

Mastering Digital Leadership Orchestration in Organizational Transformation: A Systematic Literature Review

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ARTICLE INFO

Keywords: Digital Leadership, Dynamic Capability Theory, Technology Integration, Organizational Transformation, Systematic Literature Review

Received : 12, April

Revised : 09, May

Accepted: 19, June

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ABSTRACT

In the era of Volatility, Uncertainty, Complexity, and Ambiguity (VUCA), digital transformation has become an absolute prerequisite for organizational survival, yet global success rates remain below 30%. This Systematic Literature Review (SLR) follows PRISMA 2020 standards to synthesize digital leadership orchestration mechanisms and technology integration in mediating organizational performance transformation. Analyzing 17 primary documents from Scopus and Web of Science (2010–2026), thematic analysis reveals three dominant orchestration patterns: digital leadership as an innovation determinant, organizational culture as a critical filter mechanism, and the digital productivity paradox at the individual level. Middle Range Theory (MRT) propositions confirm technology as a “hygiene factor” requiring job satisfaction mediation, while middle-level supervisors function as indispensable multi-level change agents. This research contributes a Contextual Modification of Dynamic Capability Theory, integrating psychological and structural dimensions into a socio-technical orchestration framework with clear implications for managers and policymakers.

INTRODUCTION

In the era of disruption characterized by *Volatility, Uncertainty, Complexity, and Ambiguity* (VUCA), digital transformation has shifted from a mere strategic option to an absolute prerequisite for organizational survival. The validating literature confirms that the integration of advanced technologies such as *Artificial Intelligence* (AI), *Internet of Things* (IoT), and *Big Data Analytics* has become the primary driver of operational efficiency and business model innovation. However, global phenomena reveal a contrasting reality; industry data suggest that the success rate of digital transformation programs remains below 30%. This failure is often rooted in organizations' inability to perform a balanced orchestration between technical assets and leadership capabilities.

The paradigm evolution in strategic management confirms the transition from a static resource-based view (*Resource-Based View*, RBV) toward *Dynamic Capability Theory* (DCT), which emphasizes the ability of organizations to reconfigure internal competencies to face rapid environmental changes. Within this framework, *Digital Leadership* (DL) emerges as a crucial catalyst—not only as a visionary guide, but also as an orchestrator aligning strategy, culture, and human capital. Studies across various sectors indicate that digital leadership has a significant influence on innovation performance and sustainable competitive advantage. Nevertheless, the effectiveness of this orchestration still faces major challenges, particularly in translating top-level vision into tangible productivity at the operational and individual levels.

Research Gap

Although the literature on digital transformation is extensive, a comparative analysis reveals significant multidimensional gaps. First, a *knowledge gap* exists in the form of a “psychological anomaly”: digital orchestration confirms improvements in organizational systemic performance, yet indicates non-significance at the individual job performance level—particularly for the digitally-native generation (Gen Z)—in the absence of strong job satisfaction mediation. Second, a *methodological gap* dominated by cross-sectional studies limits the understanding of how orchestration capabilities evolve longitudinally. Third, a sharp *context gap* is evident: the majority of digital leadership research focuses on top-level leaders (CEOs/School Principals), yet overlooks the crucial role of middle-level supervisors as multi-level change agents in technology orchestration. Finally, there exists a theoretical tension between the RBV and DCT paradigms regarding the minimum technology asset threshold before digital leadership can operate effectively.

Research Objectives

This study aims to synthesize the mechanisms of digital leadership orchestration and technology integration in mediating organizational performance transformation systemically. Specifically, this study addresses three research questions: (RQ1) What orchestration mechanisms are currently dominant in integrating technology into organizational routines? (RQ2) Why does digital orchestration produce different impacts on organizational systemic performance versus individual psychological performance? (RQ3) How can the

alignment between technical systems (capabilities) and social systems (culture/satisfaction) optimize performance sustainability?

The primary novelty lies in its position of *Contextual Modification of Dynamic Capability Theory*. Unlike prior studies that tend to be mechanistic, this research integrates psychological factors (self-efficacy and job satisfaction) and the role of middle-level leaders (supervisors) as boundary conditions in the orchestration model, producing a *Middle Range Theory* (MRT) proposition that redefines digital transformation as a socio-technical orchestration process demanding a balance between infrastructural sophistication and the mental readiness of human capital.

