ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 6 (June 2026)

Digital Leadership Skills of Academic Leaders in the Age of AI Agents: Toward a Human-to Algorithmic Leadership Transition Framework

Oscar P. Oganiza[1*] Marvin O Mallari[2,3] and Jesus R. Arboleda[2]
[1]*Wesleyan University – Philippines*
[2]*Nueva Ecija University of Science and Technology*
[3]*Holy Cross Colleges, Inc*
[*]*bttusdt@gmail.com*, [2]*mallarimarvin022@gmail.com*, [3]*jesusarboleda45@gmail.com*

Date Submitted:
March 19, 2026

Date Accepted:
April 21, 2026

Date Published:
June 01, 2026

DOI:
10.5281/zenodo.21606226

ABSTRACT

The emergence of AI agentic systems disrupts academic leadership theory fundamentals. Strategic leadership frameworks—Multifactor Leadership Questionnaire (Bass & Avolio, 2000), Dynamic Managerial Capabilities (Helfat & Martin, 2015), and Upper Echelons Theory (Hambrick & Mason, 1984)—were developed for human-directed environments and do not address behavioral requirements when AI agents autonomously perform academic functions. Academic leaders increasingly govern AI-integrated environments without validated theoretical frameworks. This study employs a PRISMA-informed Systematic Literature Review across Scopus, Web of Science, ERIC, and Google Scholar examining how digital leadership skills must evolve under AI agentic conditions in higher education. Four literature bodies were analyzed: strategic/academic leadership theory, AI agentic integration in higher education, digital leadership approaches, and agency theory/governance architecture. Three theoretical gaps are identified—Digital Leadership Behavior Gap, Academic Managerial Capability Gap, and Institutional Outcomes Gap—and the Human-to-Algorithmic Leadership Transition (HALT) Framework is proposed, specifying how academic leaders must transition from administrative direction to algorithmic orchestration. Evidence from Philippine public sector digital leadership contexts further grounds the framework in locally relevant governance realities.

Keywords: *academic leaders; AI agentic systems; digital leadership skills; HALT Framework; transformational leadership*

INTRODUCTION

The emergence of AI agentic systems — autonomous, goal-directed architectures capable of perceiving their environment, planning multi-step tasks, and executing actions without continuous human oversight — is fundamentally disrupting the assumptions upon which academic leadership theory was built. For decades, leadership scholarship has proceeded from a singular foundational premise: that organizational direction, institutional positioning, and strategic execution are functions performed by human leaders directing human followers. This premise, embedded in the most widely validated leadership frameworks of the past four decades, is now being systematically disrupted in higher education contexts worldwide.

Academic leaders — deans, department chairs, academic vice presidents, and university presidents — are at the center of this disruption. They are increasingly confronted with autonomous systems performing functions

ISSN: 3116-3475
International Journal
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that once required sustained human judgment: curriculum analytics, student performance monitoring, research output processing, and academic workflow coordination. Renta-Davids et al. (2025), in a scoping review published in the Review of Education, confirm that AI integration is transforming the decision-making roles of educational leaders — reshaping how academic judgments are made and introducing governance responsibilities that existing leadership theory has not theorized. Yet the digital leadership skills required to govern these AI agentic systems remain undefined, unmeasured, and undertheorized.

The urgency of this gap is empirically documented. The EDUCAUSE (2025) AI Landscape Study reports that while 80 percent of faculty and staff in higher education are already using AI tools, fewer than one in four are aware of a formal institutional policy. Elsevier's (2024) Academic Transformation Survey found that only 34 percent of academic leaders report meaningful progress in integrating AI effectively and responsibly, citing knowledge gaps and leadership readiness as the primary barriers. Hossain et al. (2025), published in the Journal of Leadership and Organizational Studies, confirm that existing digital leadership frameworks do not yet specify the AI-driven leader capabilities required in this environment. The gap between what AI agents can do and what academic leaders know how to govern is not a technology problem. It is a leadership capability problem.

