

AI Literacy for Educational Leaders: Evidence-Based Policy Guidance for Sustained AI Integration in Schools

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Abstract

The rapid adoption of artificial intelligence (AI) in higher education requires understanding institutional determinants for effective implementation. This study investigated the relationship between AI literacy, leadership competencies, school climate, and AI integration among administrators and faculty at North Eastern Mindanao State University. Utilizing a quantitative correlational design with 100 participants across seven campuses, the research analyzed data through descriptive statistics, correlation, multiple regression, and mediation analysis. Results indicated high levels of leadership competence and AI literacy, alongside a generally positive school climate. AI literacy and school climate significantly predicted AI integration, whereas leadership competencies did not exhibit a significant direct effect. Mediation analysis revealed that school climate partially mediated the relationship between AI literacy and AI integration. These findings suggest that AI integration in multi-campus institutions is primarily driven by stakeholder competencies and a supportive organizational environment rather than leadership alone. Consequently, this study proposes an evidence-based AI Integration Policy Model to guide ethical, systematic, and sustained AI adoption in higher education..

Keywords : Artificial Intelligence, AI Literacy, School Climate, Leadership, Higher Education

Introduction

Moving from an emerging set of digital technologies, artificial intelligence (AI) has become a significant transformative force for education, fundamentally reshaping administrative processes, teaching methods, assessment practices, research support, and institutional decision-making. Generative AI is transforming teaching and learning, necessitating clarity on pedagogical use, ethical considerations, and policies against misuse to obtain meaningful learning outcomes (OECD, 2026). These changes place increased responsibility on leaders and administrators to promote the necessary competencies and institutional conditions for the effective integration of AI.

A critical component of this transition is addressing gaps in AI literacy among education professionals. AI literacy is no longer solely about technical knowledge; it encompasses a deeper understanding, critical evaluation, ethical awareness, and appropriate application of AI (Chiu et al., 2024). The AI Competency Framework for Teachers highlights dimensions such as human-centered mindsets, AI ethics, foundations, pedagogy, and professional learning (Miao & Cukurova, 2024). Recent literature conceptualizes AI literacy as a necessary competence for making intelligent, ethical decisions rather than a mere technical ability (Almatrafi, Johri, & Lee, 2024; Sperling et al., 2024). Furthermore, students and stakeholders expect greater institutional direction, guidelines, and support to develop these skills responsibly (Digital Education Council, 2024; UNESCO, 2023).

Beyond individual competencies, the roles of leadership and institutional climate are vital to successful AI integration. Educational leaders are expected to determine the vision, allocate resources, and support staff navigating technological change. Transformational leadership can empower teachers to use technology in a more sophisticated manner (Schmitz et al., 2023), establishing it as a key component of institutional systems of practice

(Dexter, 2011). However, leadership alone may not result in successful technology integration without an innovative, supportive environment. Evidence suggests that an innovative school climate is a more significant mediator for technology integration at the school and individual level than principal support alone (Ninković, Knežević Florić, & Momčilović, 2023). A collaborative environment characterized by coherent support structures and collegial relations is essential for translating individual readiness into sustained digital transformation (OECD, 2023).

In the Philippines, higher education institutions continue to grapple with digital transformation and the integration of emerging technologies. Recent policy discussions emphasize the need for higher education institutions to implement clearly articulated AI use policies, address literacy gaps, and enact curricular reforms (Vergara, 2024). For North Eastern Mindanao State University (NEMSU), this is particularly relevant given its ongoing initiatives and preparation for a planned AI policy. However, empirical studies examining the linkage between AI literacy, leadership competencies, school climate, and AI integration within Philippine State Universities and Colleges remain limited.

