. H., & Saxena, S. (2024). Transformational leadership in higher education: A step towards innovation and positive change. *International Journal of Science, Technology & Management*, 13(2). [https://www.researchgate.net/publication/378497536\\_TRANSFORMATIONAL\\_LEADERSHIP\\_IN\\_HIGHER\\_EDUCATION\\_A\\_STEP\\_TOWARDS\\_INNOVATION\\_AND\\_POSITIVE\\_CHANGE/citations](https://www.researchgate.net/publication/378497536_TRANSFORMATIONAL_LEADERSHIP_IN_HIGHER_EDUCATION_A_STEP_TOWARDS_INNOVATION_AND_POSITIVE_CHANGE/citations)
- Caracut, M. J. C. (2024 Nov 14). Asia's university leaders urge responsible integration of AI in higher education at HELF 2024. <https://www.msuiit.edu.ph/news/news-detail.php?id=1994>
- Clorion, F. D. D., Buatona, J. G., Estigoy, E. B., Gray, S. Z., Hu, X., Gamiendien, Y., Sun, X., & Zhang, Y. (2025). AI transformation in basic education: A correlational analysis on the digital integration, challenges, and the role of strategic leadership in a country of emerging economy. *Procedia Computer Science*, 265, 217-225. <https://doi.org/10.1016/j.procs.2025.07.175>
- Co, S. J. (2025). Artificial intelligence in Philippine education: A narrative review of applications, perceptions, and challenges. *International Research Journal of Science, Technology, Education, and Management*, 5(2), 25-38. <https://doi.org/10.5281/zenodo.15902950>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approach* (5th ed.). Thousand Oaks, CA: SAGE Publications.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Deloitte. (2024). The state of AI in higher education: From experimentation to strategy. Deloitte Insights. <https://www.deloitte.com/global/en/insights>
- Donasco, A. G., & Oliveros, S. T. R. (2024). AI's impact on educational leadership and learning. *International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence (IMJRISSE)*, 1(8). <https://risejournals.org/index.php/imjrise/article/view/630>
- Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569–591. <https://doi.org/10.1037/0033-2909.129.4.569>
- EDUCAUSE. (2025). AI readiness and leadership in higher education: 2025 Horizon report. EDUCAUSE Center for Analysis and Research. <https://www.educause.edu>
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). Thousand Oaks, CA: Sage Publications.
- Fullan, M., Azorin, C., Harris, A., & Jones, M. (2023). Artificial intelligence and school leadership: Challenges, opportunities, and implications. *School Leadership and Management*, 44(4), 339-346. <https://doi.org/10.1080/13632434.2023.2246856>
- Funa, A. A., & Gabay, R. A. E. (2025). Policy guidelines and recommendations on AI use in teaching and learning: A meta-synthesis study. *Social Sciences & Humanities Open*, 11. <https://doi.org/10.1016/j.ssaho.2024.101221>

- Giray, L., De Silos, P. Y., Adornado, A., Buelo, R. J. V., Galas, E., Reyes-Chua, E., Santiago, C., & Ulanday, M. L. (2024). Use and impact of artificial intelligence in Philippine higher education: Reflections from instructors and administrators. *Internet Reference Services Quarterly*, 28(3), 315-338. <https://doi.org/10.1080/10875301.2024.2352746>
- Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. *Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education*. <https://scholarworks.iupui.edu/handle/1805/344>
- Khairullah, S. A., Harris, S., Hadi, H. J., Sandhu, R. A., Ahmad, N., & Alshara, M. A. (2025). Implementing artificial intelligence in academic and administrative processes through responsible strategic leadership in the higher education institutions. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1548104>
- Karakose, T., & Tulubas, T. (2025). The role of educational leaders in the age of artificial intelligence (AI). *Educational Process: International Journal*, 16, e2025267. <https://doi.org/10.22521/edupij.2025.16.267>
- Laufer, M., Deacon, B., Mende, M. A., & Schäfer, L. O. (2024). Leading with trust: How university leaders can foster innovation with educational technology through organizational trust. *Innovative Higher Education*. <https://doi.org/10.1007/s10755-024-09733-5>
- Pascual, J. (2023 Nov 16). PH schools adopting AI; UP among first in Asia: group. <https://www.abs-cbn.com/business/11/16/23/ph-schools-adopting-ai-up-among-first-in-asia-group>
- Peng, T., Wang, C., Xu, J., Dai, J., & Yu, T. (2024). Evolution and current research status of educational leadership theory: A content analysis-based study. *Sage Open*, 14(3). <https://doi.org/10.1177/21582440241285763>
- Pietsch, M., & Mah, D. (2024). Leading the AI transformation in schools: It starts with a digital mindset. *Educational technology research and development*, 73(2), 1043-1069. <https://doi.org/10.1007/s11423-024-10439-w>
- Rodrigo, M. M. T. (2023). Is the AIED conundrum a first-world problem? *International Journal of Artificial Intelligence in Education*, 34, 55-61. <https://doi.org/10.1007/s40593-023-00345-2>
- Sposato, M. (2025). Artificial intelligence in educational leadership: A comprehensive taxonomy and future directions. *International Journal of Educational Technology in Higher Education*, 22(1). <https://doi.org/10.1186/s41239-025-00517-1>
- Tarisayi, K. S. (2024). Strategic leadership for responsible artificial intelligence adoption in higher education. *CTE Workshop Proceedings*, 11, 4-14. <https://doi.org/10.55056/cte.616>
- Toquero, C. M. (2025). Trends, trajectories and tomorrows of AI regulations in Philippine higher education. *Higher Education Quarterly*, 80(1). <https://doi.org/10.1111/hequ.70090>
- Toquero, C. M., & Ramos, A. (2024). Leaders in crisis: Philippine educational leaders sustaining learning in higher education institutions during and beyond the pandemic. In: Rudolph, J., Crawford, J., Sam, CY., Tan, S. (eds). *The Palgrave Handbook of Crisis Leadership in Higher Education*. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-031-54509-2\\_28](https://doi.org/10.1007/978-3-031-54509-2_28)
- Zhang, Q., Wang, F., Liao, G., & Li, M. (2025). How does AI trust foster innovative performance under paternalistic leadership? The roles of AI crafting and leader's AI opportunity perception. *Behavioral Sciences*, 15(8). <https://doi.org/10.3390/bs15081064>