In the Philippine public sector, Balagtas and Mallari (2025) established that digital leadership directly influences operational efficiency outcomes in government agencies — demonstrating that leadership capability gaps in technology-integrated institutions carry concrete institutional consequences. Nilo, Dungca, Mallari and Florencondia (2025) further confirmed that leadership dynamics differ significantly between public sector and academic settings, underscoring the importance of context-specific theoretical frameworks. Academic leaders in Philippine colleges and universities face the same AI agentic disruption as their global counterparts — but within a governance environment characterized by collegial academic decision-making, resource-constrained institutional operations, and a national higher education system still developing its AI policy infrastructure.

Existing strategic leadership frameworks—the Multifactor Leadership Questionnaire 5X, the Dynamic Managerial Capabilities Framework, and Upper Echelons Theory—were developed for human-directed environments and do not account for the behavioral requirements of academic leaders governing AI agentic systems in higher education. The digital leadership skills required of academic leaders in AI-integrated higher education institutions remain undefined, unmeasured, and theoretically underspecified. Academic leaders in Philippine higher education lack a validated governance framework guiding how their digital leadership skills must evolve under AI agentic conditions.

This study is anchored on the following specific problems:

1. Existing strategic leadership frameworks — the MLQ 5X, the Dynamic Managerial Capabilities Framework, and Upper Echelons Theory — were developed for human-directed environments and do not account for the behavioral requirements of academic leaders governing AI agentic systems in higher education.
2. The digital leadership skills required of academic leaders in AI-integrated higher education institutions remain undefined, unmeasured, and theoretically underspecified.
3. Academic leaders in Philippine higher education lack a validated governance framework guiding how their digital leadership skills must evolve under AI agentic conditions.

This study aims to identify the theoretical gaps in existing strategic leadership frameworks as applied to the digital leadership skills of academic leaders governing AI agentic systems in higher education, and to propose the Human-to-Algorithmic Leadership Transition (HALT) Framework specifying how academic leaders' digital leadership skills must evolve under AI agentic conditions. Specifically, the study examines and critically evaluates three validated strategic leadership instruments for their applicability and limitations under AI agentic conditions, conducts an in-depth analysis of four literature bodies, formally identifies theoretical gaps in existing leadership frameworks, and proposes the HALT Framework as a theoretical contribution specifying how academic leaders' digital leadership skills must transition from administrative direction to algorithmic orchestration.

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Specific Objectives:

A. To examine and critically evaluate three validated strategic leadership instruments — the MLQ 5X, the Dynamic Managerial Capabilities Framework, and Upper Echelons Theory — for their applicability and limitations in explaining academic leaders' digital leadership skills under AI agentic conditions.

B. To conduct an in-depth analysis of four literature bodies: strategic and academic leadership theory, AI agentic integration in higher education, digital leadership approaches, and agency theory and governance architecture.

C. To formally identify the theoretical gaps in existing leadership frameworks as applied to academic leaders governing AI agentic systems.

D. To propose the HALT Framework as a theoretical contribution specifying how academic leaders' digital leadership skills must transition from administrative direction to algorithmic orchestration.

Figure 1 presents the conceptual framework of this study, structured as an Input-Process-Output (IPO) model. The input layer comprises three established literature bodies that serve as the theoretical baseline: existing strategic leadership frameworks (MLQ 5X, DMC Framework, and Upper Echelons Theory), the AI agentic condition in higher education, and the academic leadership context in Philippine and global HEIs. These inputs are subjected to an In-Depth Literature Analysis process employing a PRISMA-informed Systematic Literature Review across Scopus, Web of Science, ERIC, and Google Scholar, covering publications from 2016 to 2026. The analysis produces three formally identified theoretical gaps — the Digital Leadership Behavior Gap, the Academic Managerial Capability Gap, and the Institutional Outcomes Gap — which collectively generate the output: the HALT Framework, grounded in four theoretical propositions.



[Figure 1. Conceptual Framework — IPO Model]

Input → Process (SLR) → 3 Gaps → HALT Framework → 4 Propositions

For academic leaders, this research provides the first theoretically grounded framework specifying how their digital leadership skills must evolve as AI agents assume active roles in academic operations. Dai et al. (2024) established that AI can enhance the decision-making abilities of academic leaders by processing and analyzing vast amounts of institutional data — but this enhancement is contingent on leaders developing the governance skills to direct, monitor, and recalibrate AI agent outputs responsibly.