This study is anchored on the Unified Theory of Acceptance and Use of Technology (UTAUT) and Organizational Climate Theory. The UTAUT posits that technology adoption is determined by performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003). In this context, AI literacy relates to an individual's expectation of AI's usefulness (performance and effort expectancy), while leadership acts as a social influence. Furthermore, Organizational Climate Theory states that collective perceptions of an organization's rules, values, structures, and processes determine behavior (Hoy & Miskel, 2013). Together, these theories hypothesize that AI integration is a product of both human capability (AI literacy) and organizational support systems (leadership and school climate).

Therefore, the primary purpose of this study was to determine the interrelationship among AI literacy skills, leadership competencies, school climate, and AI integration among administrators and faculty members with leadership functions across the seven campuses of North Eastern Mindanao State University. Specifically, the study sought to assess the demographic profile of the respondents and their current levels of leadership and AI literacy skills. It also aimed to evaluate the status of the school climate—specifically its norms, values, interpersonal relationships, organizational structures, and teaching practices—alongside the extent of institutional AI readiness and integration. Furthermore, the study investigated the interrelationships among these variables, identified the significant predictors of AI integration, and examined whether leadership competencies and school climate mediated the relationship between AI literacy and AI integration. Ultimately, these findings were intended to serve as the empirical basis for designing an AI Integration Policy Brief for the institution.

Research Objectives

This study determined the interrelationship among AI literacy skills, leadership competencies, school climate, and AI integration among administrators and faculty members with leadership functions across the seven campuses of North Eastern Mindanao State University during Academic Year 2025–2026. Specifically, it sought to answer the following questions:

Specifically, it sought to answer the following questions:

What was the demographic profile of administrators in SUCs in terms of:

name;

age;

gender;

highest educational attainment;

employment status; and

years in service?

What was the level of school leaders' competencies in relation to:

leadership skills; and

AI literacy skills?

What was the status of the school in terms of the following:

School Climate

norms and values;

interpersonal relationships;
organizational structures; and
teaching and learning practices

AI Integration

readiness;

integration; and

expectations?

Was there an interrelationship among the AI literacy skills, leadership skills, school climate and AI integration?

What were the predictors of AI Integration in the Institution?

Did leadership competencies and school climate mediate between the relationship of AI Literacy Skills and AI Integration?

Based on the results of the study, what AI Integration Policy Brief could be designed?

Methods

Design

This study utilized a quantitative descriptive correlational design, employing correlation, multiple regression, and mediation analyses. Pearson Product-Moment Correlation analysis was used to investigate the correlation between the primary variables. Multiple regression was conducted to investigate the predictive power of AI literacy skills, leadership competencies, and school climate on AI integration. Moreover, mediation analysis was employed to determine if leadership competencies and school climate mediated the relationship between AI literacy skills and AI integration.

Environment

All seven campuses of North Eastern Mindanao State University (NEMSU) were covered in this study: Tandag (Main Campus), Cantilan, Lianga, Cagwait, San Miguel, Tagbina, and Bislig. NEMSU is a multi-campus institution located in Surigao del Sur Province in the Philippines, renamed following the passage of Republic Act No. 11584 (Republic of the Philippines, 2021).

Respondents and Sampling Technique

This study utilized purposive sampling to select respondents based on specific organizational experience and participation in decision-making regarding school leadership and AI utilization. Selection was conducted using organizational documents, and respondents were invited via official communication lines without coercion from direct supervisors.

Respondents were included if they: (a) held a position as an administrator, director, or dean, or were full-time faculty members with administrative responsibilities at NEMSU; (b) had continuously held their present leadership or administrative tenure for at least three years during the conduct of the study; and (c) volunteered with full awareness of the study's purpose, procedures, and ethical considerations. Excluded from the study were on-call, job-order, contractual, and temporary faculty, as well as those who had served in their current position for less than three years.

A total of 100 respondents were included in the study, comprising 66 full-time faculty members with leadership roles and 34 administrative staff. This sample size was statistically sufficient to power the correlation, regression, and mediation analyses. Table 1 presents the distribution of respondents across the seven campuses.