THEORETICAL REVIEW

Dynamic Capability Theory (DCT) vs. Resource-Based View (RBV)

The primary theoretical foundation in digital orchestration discourse confirms a paradigm shift from static advantage toward dynamic agility. The validating literature consistently positions the *Resource-Based View* (RBV) as an initial framework emphasizing the ownership of valuable, rare, and inimitable technology assets as a performance determinant. However, critiques in the literature corpus suggest that RBV fails to explain how organizations sustain competitiveness in highly volatile VUCA environments.

As a solution, *Dynamic Capability Theory* (DCT) formulated by Teece, Pisano, and Shuen (1997) becomes the primary theoretical anchor in this research. DCT confirms that superior performance derives not from mere technology ownership, but from the organization's ability to perform *sensing* (identifying digital opportunities), *seizing* (mobilizing technology resources), and *reconfiguring* (transforming operational routines). In the context of technology integration, DCT provides a framework for understanding how digital leadership acts as an orchestration catalyst that unifies technical capabilities with organizational flexibility.

Inventory of Core Constructs

Table 1. Operational Inventory of Central Constructs

Construct	Operational Definition	Anchor Study
Digital Leadership	The leader's skill in navigating technological complexity and inspiring teams through a clear digital vision.	Mulyani (2024); Çetinkaya & Sürücü (2025)
Technology Integration	Alignment of IT infrastructure (AI, IoT, 5G) with business processes to enhance efficiency and transparency.	Dubey et al. (2024); Ansar et al. (2026)
Digital Organizational Culture	A set of values and norms supporting innovation, virtual	Fakhfakh et al. (2025); Ningsih et al. (2026)

	collaboration, and data-driven decision-making.	
Organizational Performance	Measurable outcomes encompassing innovation, sustainability (ESG), and public service effectiveness.	Takyi et al. (2025); Mulyani (2024)

Conceptual Framework and MRT Proposition

Based on MRT proposition synthesis, the conceptual framework rests on two core logical mechanisms. The **Psychological-Technology Mechanism** confirms that digital leadership orchestration does not directly produce individual performance, but is mediated by job satisfaction—acting as a psychological filter through which technology facilities (hygiene factors) and digital recognition (motivational factors) are processed by human capital. The **Structural-Orchestration Mechanism** indicates that in complex organizational structures, the effectiveness of advanced technology integration (AI/5G) heavily depends on the role of middle-level supervisors as operational orchestrators who bridge leadership vision with cultural practice at the unit level.

“Digital transformation orchestration is a manifestation of organizational Dynamic Capability rooted in RBV internal assets, whose effectiveness is enabled by leadership that navigates social structures, and whose success is determined by the reinforcement of Creative Self-Efficacy and the fulfillment of Motivational Factors of human capital.” (MRT Proposition)

METHODOLOGY

Research Design

This study employs a *Systematic Literature Review* (SLR) design to identify, evaluate, and synthesize the complete corpus of relevant literature on digital leadership orchestration. The SLR method mitigates subjective bias through systematic and replicable search procedures. This research protocol strictly adheres to the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA 2020) standards to ensure the quality of result reporting.

PICOS Protocol and Search Strategy

Table 2. PICOS Inclusion Criteria

Criteria	Inclusion Description
Population (P)	Organizations in the public sector (education), private sector (SME/Telecommunications), and creative industries.
Intervention (I)	Digital leadership orchestration and technology capability integration (AI, IoT, 5G, Big Data).
Comparison (C)	Traditional leadership models, static hierarchical structures, or pre-digital transformation conditions.

Outcomes (O)	Organizational performance (innovation, ESG sustainability, service effectiveness) and human capital performance.
Study Type (S)	Empirical validating studies (V) and conceptual formulating studies (F) indexed in Scopus/WoS.

Literature searches were conducted on the Scopus and Web of Science (WoS) databases for the publication period 2010–2026. The search strategy employed Boolean operators (AND, OR) with the following string: ("Digital Leadership" OR "E-Leadership") AND ("Technology Integration" OR "Digital Transformation") AND ("Organizational Performance" OR "Innovation"). Restrictions were limited to English-language journal articles to maintain consistency in synthesis and interpretation of findings.

PRISMA 2020 Selection Flow

The literature selection process proceeded through four systematic phases: (1) **Identification**: initial searches yielded raw document records from the primary databases; (2) **Screening**: removing duplicates and screening titles and abstracts based on relevance to digital orchestration; (3) **Eligibility**: full-text review to ensure mediation and moderation variables aligned with the research focus; and (4) **Included**: the final selection established 17 primary documents for in-depth analysis.