For the academic research community in Engineering Management and Educational Administration, this study contributes a novel theoretical framework extending existing strategic leadership theory to address the AI agentic condition. For leadership development practitioners, this study establishes that AI orchestration knowledge constitutes an emerging frontier of academic leadership competence that current professional development programs, including those in Philippine HEIs, have not yet incorporated (Esteban, Florencondia, Jacoba, Ladignon & Mallari, 2025).

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METHODS

Research Design

This study employs an In-Depth Literature Analysis design — a non-empirical research approach deriving theoretical contributions from the systematic examination of existing published literature. No primary data collection, fieldwork, or respondents are involved. The study is evaluated on the depth, rigor, and theoretical coherence of its literature synthesis and the theoretical contribution it produces.

Literature Search Strategy

The literature search was conducted across four primary databases: Scopus, Web of Science, ERIC, and Google Scholar. Search strings combined terms from three conceptual domains: (1) academic leadership, digital leadership skills, transformational educational leadership, upper echelons, dynamic managerial capabilities; (2) AI agents, agentic AI, autonomous AI systems, algorithmic governance; and (3) higher education, academic administration, deans, academic vice presidents. Boolean operators (AND, OR) were applied across domains. The temporal scope spans 2016 to 2026, with primary emphasis on 2020–2026 publications. Seminal foundational works prior to 2016 were retained only where they constitute the primary theoretical basis for validated instruments examined in this study (Bass & Avolio, 2000; Hambrick & Mason, 1984; Helfat & Martin, 2015).

Inclusion and Exclusion Criteria

Inclusion criteria required peer-reviewed sources relevant to at least two of the three conceptual domains, published between 2016 and 2026. Large-scale empirical studies from education research organizations (EDUCAUSE, Elsevier, MIT Sloan-BCG) were included where they provided evidence unavailable in peer-reviewed literature. Philippine and Southeast Asian institutional research ((Author, 2025); Nilo et al., 2025; (Author, 2025); Santos, Ramos & Mallari, 2025) was specifically included to ground findings in locally relevant governance contexts. Exclusion criteria eliminated opinion pieces without empirical or theoretical grounding, studies focused exclusively on narrow technical AI implementation without academic leadership relevance, and publications prior to 2016 unless constituting the foundational theoretical baseline for a validated instrument.

Literature Analysis Framework

The analysis followed a PRISMA-informed Systematic Literature Review methodology. Literature was organized into four thematic bodies: (1) strategic and academic leadership theory as the human-centered baseline; (2) AI agentic integration in higher education as the disruptive condition; (3) digital leadership approaches under technological disruption; and (4) agency theory and governance architecture for AI agentic systems. The synthesis produced the formal gap statements and the proposed HALT Framework.

Ethical Considerations

This study analyzes publicly available peer-reviewed literature and institutional reports. No human subjects were involved. All sources are properly cited and attributed according to academic standards. Secondary data from published research was used in accordance with fair use principles for scholarly research.

RESULTS AND DISCUSSION

Validated Instruments and Their Limitations

Three validated strategic leadership instruments were examined as the theoretical reference baseline for this study. Each instrument was assessed for its definition, validation rigor, documented applications in academic leadership literature, and specific limitations under AI agentic conditions. The unifying logic is deliberate: each instrument explains how academic leaders direct, configure, and govern human followers — and each fails, in a

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specific and theoretically significant way, to account for the conditions created when AI agents become active participants in academic operations.

Multifactor Leadership Questionnaire (MLQ 5X)

Table 1: *Multifactor Leadership Questionnaire (MLQ 5X) Characteristics*

Characteristics	Description
Authors	Bass & Avolio (1985–2000) | Mind Garden Inc.
Type	Validated psychometric survey — 36 items, 9 subscales
Validation	40+ years, thousands of peer-reviewed studies globally
Construct	Full-range leadership: Transformational, Transactional, Laissez-Faire + 3 outcome scales
Limitation under AI Agentic Conditions	Every MLQ item assumes a human follower as the target. No subscale, item, or theoretical dimension addresses how academic leaders should govern, specify objectives for, monitor outputs from, or recalibrate autonomous AI agents.