Table 1. Distribution of Full-Time Faculty and Administrative Staff by Campus

Campus	Faculty (n)	%	Administrative Staff (n)	%	Total (n)	%
A	15	22.73	6	17.65	21	21.00
B	18	27.27	12	35.29	30	30.00
C	4	6.06	4	11.76	8	8.00

Campus	Faculty (n)	%	Administrative Staff (n)	%	Total (n)	%
D	8	12.12	2	5.88	10	10.00
E	6	9.09	5	14.71	11	11.00
F	6	9.09	4	11.76	10	10.00
G	9	13.64	1	2.94	10	10.00
TOTAL	66	100.00	34	100.00	100	100.00

Instruments

An adapted questionnaire comprising selected questions from pre-existing instruments was utilized to assess AI literacy, leadership skills, school climate, and AI integration. AI literacy questions were adapted from the Scale for the Assessment of Non-Experts' AI Literacy (Laupichler et al., 2023). Leadership skills were measured using selected and modified questions from the Leadership Skills Questionnaire (Northouse, 2021). To gauge the degree of AI integration, questions were adapted from the Global AI Student Survey (Digital Education Council, 2024). Indicators for the school climate scale (focusing on norms and values, interpersonal relationships, organizational structure, and teaching and learning practices) were identified based on existing school climate literature. Likert-type scales were used for all questions, and the instrument was subjected to piloting prior to the actual study.

Data Gathering Procedures

Prior to conducting the study, approval was sought from the Institutional Review Board (IRB) to conform to ethical guidelines. With the approval obtained, a letter of transmittal was sent to the University President and the campus administrators of the North Eastern Mindanao State University (NEMSU) to request permission to carry out the study across the seven campuses. Coordination with the campus administrators was conducted to select suitable respondents based on the inclusion criteria and to schedule convenient times for data gathering. Once all requisite permissions were successfully obtained, the researcher began distributing the questionnaires among the selected respondents. Data collection involved the use of either a hard copy or an online version of the questionnaires, depending on respondent preferences. Instructions were provided to direct the respondents on how to fill out the questionnaire, and sufficient time was accorded to complete it. After all necessary data was collected, completed surveys were physically collected by the researcher or submitted through the online platform. The collected answers were encoded and analyzed employing descriptive, correlation, multiple regression, and mediation analyses. To ensure confidentiality, the collected data was kept in an encrypted computer document accessible only to the researcher. After retaining the data for the appropriate period, all print-outs will be disposed of, and all digital documents will be deleted upon completion of the study.

Data Analysis

Obtained responses were coded, classified, and analyzed using an appropriate statistical package. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize demographic characteristics and the extent of the primary variables. Pearson product-moment correlation tested the interrelationships between AI literacy skills, leadership competencies, school climate, and AI integration. Multiple regression identified which independent variables significantly predicted the dependent variable, AI integration. Finally, mediation analysis tested the indirect effects of leadership competencies and school climate on the relationship between AI literacy and AI integration by measuring direct effects, the effect of the independent variable on the mediators, the effect of mediators on the outcome, and the indirect pathways.

Ethical Considerations

This study strictly adhered to the Declaration of Helsinki regarding ethical principles for medical research involving human subjects (World Medical Association, 2013). The research was approved by the Research and Ethics Committee of the University of the Visayas (Ref# 2026-016), dated March 12, 2026. All participants were adult volunteers who were thoroughly briefed on the nature of the research, potential risks and benefits, voluntary participation, and confidentiality. Written informed consent was obtained prior to participation. Withdrawal was permitted at any stage, no compensation was offered, and strict confidentiality was guaranteed, ensuring responses were used exclusively for academic purposes in an aggregated format.

Results

Demographic Profile

The respondents' demographic profile is categorized by campus, age, gender, highest educational attainment, employment status, and years in service. Table 2 indicates that the respondents were distributed across all seven campuses and comprised both administrative staff (n=34) and permanent faculty members (n=66).

