

Creative Leadership in Digital Startups: A Longitudinal Case Study in Innovation Management

Sulistyorini¹, Roya Zahir², Zara Ali³

¹ Universitas Islam Negeri Sayyid Ali Rahmatullah Tulungagung, Indonesia

² Kunduz University, Afghanistan

³ Khost University, Afghanistan

Corresponding Author:

Sulistyorini,

Universitas Islam Negeri Sayyid Ali Rahmatullah Tulungagung, Indonesia

Jl. Mayor Sujadi No.46, Kudus, Plosokandang, Kec. Kedungwaru, Kabupaten Tulungagung, Jawa Timur 66221

Email: sulistyorini@uinsatu.ac.id

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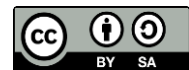
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Abstract

In the hyper-competitive digital economy, the survival and growth of startups are intrinsically linked to their capacity for continuous innovation. While leadership is acknowledged as a critical driver of innovation, there is a limited understanding of how creative leadership specifically manifests and evolves over time within the volatile startup environment. This study aims to address this gap by longitudinally exploring the dynamics of creative leadership and its influence on innovation management processes within a digital startup. It seeks to identify the key leadership behaviors that foster a sustainable innovation culture and to understand how these behaviors adapt to the startup's developmental stages. Employing a qualitative longitudinal case study approach, this research tracked a single digital startup over a three-year period. Data were collected through semi-structured interviews with the founding team and employees, direct observation of team meetings, and an analysis of internal documents related to project development and strategic planning. Key practices identified include fostering psychological safety, championing nascent ideas, and strategically allocating resources for experimentation. These leadership practices directly correlated with the development of an agile and resilient innovation management system. The study concludes that effective creative leadership in digital startups is contingent on the leader's ability to adapt their style to the organization's evolving needs.

Keywords: Creative Leadership, Digital Startups, Innovation Management



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INTRODUCTION

The contemporary global economy is fundamentally characterized by its digital-first orientation, where innovation serves as the primary currency for competitive advantage and market relevance. Within this landscape, digital startups have emerged as pivotal engines of economic dynamism, disrupting established industries and creating novel value propositions through technological agility and entrepreneurial vision (Cui & Fwuyuan, 2024; Soundarya et al., 2024). Their capacity to rapidly ideate, develop, and scale solutions has positioned them at the forefront of technological progress. The very structure of these nascent organizations is optimized for speed and adaptability, making them critical subjects for understanding the mechanisms of modern innovation in its most fluid and intense form. An examination of their operational dynamics is, therefore, an examination of the vanguard of twenty-first-century commerce.

Leadership is universally acknowledged as a critical determinant of organizational outcomes, profoundly influencing culture, strategy, and performance. In the context of innovation, the role of a leader transcends traditional managerial functions of planning and oversight. It extends into the realms of inspiring vision, mobilizing creative energies, and architecting an environment where novel ideas can flourish (Barde et al., 2024; Sun, 2024). The literature on innovation management consistently underscores this link, demonstrating that the behaviors and philosophies of those in leadership positions directly correlate with an organization's innovative output. Effective leadership acts as the catalyst that transforms latent creative potential within a team into tangible, market-ready innovations, thereby steering the organization toward sustainable growth and success.

A specific variant of leadership, termed creative leadership, is particularly salient to the discourse on innovation (Ghaffarifar et al., 2024; Schlechter et al., 2024). This leadership style is distinct from broader concepts like transformational or transactional leadership, as it focuses explicitly on nurturing the cognitive and collaborative processes that underpin creative work. Creative leaders are defined by their ability to champion unconventional ideas, foster psychological safety for risk-taking, and provide the necessary resources and autonomy for experimentation. They actively engage in problem-finding, not just problem-solving, and cultivate a culture where inquiry and intellectual curiosity are valued. In the high-stakes, resource-constrained environment of a digital startup, the presence of such leadership is not merely beneficial; it is an essential precondition for survival and breakthrough success.

Digital startups operate within an ecosystem defined by extreme volatility, uncertainty, complexity, and ambiguity (VUCA) (Moritani & Kurihara, 2024; Schlechter et al., 2024). The pressure to innovate is relentless, and the pathway from a promising idea to a viable product is fraught with technical, market, and financial hurdles. High failure rates among these ventures are often attributed not to a lack of technical skill or market opportunity, but to an inability to sustain an innovative trajectory beyond the initial launch phase. A significant part of this challenge lies in the leadership dynamics within the founding team. The leadership approaches that are effective during the chaotic, ideation-driven inception of a startup may prove inadequate or even detrimental as the organization begins to scale and requires more structured processes for managing innovation.