The MLQ 5X is the most widely validated leadership measurement instrument in organizational behavior and educational leadership literature. In the Philippine engineering education context, Mallari, Domingo, Cruz and Florencondia (2025) confirmed that transformational leadership was the predominant leadership style perceived among engineering students at NEUST, with significant correlation to higher academic performance — validating the MLQ's continued relevance in Philippine HEI contexts while simultaneously revealing its limitation when AI agents execute the operational tasks that transformational leadership is designed to influence.

Hossain et al. (2025) demonstrated that transformational leadership dimensions are the strongest predictors of successful digital transformation outcomes, while simultaneously identifying that transformational leadership scales require reconceptualization in AI-driven dynamic environments. Karakose (2024) confirms that leaders with higher digital leadership capacity demonstrate superior AI integration outcomes — but no instrument currently measures the specific behavioral dimensions of that capacity under agentic conditions.

The MLQ's transformational dimensions remain the most validated predictors of academic innovation and faculty performance ((Author, 2025); Hossain et al., 2025). Nilo, Dungca, Mallari and Florencondia (2025) confirmed that leadership behavioral differences between academic and public sector settings are significant, establishing that academic-specific leadership measurement is both necessary and valid.

Every MLQ item assumes a human follower as the target of an academic leader's influence. The instrument contains no subscale, item, or theoretical dimension addressing how academic leaders should govern, specify objectives for, monitor outputs from, or recalibrate autonomous AI agents — a limitation confirmed by Karakose (2024) and Hossain et al. (2025).

Resolution — HALT Proposition 1: The HALT Framework resolves this tension by proposing the bifurcation of academic leaders' digital leadership skills into human-directed and algorithmic-directed behavioral modes. This is the Digital Leadership Behavior Gap.

Dynamic Managerial Capabilities (DMC) Framework

Table 2: *Dynamic Managerial Capabilities (DMC) Framework Characteristics*

Characteristics	Descriptions
Authors	Adner & Helfat (2003); Helfat & Martin (2015) | SMJ | Scopus Q1
Type	Theoretical framework with empirical validation — 188+ articles, 33 journals
Validation	Applied across strategic management, technology management, and educational administration
Construct	3 foundations: managerial human capital, social capital, and cognition

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The DMC framework specifies the capabilities through which leaders create advantage by sensing strategic opportunities, seizing them through resource commitment, and reconfiguring organizational capabilities. Hossain et al. (2025) applied the DMC lens specifically to digital leadership, introducing three dimensions of AI-driven leader capabilities: technical capability for understanding and adopting AI, adaptive capability for decision-making and integration, and transformational capability for sense-making and vision articulation.

Esteban, Florencondia, Jacoba, Ladignon and Mallari (2025) established that engineering management principles, when systematically applied to research and innovation governance in Philippine HEIs, produce measurable improvements in institutional outcomes — providing local empirical basis for the argument that capability-based frameworks are relevant and applicable in the Philippine academic governance context.

At the managerial human capital level, AI agents can now perform substantial portions of the knowledge work constituting academic leadership expertise — data analysis, performance trend identification, compliance tracking, and resource utilization monitoring. At the managerial cognition level, AI agents compress institutional sensing-to-response cycles from weeks to minutes, fundamentally altering the cognitive decision rhythms that DMC theory was built to explain.

Resolution — HALT Proposition 2: The HALT Framework addresses this gap through Proposition 2: the reconceptualization of academic leaders' managerial human capital to incorporate AI orchestration knowledge as a core component. This is the Academic Managerial Capability Gap.

Upper Echelons Theory

Table 3: *Upper Echelons Theory Characteristics*

Characteristics	Description
Authors	Hambrick & Mason (1984); Hambrick (2007) | AMR | Scopus Q1
Type	Most cited theory in strategic leadership literature
Validation	40+ years of empirical application; applied extensively in educational leadership research
Construct	Organizational outcomes reflect the values, cognitive frames, and characteristics of top management teams

Upper Echelons Theory establishes that organizational outcomes reflect the cognitive characteristics, values, and experiences of the human leaders who govern them. Finkelstein, Hambrick and Cannella (2009) confirmed that top management team characteristics are robust predictors of strategic choice across organizational types.