Table 2. Demographic Profile

Category	Campus A	Campus B	Campus C	Campus D	Campus E	Campus F	Campus G
AGE							
20-30 yrs. old	6	5	2	1	3	3	1
30-40 yrs. old	5	9	2	4	5	3	2
40-50 yrs. old	7	9	2	4	-	4	5
50-60 yrs. old	2	6	2	-	3	-	2
61 and above	1	1	-	1	-	-	-
GENDER							
Male	7	11	4	4	2	3	4
Female	14	19	4	6	9	7	6
HIGHEST Educational attainment							
Bachelor's Degree	3	11	3	2	4	3	1
Master's Degree (with units)	-	-	-	-	-	1	-
Master's Degree (completed)	7	5	3	3	2	1	5

Category	Campus A	Campus B	Campus C	Campus D	Campus E	Campus F	Campus G
Doctoral Degree (with units)	4	4	-	2	-	1	1
Doctoral Degree	6	10	2	3	5	4	3
Postdoctoral Studies	1	-	-	-	-	-	-
Employment Status							
Administrative Staff	6	12	4	2	5	4	1
Permanent Faculty	15	18	4	8	6	6	9
Years in Service							
3-5years	8	11	5	7	6	3	3
6-10 years	6	8	-	2	4	2	2
More than 10years	7	11	3	1	1	5	5

Leadership and AI Literacy Skills

Table 3 presents the respondents' leadership and AI literacy skills across the seven campuses. In terms of leadership skills, the aggregate scores across all campuses were ranked as "Outstanding," ranging from a mean of 4.29 (Campus A) to 4.69 (Campus D). Regarding AI literacy skills, respondents in six out of the seven campuses demonstrated "Advanced" proficiency, ranging from 4.61 to 5.00. Campus B recorded the highest mean (5.00), while Campus G recorded a mean score of 4.28, falling into the "Upper Intermediate" category.

Table 3. Leadership and AI Literacy Skills of School Heads

Campus	Leadership Skills Mean/SD	Description	AI Literacy Skills Mean/SD	Description
A	4.29	Outstanding	4.81	Advanced
B	4.45	Outstanding	5.00	Advanced
C	4.42	Outstanding	4.73	Advanced
D	4.69	Outstanding	4.89	Advanced
E	4.31	Outstanding	4.28	Upper Intermediate

Campus	Leadership Mean/SD	Skills Description	AI Literacy Mean/SD	Skills Description
F	4.53	Outstanding	4.61	Advanced
G	4.46	Outstanding	4.67	Advanced

(Legend: Leadership: 1.00-1.80=Poor; 1.81-2.60=Fair; 2.61-3.40=Satisfactory; 3.41-4.20=Very Satisfactory; 4.21-5.00=Outstanding. AI Literacy: 1.00-1.82=Beginner; 1.83-2.66=Lower Intermediate; 2.67-3.49=Intermediate; 3.50-4.32=Upper Intermediate; 4.33-5.15=Advanced; 5.16-6.00=Native AI User).

Status of School Climate

Table 4 displays the status of the school climate based on norms and values, interpersonal relationships, organizational structures, and teaching and learning practices. Overall, six campuses reported a "Highly Positive" school climate (ranging from 4.28 to 4.51), while Campus C reported a "Positive" climate (3.95). Across the components, norms and values alongside interpersonal relationships received the highest scores, whereas teaching and learning practices consistently received the lowest scores relative to the other variables.