Quality Assessment and Data Synthesis

All included literature underwent quality assessment using the JBI Critical Appraisal Tools and CASP Checklist. Validating literature (V) was evaluated based on methodological rigor (instrument validity, reliability, and SEM analysis techniques), while conceptual formulating literature (F) was evaluated based on the depth of theoretical foundations and conceptual contribution. Only high and moderate quality studies were included in the final synthesis. Data extraction employed a systematic matrix encompassing author identity, industry context, methodology, and key findings. Synthesis employed thematic analysis to identify consensus patterns and contradictions across authors.

RESULTS

Study Characteristics and Distribution of Findings

Analysis of the 17 primary documents confirms the diversity of industrial and geographical contexts in digital orchestration research. The majority of validating studies (V) use quantitative approaches based on PLS-SEM (~80%), while qualitative studies provide depth on transformation processes in the education sector.

Table 3. Distribution of Studies by Sector

Focus Dimension		% Validating Lit (V)	Key Evidence (Author, Year)
Private Sector (SME/Telecom)		~45%	Takyi et al. (2025); Dubey et al. (2024); Fakhfakh et al. (2025)
Education Sector (Schools/HEI)		~35%	Ansar et al. (2026); Umah et al. (2023); Xue et al. (2026)
Public/Service Sector		~20%	Mulyani (2024); Budiadi (2026)

Results of Thematic Synthesis

Theme 1: Digital Leadership as Innovation Determinant (Strong Consensus).

The literature consistently confirms that digital leadership (DL) positively enhances innovation performance through technology capability orchestration. DL acts as a catalyst transforming technical barriers into exploratory opportunities. Çetinkaya and Sürücü (2025) confirm that digital leadership significantly shapes creative self-efficacy and innovation performance ($\beta = 0.45$, $p < 0.001$). Similarly, Fakhfakh et al. (2025) confirm that digital leadership has a significant positive effect on sustainable performance ($\beta = 0.52$, $p < 0.05$) in Egyptian telecommunications companies, mediated by digital organizational culture.

Theme 2: Culture as Filter Mechanism (Strong Consensus). Digital organizational culture (DOC) is validated as a crucial moderation and mediation variable. Without an adaptive and inclusive culture, technology infrastructure investment fails to produce sustainable competitive advantage. Fakhfakh et al. (2025) confirm that the relationship between digital leadership and sustainable performance is fully mediated by digital organizational culture, illustrating that technology adoption without cultural transformation remains ineffective.

Theme 3: Digital Productivity Paradox at Individual Level (Conflicting Consensus). There exists an academic tension: digital transformation confirms systemic performance while indicating non-significance at individual job performance if not mediated by job satisfaction. Anggiani and Fatonah (2025) empirically confirm this paradox – the direct path from digital transformation to Gen Z job performance is rejected ($\beta = 0.02$, $p > 0.05$), while digital leadership's effect on job satisfaction is strongly accepted ($\beta = 0.75$, $t = 16.08$). This supports the MRT argument that technology serves as a “hygiene factor” (Herzberg's Two-Factor Theory) requiring satisfaction mediation to become real productivity.

Validation of Middle Range Theory (MRT) Propositions

Proposition 1: Psychological-Technology Mechanism (STATUS: PARTIALLY CONFIRMED). Evidence from Anggiani and Fatonah (2025) strongly confirms that the influence of digital transformation on individual (Gen Z) job performance is rejected ($\beta = 0.02$, $p > 0.05$), but the influence of DL on job satisfaction is significantly accepted ($\beta = 0.75$, $t = 16.08$). This supports the MRT argument that technology serves as a “hygiene factor” (Herzberg) requiring

satisfaction mediation to become real productivity. Additionally, Çetinkaya and Sürücü (2025) confirm that creative self-efficacy partially mediates the relationship between digital leadership and innovation performance.

Proposition 2: Structural-Orchestration Mechanism (STATUS: CONFIRMED). Studies by Ansar et al. (2026) and Umah et al. (2023) confirm that the effectiveness of advanced technology orchestration (5G/AI) in public organizations is highly dependent on the role of middle-level leaders or supervisors as multi-level change agents. Ansar et al. (2026) confirm that the supervisor digital competency scale (SDC-PE) significantly predicts performance excellence ($r = 0.67$, $p < 0.001$), while Umah et al. (2023) confirm that principal digital leadership innovation directly drives the effectiveness of digital learning transformation.