Nilo, Dungca, Mallari and Florencondia (2025) established empirically that leadership dynamics and characteristics differ meaningfully between public sector and academic institutions, reinforcing the theory's prediction that context-specific leader attributes shape distinct institutional outcomes. Balagtas and Mallari (2025) confirmed that digital leadership characteristics directly influence operational efficiency outcomes in Philippine government agencies.

Upper Echelons Theory's central causal chain — academic leader characteristics → cognitive framing → strategic choices → institutional actions → educational outcomes — assumes the path from leadership intent to institutional outcome runs entirely through human actors at every node. AI agents interrupt this chain at its most consequential point, inserting a non-human execution layer between an academic leader's strategic intent and the actual educational outcome experienced by students.

Resolution — HALT Propositions 3 and 4: The HALT Framework addresses this through Proposition 3 (governance layer insertion in the academic leader causal chain) and Proposition 4 (academic values alignment as a core digital leadership skill). This is the Institutional Outcomes Gap.

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Unified Gap Across All Three Instruments

While existing literature has produced a validated behavioral instrument (Bass & Avolio, 2000), a dynamic capability framework (Helfat & Martin, 2015), and a foundational theory connecting leader characteristics to organizational outcomes (Hambrick & Mason, 1984), no validated instrument or theoretical framework simultaneously addresses how the digital leadership skills of academic leaders must evolve when AI agents become active participants in the academic operations they govern.

Literature Analysis

Strategic and Academic Leadership Theory: The Human-Centered Baseline

Strategic leadership theory's intellectual origins trace to Selznick's (1957) foundational observation that organizational character is shaped by the choices of institutional leaders. Burns (1978) and Bass (1985) provided the behavioral architecture explaining how leaders translate strategic intent into organizational action through inspiration, vision articulation, and individualized consideration of followers' developmental needs. Ireland and Hitt (1999) established that effective strategic leaders maintain performance through six key behaviors: determining direction, exploiting core competencies, developing human capital, sustaining effective culture, emphasizing ethical practice, and establishing balanced governance.

Mallari, Domingo, Cruz and Florencondia (2025) provide direct Philippine empirical support for the human-centered baseline, confirming that transformational leadership behaviors significantly predict academic performance outcomes among engineering students at NEUST. Esteban et al. (2025) further established that engineering management principles applied to HEI governance produce measurable institutional improvements, grounding the argument that leadership capability frameworks have direct practical relevance in Philippine academic administration.

Hossain et al. (2025) directly challenge the sufficiency of the human-centered baseline for AI-integrated environments, confirming that transformational leadership dimensions require reconceptualization under AI-driven conditions. Renta-Davids et al. (2025) confirm that limited theoretical tools for academic leaders' AI governance role constitute a direct challenge to the human-centered baseline's adequacy.

AI Agentic Integration in Higher Education

Tejada-Ortigiosa et al. (2025) establish the foundational taxonomy: AI Agents are task-specific autonomous systems executing bounded academic goals, while Agentic AI systems pursue institutional objectives across open-ended operational environments with minimal human intervention. The International Journal of Educational Technology in Higher Education's (2025) comprehensive taxonomy of AI applications in educational leadership identifies ten distinct domains where AI is making significant impact — from administrative efficiency and personalized learning to organizational leadership and strategic planning.

Renta-Davids et al. (2025), in a scoping review of 1,514 records, confirm that AI integration is reshaping how academic leaders make decisions while revealing the limited theoretical tools available to support them. Santos, Ramos and Mallari (2025) established in the Philippine educational context that digital reporting systems in educational institutions improve operational efficiency and safety outcomes — confirming that AI-integrated governance tools carry direct institutional consequences that academic leaders must be equipped to manage.

Fullan, Harris and Jones (2023) argue that AI in educational leadership presents challenges specifically at the intersection of human judgment and algorithmic execution — suggesting that the appropriate response is not uncritical AI adoption but careful governance design. This tension establishes that AI agentic integration is not simply a technological condition but a governance challenge requiring new leadership theory.