Table 4. Status of School Climate in Schools

Campus	Norms and Values	Interpersonal Relationships	Organizational Structures	Teaching & Learning Practices	Totality	Description
A	4.74	4.11	4.43	3.89	4.29	Highly Positive
B	5.19	5.00	4.23	3.59	4.50	Highly Positive
C	4.00	4.26	3.91	3.63	3.95	Positive
D	4.75	4.59	4.41	4.30	4.51	Highly Positive
E	4.42	4.78	4.34	3.92	4.37	Highly Positive
F	4.59	4.61	4.55	3.83	4.40	Highly Positive
G	4.53	4.67	4.28	3.63	4.28	Highly Positive

(Legend: Leadership: 1.00-1.80=Poor; 1.81-2.60=Fair; 2.61-3.40=Satisfactory; 3.41-4.20=Very Satisfactory; 4.21-5.00=Outstanding. AI Literacy: 1.00-1.82=Beginner; 1.83-2.66=Lower Intermediate; 2.67-3.49=Intermediate; 3.50-4.32=Upper Intermediate; 4.33-5.15=Advanced; 5.16-6.00=Native AI User).

Status of AI Integration

The status of AI integration among the campuses is summarized in Table 5. AI integration was observed at a "Considerable Extent" across six campuses, with overall means ranging from 3.63 to 3.93. Campus D reported integration to a "Great Extent" with an overall mean of 4.20.

Table 5. Status of AI Integration in Schools

Campus	Readiness (Mean)	Integration (Mean)	Expectation (Mean)	Overall Mean	SD	Description
A	3.61	3.78	4.29	3.87	.637	Considerable Extent
B	4.08	3.84	3.94	3.90	.504	Considerable Extent
C	3.78	3.48	3.74	3.63	.475	Considerable Extent
D	4.31	4.12	4.22	4.20	.549	Great Extent
E	4.19	3.82	3.97	3.93	.498	Considerable Extent
F	—	4.27	3.70	3.85	.286	Considerable Extent
G	—	3.95	3.56	3.65	.436	Considerable Extent

(Legend: Leadership: 1.00-1.80=Poor; 1.81-2.60=Fair; 2.61-3.40=Satisfactory; 3.41-4.20=Very Satisfactory; 4.21-5.00=Outstanding. AI Literacy: 1.00-1.82=Beginner; 1.83-2.66=Lower Intermediate; 2.67-3.49=Intermediate; 3.50-4.32=Upper Intermediate; 4.33-5.15=Advanced; 5.16-6.00=Native AI User).

Interrelationship Analysis

A Pearson product-moment correlation was conducted to determine the relationships between the variables (Table 6). There was a strong, positive, and significant relationship between AI literacy and AI integration ($r = 0.574$, $p < .001$). School climate also demonstrated a moderate and significant positive correlation with AI integration ($r = 0.495$, $p < .001$). Conversely, there was no significant relationship between leadership and AI integration ($r = 0.042$, $p = 0.678$). Among the independent variables, AI literacy was weakly but significantly correlated with leadership ($r = 0.229$, $p = .022$) and moderately correlated with school climate ($r = 0.367$, $p < .001$). No significant correlation was found between leadership and school climate ($r = 0.090$, $p = .374$).

Table 6. Correlation Matrix

	LEADERSHIP	AI LITERACY	SCHOOL CLIMATE
AI LITERACY			
Pearson's r	0.229	—	
df	98	—	
p-value	0.022	—	
SCHOOL CLIMATE			
Pearson's r	0.090	0.367	—

	LEADERSHIP	AI LITERACY	SCHOOL CLIMATE
df	98	98	—
p-value	0.374	<.001	—
AI INTEGRATION			
Pearson's r	0.042	0.574	0.495
df	98	98	98
p-value	0.678	<.001	<.001

Multiple Linear Regression Analysis

A multiple linear regression analysis was conducted to predict AI integration based on leadership, AI literacy, and school climate (Table 7). The overall model was statistically significant ($F = 24.30$, $p < .001$) and explained 43.2% of the variance in AI integration ($R^2 = 0.432$). AI literacy emerged as a strong and significant positive predictor ($\beta = 0.3348$, $p < .001$), as did school climate ($\beta = 0.3708$, $p < .001$). Leadership did not significantly predict AI integration ($\beta = -0.0842$, $p = 0.227$).