The core problem this research addresses is the significant gap in our understanding of how creative leadership manifests and functions as a *process over time* within the digital startup context. Much of the existing research on leadership and innovation adopts a static,

cross-sectional perspective, offering a snapshot of leadership behaviors at a single point in time (Kamiliya et al., 2024; Uluskan, 2024). This approach fails to capture the dynamic, evolving nature of leadership as a startup navigates different developmental stages from seed and early-stage to growth and maturity. Consequently, our current conceptual models are insufficient to explain how leaders must adapt their strategies to manage innovation effectively amidst constant internal and external change.

This lack of a longitudinal perspective creates both a theoretical and a practical void. Theoretically, it limits our ability to build robust, process-oriented theories of creative leadership that account for contextual evolution (Kamiliya et al., 2024; Tonkal et al., 2024). Practically, it leaves founders and startup executives without an evidence-based framework to guide their leadership development and adapt their innovation management strategies as their companies grow. They are often forced to rely on intuition or anecdotal evidence, which may not be transferable or effective. The absence of a clear, dynamic model of creative leadership in action contributes to the strategic missteps that can stifle a startup's innovative potential and ultimately lead to its stagnation or failure.

The primary objective of this study is to conduct an in-depth, longitudinal exploration of the dynamics of creative leadership and its direct influence on the evolution of innovation management practices within a digital startup. This research seeks to move beyond a static analysis by tracing the co-evolution of leadership behaviors and innovation processes over a significant period of the organization's lifecycle (Ac et al., 2025; Simsek, 2024). The overarching goal is to construct a rich, contextualized narrative that elucidates how leadership shapes and is shaped by the startup's journey from a nascent venture to a more established entity, providing a holistic view of innovation management in motion.

To achieve this primary objective, the research sets forth several specific aims. First, it aims to identify and categorize the specific creative leadership behaviors and practices that are most salient at different stages of a digital startup's growth. Second, the study will analyze how these identified leadership practices directly facilitate or impede the development of formal and informal innovation management systems, including processes for idea generation, project selection, and knowledge sharing (Ac et al., 2025; Mitra, Kroeger, Wang, Masedunskas, Cassidy, Huang, et al., 2024). Third, it seeks to develop a dynamic, process-based model that maps the evolutionary trajectory of creative leadership in this unique organizational context, highlighting critical inflection points where leadership approaches must adapt to sustain innovation.

These objectives will be guided by a set of focused research questions. The central questions are: (1) How do the manifestations of creative leadership evolve as a digital startup transitions through its key developmental stages? (2) What specific leadership practices are most effective in fostering a resilient and sustainable culture of innovation within the volatile startup environment? (3) How do leaders adapt their innovation management strategies in response to internal growth and external market pressures over time? Answering these questions will provide a nuanced and deeply contextualized understanding of the phenomenon under investigation.

A comprehensive review of the existing literature reveals a well-established body of work connecting leadership with organizational innovation. Scholars such as Amabile, Mumford, and Shalley have laid a strong foundation, demonstrating empirically that leadership styles which encourage autonomy, provide support, and champion new ideas are positively

correlated with creative outcomes (Candra et al., 2024; Roopaei & Roopaei, 2024). Furthermore, research has specifically examined the unique challenges of innovation within startup environments, highlighting the importance of agility, resourcefulness, and a strong entrepreneurial vision. This body of knowledge provides a critical starting point, confirming the fundamental importance of leadership in driving innovation within new ventures.

Despite these contributions, a significant and critical gap persists in the literature: the dearth of longitudinal research examining the *processual* nature of creative leadership in digital startups. The overwhelming majority of studies in this domain are cross-sectional, comparing different firms at a single moment, or are theoretical in nature (Montenegro C. et al., 2024; Siregar et al., 2024). While valuable, these static snapshots fail to capture the temporal dynamics and evolutionary pathways of leadership. They cannot adequately explain how leadership practices are initiated, adapted, and institutionalized over time in response to the rapid growth and constant change that define the startup lifecycle. This methodological limitation results in an incomplete and potentially misleading picture of the phenomenon.

This study is designed to directly address this temporal and processual void. By employing a longitudinal case study methodology, it moves beyond asking *what* creative leadership is, to understanding *how* it unfolds and functions over time. Existing models often implicitly assume a level of stability that is absent in the startup world (Mitra, Kroeger, Wang, Masedunskas, Cassidy, Huang, et al., 2024; Montenegro C. et al., 2024). This research challenges that assumption by placing the evolution of leadership at the center of the inquiry. It investigates the critical transitions and adaptations that static models cannot see, thereby providing a more realistic and nuanced account of how innovation is managed through leadership from the ground up, day after day, year after year.