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Digital Leadership Skills Under Technological Disruption

Five digital leadership approaches were examined. Transformational educational leadership (Bass & Avolio, 2000; Leithwood & Jantzi, 2005) remains the most validated framework for academic leadership behavior, but Hossain et al. (2025) confirm it requires reconceptualization in AI-driven dynamic environments. Responsible innovation leadership (De la Torre & De la Vega, 2025) provides a directly applicable framework: leaders must integrate ethical reasoning with technical judgment when governing digital innovation. Adaptive leadership (Heifetz, Linsky & Grashow, 2009) establishes that AI agentic integration is an adaptive challenge requiring genuinely new leadership knowledge. Kafa (2025) confirms that academic leaders who receive AI-related training are more likely to achieve effective AI integration outcomes.

Van Roekel, Tummers and Kruyen (2025) confirm through scale development and validation that digital transformation leadership constitutes a measurable and distinct leadership construct — supporting the HALT Framework's argument that algorithmic governance represents a new theorizable behavioral domain. Balagtas and Mallari (2025) provide Philippine empirical support for the proposition that digital leadership characteristics directly influence digital transformation outcomes in institutional settings.

Across all five approaches, a common boundary condition is identified: each framework addresses the human-directed dimension of academic leadership effectively, but none provides behavioral theory for the algorithmic-directed dimension. This boundary condition, consistent across five distinct leadership approaches, constitutes independent theoretical evidence for the Digital Leadership Behavior Gap.

Agency Theory and Governance Architecture

Agency theory (Jensen & Meckling, 1976; Eisenhardt, 1989) provides the governance architecture literature most directly relevant to the behavioral skills academic leaders must develop. Humberd, Oc and Hayton (2026) establish that AI agents create a new class of principal-agent relationship: unlike human agents, AI agents do not exhibit self-interest, but they do exhibit goal misalignment, specification gaming, and emergent behaviors that produce governance failures structurally analogous to traditional agency problems.

Jarrahi et al. (2025) introduce the concept of AI agent accountability gaps — situations in which AI agents produce institutional outcomes for which no clear human academic leader bears personal accountability. Stocker and Lehr (2025) introduce the shadow principal problem: commercial AI systems deployed in academic contexts may encode optimization objectives of their commercial developers rather than the deploying academic leader's educational values.

A counterargument exists within the agency theory literature: traditional principal-agent solutions — monitoring, incentive alignment, and contractual specification — may be adapted rather than replaced for AI governance contexts. The HALT Framework does not reject agency theory's governance logic but extends it: Propositions 3 and 4 operationalize the monitoring, specification, and alignment mechanisms that agency theory proposes, specifically for the AI agentic condition in academic institutions.

The HALT Framework: Proposed Theoretical Contribution

The Human-to-Algorithmic Leadership Transition (HALT) Framework is proposed as the theoretical contribution of this study, specifying how the digital leadership skills of academic leaders must evolve when AI agents become active participants in the academic operations they govern. The HALT Framework does not replace existing academic leadership theory — it extends it, transitioning the unit of leadership analysis from the human follower to the human-AI academic team, from motivational influence to governance architecture design, and from digital tool adoption to algorithmic orchestration as a core leadership skill.