Table 7. Linear Regression Analysis Predicting AI Integration

Model	R	R ²	F	df1	df2	p
1	0.657	0.432	24.30	3	96	< .001

Note. Model estimated using a sample size of $N = 100$.

Predictor	Estimate	SE	t	p	Interpretation
Intercept	1.0809	0.4822	2.24	0.027	Significant
Leadership	-0.0842	0.0692	-1.22	0.227	Not Significant
AI Literacy	0.3348	0.0596	5.62	< .001	Significant
School Climate	0.3708	0.0932	3.98	< .001	Significant

Mediation

Mediation analysis was utilized to test the indirect effects of school climate and leadership on the relationship between AI literacy and AI integration. As shown in Table 8, school climate was found to partially mediate the relationship. The total effect of AI literacy on AI integration was significant (Estimate = 0.4043, $p < .001$). A significant direct effect (Estimate = 0.3195, $p < .001$) accounted for 79.0% of the total effect, while a significant indirect effect through school climate (Estimate = 0.0848, $p = 0.005$) accounted for 21.0%.

Table 8. School Climate as Mediating Variable

Effect	Estimate	SE	Z	p	% Mediation
Indirect	0.0848	0.0301	2.82	0.005	21.0
Direct	0.3195	0.0575	5.56	<.001	79.0

Analysis

Effect	Estimate	SE	Z	p	% Mediation
Total	0.4043	0.0577	7.01	<.001	100.0
Path	Estimate	SE	Z	p	
AI LITERACY → SCHOOL CLIMATE	0.229	0.0581	3.95	<.001	
SCHOOL CLIMATE → AI INTEGRATION	0.370	0.0921	4.02	<.001	
AI LITERACY → AI INTEGRATION	0.319	0.0575	5.56	<.001	

Conversely, mediation analysis indicated that leadership was not a significant mediating variable (Table 9). While AI literacy significantly predicted leadership (Estimate = 0.1838, $p = 0.019$), leadership did not significantly predict AI integration (Estimate = -0.0824, $p = 0.260$), failing to establish an indirect pathway.

Table 9. Leadership as Mediating Variable

Path	Estimate	SE	Z	p
AI LITERACY → LEADERSHIP	0.1838	0.0783	2.35	0.019
LEADERSHIP → AI INTEGRATION	-0.0824	0.0732	-1.13	0.260
AI LITERACY → AI INTEGRATION	0.4195	0.0588	7.13	<.001

Discussion

This study aimed to determine the interrelationship among AI literacy, leadership, school climate, and AI integration in a multi-campus public university context. The findings revealed that administrators and faculty members possessed outstanding leadership competencies and advanced AI literacy skills, indicating a high level of individual readiness for technological adoption. Furthermore, the campuses exhibited a highly positive school climate and had integrated AI to a considerable extent. Crucially, the analyses demonstrated that AI literacy and school climate were significant positive predictors of AI integration, whereas leadership was not. Mediation analysis further confirmed that school climate partially mediated the relationship between AI literacy and AI integration, while leadership failed to serve as a mediating pathway. These results indicate that institutional environment and stakeholder competence, rather than direct leadership alone, are the primary catalysts for translating individual AI readiness into organizational adoption.

The strong predictive relationship between AI literacy and AI integration confirms that educators' competence is foundational to the successful implementation of emergent technologies. This aligns with Falloon (2020), who argued that digital competence is crucial for technological integration, and Trust, Carpenter, and Krutka (2021), who reported that technological knowledge predicts classroom innovation. In the contemporary educational landscape, AI literacy extends beyond basic technical awareness; it encompasses ethical understanding, critical evaluation, and practical application, reflecting the human-centered dimensions outlined in the UNESCO AI Competency Framework (Miao & Cukurova, 2024).