DISCUSSION

The contradiction regarding the direct impact of digital transformation on performance is validated as a *Level of Analysis* (LVL) problem. At the macro/organizational level (SMEs in Ghana), digital transformation confirms systemic efficiency improvements due to focus on process automation (Takyi et al., 2025; Dubey et al., 2024). Conversely, at the micro/individual level (freelance Gen Z writers in Indonesia), technology is regarded as a standard tool that no longer provides additional motivation unless accompanied by recognition and work challenges – motivational factors (Anggiani & Fatonah, 2025).

Theoretically, the failure of digital leadership's moderation role in data-driven innovation at universities confirms assumptions of Complexity Leadership Theory. In dispersed power structures, technology integration requires orchestration that is more "facilitating" than "instructing," where technical unit capabilities are more dominant than central leadership vision (Xue et al., 2026). This finding has important implications for understanding the boundary conditions under which digital orchestration models operate effectively across different institutional contexts.

Boundary Conditions. Findings indicate that digital orchestration achieves optimal performance only when two conditions are met: (1) basic IT infrastructure is fulfilled – digital leadership loses its orchestration instruments if hardware and software assets are inadequate (Xue et al., 2026); and (2) job satisfaction is ensured – human capital requires a virtual work environment supporting work-life balance (WLB) to convert digital literacy into innovative behavior (Anggiani & Fatonah, 2025).

CONCLUSIONS AND RECOMMENDATIONS

This research has answered three fundamental questions regarding digital transformation orchestration. First, the dominant orchestration mechanisms confirm an alignment pattern between strategic leadership vision and technical capability reconfiguration – consistent with Dynamic Capability Theory. Second, differential impacts between systemic and individual performance indicate that digital orchestration often only touches operational structures (efficiency) while neglecting the job satisfaction filter. Third, sustainable performance optimization requires the integration of socio-technical systems where digital leadership focuses

not only on technology, but also on strengthening digital culture and empowering middle-level leaders as operational orchestrators.

Novelty Statement. The original contribution lies in the *Contextual Modification* proposition of DCT through the integration of psychological and structural dimensions previously fragmented in the literature. Unlike prior studies positioning digital transformation as a purely technical process, this research confirms that DCT effectiveness at the operational level depends on the mediation of job satisfaction for digitally-native generations (Gen Z) and the moderation role of middle-level supervisors. Technology is confirmed as a “hygiene factor” that will only generate competitive advantage if activated through cultural motivator factors and systematic digital recognition.

Theoretical Implications. This research extends the application boundaries of DCT by demonstrating that organizational *reconfiguring* capacity is not automatic, but requires alignment with the value system of human capital. The integration of Social Cognitive Theory and Two-Factor Theory into the digital orchestration model indicates that digital leadership must evolve into a mechanism that is more facilitating than instructing, particularly in decentralized power structures.

Practical Implications. For managers and policymakers, three strategic recommendations are formulated: (1) Investment in advanced digital infrastructure (AI/5G) must be accompanied by a digital culture readiness audit to avoid the “adoption trap” of unproductive assets; (2) Organizations should design hybrid work models that prioritize job satisfaction through work-life balance (WLB) as the primary pathway for converting digital literacy into innovation performance; (3) The public and education sectors are advised to grant strategic autonomy to middle-level supervisors to act as change agents bridging central leadership vision with digital practice at the field unit level.

FURTHER STUDY

This research acknowledges six dimensions of limitations: (1) data sources are limited to Scopus and Web of Science databases; (2) the publication range 2010–2026 may cause variation in the definition of “digital leadership”; (3) restriction to English-language articles only may introduce linguistic bias; (4) the dominance of cross-sectional studies limits longitudinal causality claims; (5) the use of single-researcher coding suggests a risk of interpretation bias; and (6) the generalizability of findings may be limited to the geographical contexts represented in the literature corpus.

Based on identified gaps, future research is suggested to focus on three primary areas: (1) Longitudinal studies are needed to observe the evolution of digital orchestration capabilities alongside the maturity of AI technology in organizations; (2) Cross-sector comparative research testing whether the job satisfaction mediation mechanism carries equal weight in the public sector and creative industries; and (3) Exploration of the role of “algorithmic leadership” in the orchestration of autonomous virtual teams—a new frontier in digital management theory that urgently needs empirical testing.

ACKNOWLEDGMENT

The authors express their gratitude to the Department of Management, STIE Pelita Nusantara, Semarang, Indonesia for institutional support in this research. Yuliati (First Author) was responsible for conceptualization, methodology, formal analysis, and writing—original draft. Susanti Wahyuningsih (Second Author) was responsible for data curation, validation, visualization, and writing—review & editing. This research received no specific external funding grant.

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