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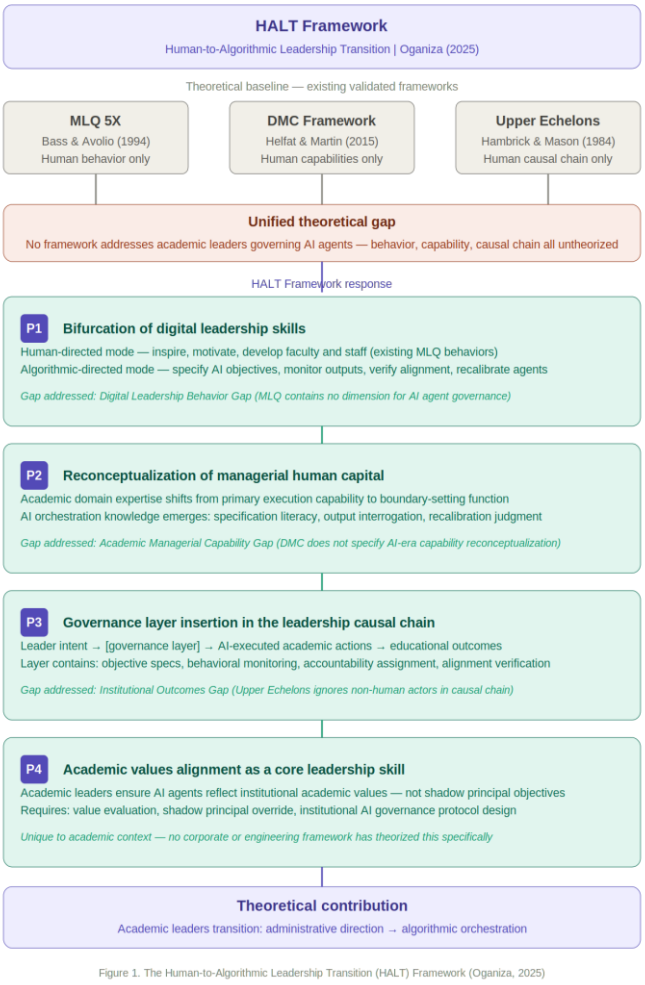


Figure 2. *The HALT Framework (Author, 2025)*

Proposition 1: Bifurcation of Academic Leader Digital Leadership Skills. The digital leadership skills of academic leaders must bifurcate into two distinct behavioral modes. The human-directed mode retains the validated transformational and transactional behaviors of the MLQ. The algorithmic-directed mode constitutes a new behavioral domain: governing AI agents through precise objective specification, systematic output monitoring, alignment verification against academic values, and recalibration when agent behavior diverges from leadership intent. Hossain et al. (2025) provide direct empirical support, confirming that transformational leadership dimensions require reconceptualization in AI-driven environments.

Proposition 2: Reconceptualization of Academic Leaders' Managerial Human Capital. The managerial human capital of academic leaders must shift to incorporate AI orchestration knowledge as a core component alongside academic domain expertise. AI orchestration knowledge encompasses the ability to specify AI agent objectives with sufficient precision to prevent misalignment, to interpret AI agent outputs with sufficient critical judgment to identify specification gaming, and to recalibrate AI agent parameters when outputs diverge from educational intent. Kafa (2025) confirms that AI-related training improves academic leaders' governance capacity. Esteban et al. (2025) establish that systematically applied engineering management principles improve HEI governance outcomes.

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Proposition 3: Governance Layer Insertion in the Academic Leader Causal Chain. The Upper Echelons causal chain requires a new governance layer between institutional strategic choices and AI-executed academic actions. This governance layer, comprising AI agent objective specification protocols, behavioral monitoring systems, accountability assignment mechanisms, and alignment verification procedures, must be designed, implemented, and maintained by academic leaders as a core digital leadership function. Jarrahi et al. (2025) establish that AI agent accountability gaps arise specifically when this governance layer is absent. Balagtas and Mallari (2025) demonstrate in the Philippine context that digital leadership directly mediates the relationship between institutional strategy and operational outcomes.

Proposition 4: Academic Values Alignment as a Core Digital Leadership Skill. Academic leaders bear personal responsibility for ensuring that AI agents operating within their academic purview encode and reflect the academic values, student welfare commitments, and educational integrity standards of their institutions. Stocker and Lehr (2025) establish that commercial AI systems may encode shadow principal optimization objectives — creating a direct threat to academic values that Proposition 4 addresses. Responsible innovation leadership theory (De la Torre & De la Vega, 2025) specifies that leaders must integrate ethical reasoning with technical judgment when governing digital innovation.

CONCLUSIONS

On Validated Instruments and Their Limitations. The MLQ 5X (Bass & Avolio, 2000) contains no behavioral dimension for governing non-human autonomous actors, creating a Digital Leadership Behavior Gap. The DMC Framework (Helfat & Martin, 2015) does not specify how capability dimensions must be reconceptualized when AI agents absorb institutional sensing and execution functions, creating an Academic Managerial Capability Gap. Upper Echelons Theory (Hambrick & Mason, 1984) does not address how the academic leader-to-institutional-outcome causal chain is altered when AI agents insert a non-human decision layer, creating an Institutional Outcomes Gap.