However, individual capability alone does not guarantee integration. The finding that school climate significantly predicts and mediates AI integration suggests that even highly competent individuals require a supportive institutional environment—characterized by collaboration, openness to trial and error, and shared practices—to operationalize their knowledge. This supports Thapa et al. (2013), who found that collaborative climates promote new educational practices, and the OECD (2023) report noting that collaborative cultures more efficiently integrate digital technologies like AI.

Interestingly, while leadership positively correlated with AI literacy, it did not significantly predict or mediate AI integration. This suggests that current leadership practices at the institution may be focused more on general management than on fostering specific technological innovations. While leaders are theoretically vital for enabling digital transformation (Schmitz et al., 2023) and establishing systems of practice (Dexter, 2011), leadership support is insufficient without strong teacher capacity and an innovative organizational climate. This is consistent with Ninković, Knežević Florić, and Momčilović (2023), who concluded that an innovative climate significantly mediates technology integration, whereas principal support does not.

Practical Implications

The findings provide an empirical foundation for developing a targeted, system-wide AI Integration Policy. To meaningfully increase AI integration, the university should focus on capacity-building and environmental readiness rather than relying solely on administrative guidance. Administrators should reinforce a supportive campus climate by establishing peer coaching networks, communities of practice, and robust instructional and technical support systems. Regular training workshops must go beyond basic tool demonstration to mentor personnel on prompt design, validation of AI outputs, data privacy, and ethical applications.

Furthermore, the university should convene a system-wide AI Integration Committee comprising representatives from academic departments, ICT, quality assurance, research, and legal affairs to oversee these efforts across all seven campuses. Implementing a comprehensive, unified policy is essential to standardizing academic integrity, monitoring compliance, and ensuring human oversight in AI-assisted decision-making. This addresses Vergara's (2024) call for clear institutional guidelines regarding generative AI in Philippine higher education and the OECD (2026) recommendation that AI use must be intentional, well-guided, and governed by firm pedagogical frameworks.

Limitations and Future Research

While this study provides valuable insights into the determinants of AI adoption, it is limited to a single multi-campus public university setting, which may restrict the generalizability of the findings. Future research could utilize advanced statistical techniques, such as structural equation modeling or longitudinal designs, to further investigate the causal relationships among these variables. Additionally, qualitative methodologies—such as in-depth interviews with administrators—could offer deeper insights into why leadership emerged as a non-significant predictor in this context. Finally, follow-up studies involving different cohorts from private higher education institutions and basic education sectors would help determine whether AI literacy and school climate universally outpace leadership as predictors of AI integration.

Conclusion

This study concludes that the demographic and professional profile of the respondents provided a representative context for assessing AI readiness across a multi-campus university system. While administrators and faculty demonstrated high levels of leadership and AI literacy, these individual competencies require an enabling institutional environment to translate into actual AI integration. The findings confirm that AI literacy and a positive school climate are the primary predictors of institutional AI adoption. Conversely, leadership competencies were not significant predictors or mediators in this context, suggesting that while leadership is essential for governance, current administrative practices may not yet be tailored to drive specific technological innovation. Therefore, the proposed AI Integration Policy Brief is essential to provide a standardized, evidence-based framework that addresses individual readiness through targeted training and improves environmental readiness through collaborative support systems. By focusing on capacity building, ethical use, and

institutionalizing an innovative climate, the university can effectively transition from emerging AI use to systematic, sustainable AI integration across all seven campuses..

References

1. Almatrafi, O., Johri, A., & Lee, H. (2024). A systematic review of AI literacy conceptualization, constructs, implementation, and assessment efforts (2019–2023). *Computers and Education Open*, 6, 100173. <https://doi.org/10.1016/j.caeo.2024.100173>
2. Chiu, T. K. F., Ahmad, Z., Ismailov, M., & Sanusi, I. T. (2024). What are artificial intelligence literacy and competency? A comprehensive framework to support them. *Computers and Education Open*, 6, 100171. <https://doi.org/10.1016/j.caeo.2024.100171>
3. Dexter, S. (2011). School technology leadership: Artifacts in systems of practice. *Journal of School Leadership*, 21(2), 166–189. <https://doi.org/10.1177/105268461102100202>
4. Digital Education Council. (2024). Global AI student survey 2024. <https://www.digitaleducationcouncil.com/post/digital-education-council-global-ai-student-survey-2024>
5. Falloon, G. (2020). From digital literacy to digital competence: The teacher digital competency framework. *Educational Technology Research and Development*, 68(5), 2449–2472. <https://doi.org/10.1007/s11423-020-09767-4>
6. Hoy, W. K., & Miskel, C. G. (2013). *Educational administration: Theory, research, and practice* (9th ed.). McGraw-Hill Education.
7. Kasneci, E., Sessler, K., Kuchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günnemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeiffer, F., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., Stadler, M., Weller, J., Kuhn, J., & Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
8. Laupichler, M. C., Aster, A., Schirch, J., & Raupach, T. (2023). Development of the scale for the assessment of non-experts' AI literacy: An exploratory factor analysis. *Computers and Education: Artificial Intelligence*, 4, 100165. <https://doi.org/10.1016/j.caeai.2023.100165>
9. Miao, F., & Cukurova, M. (2024). AI competency framework for teachers. UNESCO. <https://doi.org/10.54675/ZJTE2084>
10. Ninković, S., Knežević Florić, O., & Momčilović, M. (2023). Multilevel analysis of the effects of principal support and innovative school climate on the integration of technology in learning activities. *Computers & Education*, 201, 104833. <https://doi.org/10.1016/j.compedu.2023.104833>
11. Northouse, P. G. (2021). *Leadership: Theory and practice* (9th ed.). SAGE Publications.
12. OECD. (2023). *OECD digital education outlook 2023: Towards an effective digital education ecosystem*. OECD Publishing. <https://doi.org/10.1787/c74f03de-en>
13. OECD. (2026). *OECD digital education outlook 2026: Exploring effective uses of generative AI in education*. OECD Publishing. <https://doi.org/10.1787/062a7394-en>
14. Republic of the Philippines. (2021). Republic Act No. 11584: An act renaming the Surigao del Sur State University (SDSSU) in the Province of Surigao del Sur to North Eastern Mindanao State University (NEMSU).
15. Schmitz, M. L., Antonietti, C., Gollner, R., Bedenlier, S., Handel, M., & Schober, B. (2023). Transformational leadership for technology integration in schools: Empowering teachers to use technology in a more demanding way. *Computers & Education*, 204, 104867. <https://doi.org/10.1016/j.compedu.2023.104867>
16. Sperling, K., Stenberg, C.-J., McGrath, C., Åkerfeldt, A., Heintz, F., & Stenliden, L. (2024). In search of artificial intelligence (AI) literacy in teacher education: A scoping review. *Computers and Education Open*, 6, 100169. <https://doi.org/10.1016/j.caeo.2024.100169>
17. Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83(3), 357–385. <https://doi.org/10.3102/0034654313483907>
18. Trust, T., Carpenter, J. P., & Krutka, D. G. (2021). Moving beyond silos: Professional learning networks in higher education. *The Internet and Higher Education*, 49, 100772. <https://doi.org/10.1016/j.iheduc.2020.100772>

19. UNESCO. (2023). Guidance for generative AI in education and research.
20. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
21. Vergara, J. P. C. (2024). Navigating the generative artificial intelligence era: Charting the course for curricular reform in higher education in the Philippines. UP Center for Integrative and Development Studies / Second Congressional Commission on Education. <https://edcom2.gov.ph/publications/navigating-the-generative-artificial-intelligence-era-charting-the-course-for-curricular-reform-in-higher-education-in-the-philippines/>
22. World Medical Association. (2013). World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA*, 310(20), 2191–2194. <https://doi.org/10.1001/jama.2013.281053>.