On Strategic and Academic Leadership Theory. The foundational human-centered baseline provides a theoretically robust but AI-incomplete architecture for understanding academic leader behavior. Philippine empirical support from Mallari et al. (2025) and Esteban et al. (2025) confirms the baseline's validity in local HEI contexts while simultaneously establishing the gap the HALT Framework addresses.

On AI Agentic Integration in Higher Education. AI agentic systems are actively deployed in higher education across student services, research management, and academic administration. Renta-Davids et al. (2025) confirm that AI is reshaping how academic leaders make decisions while revealing the limited theoretical tools available. Santos, Ramos and Mallari (2025) provide Philippine institutional evidence that digital systems in educational contexts carry direct operational consequences that leaders must be equipped to govern.

On Digital Leadership Approaches. Five digital leadership approaches were found to be partially relevant but collectively insufficient for the algorithmic governance dimension of academic AI leadership. Van Roekel, Tummers and Kruyen (2025) confirm that digital transformation leadership constitutes a measurable and distinct leadership construct, supporting the HALT Framework's argument that algorithmic governance is a new theorizable behavioral domain.

On Agency Theory and Governance Architecture. Agency theory extensions by Humberd, Oc and Hayton (2026), Jarrahi et al. (2025), and Stocker and Lehr (2025) establish that AI agents create novel principal-agent governance challenges. Balagtas and Mallari (2025) and Nilo, Dungca, Mallari and Florencondia (2025) provide Philippine empirical grounding for the argument that digital leadership governance capacity has direct and measurable institutional consequences.

Existing strategic leadership frameworks — the MLQ 5X, the DMC Framework, and Upper Echelons Theory — are theoretically insufficient for explaining or developing the digital leadership skills required of academic leaders governing AI agentic systems. Each framework carries a specific and consequential gap at the precise point where AI agents intersect with academic leadership functions.

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The digital leadership skills of academic leaders must transition beyond the human-directed behavioral repertoire captured by existing validated instruments toward a new capability domain encompassing AI agent governance, objective specification, output monitoring, accountability assignment, and value alignment verification. This transition is not elective — it is structurally required by the operational realities of AI agentic integration in contemporary higher education.

The proposed HALT Framework provides the first theoretically grounded architecture specifying how this transition must occur — through four propositions addressing the bifurcation of digital leadership skills, the reconceptualization of academic managerial human capital, governance layer insertion in the academic leader causal chain, and academic values alignment as a core leadership skill.

Philippine empirical work by Balagtas and Mallari (2025), Nilo et al. (2025), Mallari et al. (2025), Esteban et al. (2025), and Santos, Ramos and Mallari (2025) collectively demonstrate that leadership capability and digital governance are consequential in the Philippine HEI context, grounding the HALT Framework in locally relevant evidence.

Future researchers are recommended to conduct empirical validation of the HALT Framework's four propositions through quantitative survey-based studies targeting academic leaders in Philippine and Southeast Asian higher education institutions, using structural equation modeling approaches.

Researchers in Educational Administration and Engineering Management are recommended to develop a validated measurement instrument specifically assessing academic leaders' digital leadership skills under AI agentic conditions — an instrument extending the MLQ's behavioral framework to include the AI governance, objective specification, output monitoring, and value alignment dimensions identified in the HALT Framework.

Academic leadership development programs are recommended to incorporate AI orchestration knowledge and governance architecture design as core competencies in academic leadership preparation. Kafa (2025) confirms that academic leaders who receive AI-related training are more likely to achieve effective AI integration outcomes.

Academic leaders currently governing AI-integrated educational environments are recommended to apply the HALT Framework's four propositions as a self-assessment architecture — evaluating their current behavioral repertoire, knowledge base, governance protocols, and AI vendor relationships against each proposition's requirements.

Future researchers are recommended to investigate the specific AI orchestration knowledge dimensions that constitute academic managerial human capital advantage under AI agentic conditions, addressing the Academic Managerial Capability Gap through empirical studies in Philippine and Southeast Asian academic settings.

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