The primary novelty of this research lies in its methodological approach and its specific contextual focus. The application of a multi-year, longitudinal case study to investigate creative leadership within a single digital startup is a novel endeavor. This approach enables a depth of analysis that is unattainable through quantitative surveys or cross-sectional studies, allowing for the observation of causal mechanisms and feedback loops between leadership actions and innovation outcomes as they unfold in real-time (Fraga et al., 2025; Gasner P., 2024). It provides a rare, “behind-the-scenes” view of the messy, emergent, and adaptive process of leading for innovation in a high-growth environment.

This study makes a significant theoretical contribution by aiming to develop a dynamic, stage-based model of creative leadership. It moves beyond existing static or trait-based frameworks to propose a process-oriented theory that explains how and why leadership behaviors must change as a startup scales (Hu & Li, 2024; Mylonas et al., 2025). By integrating insights from organizational lifecycle theory with the literature on creative leadership, this research will offer a more sophisticated conceptualization that accounts for the evolving demands placed on leaders. This contribution will refine our academic understanding, providing a new lens through which to analyze the leadership-innovation nexus in entrepreneurial contexts.

The practical justification for this research is compelling and urgent. The findings are expected to yield actionable insights for a wide range of stakeholders, including startup founders, venture capitalists, and educators in entrepreneurship programs. For founders, this study will offer an evidence-based roadmap for adapting their leadership styles to foster sustained innovation (Paliwal et al., 2025; Shaikh & Ali, 2025). For investors, it will provide a

more nuanced framework for evaluating the leadership capacity of potential portfolio companies. For educators, it will supply rich case material for teaching the practical complexities of innovation management. Ultimately, by illuminating the path of effective creative leadership, this research aims to contribute to increasing the success rate and innovative impact of digital startups.

RESEARCH METHOD

This study employed a qualitative research approach to explore the dynamic relationship between creative leadership and innovation management within a digital startup environment. A qualitative paradigm was selected because it enables researchers to gain an in-depth understanding of social phenomena, organizational behavior, and participant experiences that cannot be adequately captured through quantitative measurements alone. The study focused on understanding how leadership practices evolve over time and how these practices influence innovation processes within entrepreneurial organizations. In addition, the research adopted an interpretivist epistemological perspective, which assumes that social reality is constructed through the meanings, perceptions, and experiences of individuals within a particular organizational context (Dolly et al., 2024; Kuzovkova et al., 2024).

Research Design

This research applied a qualitative single-case study design with a longitudinal orientation. The design was deliberately chosen because it provides an effective strategy for investigating complex, context-dependent, and evolving organizational phenomena over time (Hu & Li, 2024; Oberdörfer et al., 2024). The longitudinal aspect of the study was conducted over a three-year period to observe the developmental trajectory of leadership practices and their impact on innovation management as the startup progressed through different stages of organizational growth. The single-case study approach enabled an intensive and holistic examination of the selected organization within its real-world context. This design was particularly useful for answering “how” and “why” questions related to the mechanisms through which creative leadership influences innovation outcomes.

Research Target/Subject

The unit of analysis in this study was a single digital startup operating in the software-as-a-service (SaaS) industry, referred to under the pseudonym “Innovatech.” The company was selected using purposive sampling based on several predetermined criteria to ensure theoretical relevance. Within the selected case, participants were chosen using purposive and criterion-based sampling to obtain diverse organizational perspectives. The participants included all members of the founding team (n=3), who occupied primary leadership roles, as well as employees from different functional divisions such as software development, marketing, and product management (n=12). Participants also represented varying lengths of organizational tenure to provide a comprehensive understanding of leadership experiences across the organization. The sample size was determined according to the principles of theoretical saturation and information richness rather than statistical representation (Christodoulou Raftis et al., 2024; Mitra, Kroeger, Wang, Masedunskas, Cassidy, de Ciutiis, et al., 2024).

Research Procedure

The research procedure was conducted systematically over a 36-month period and consisted of several sequential phases. The study began with an initial round of interviews involving all selected participants to establish a baseline understanding of leadership dynamics,

innovation culture, and organizational processes within Innovatech. Following the baseline stage, annual follow-up interviews were conducted to monitor changes, developments, and evolving leadership practices throughout the study period. Observational activities were also carried out continuously during the three years by attending organizational meetings, project review sessions, and strategic planning workshops. In addition, relevant organizational documents were collected quarterly to support the continuity and comprehensiveness of the data.

Instruments and Data Collection Techniques

Data were collected using three primary qualitative instruments to facilitate triangulation and strengthen the credibility of the findings. The primary instrument consisted of semi-structured interviews conducted annually with all participants. The interview protocol was developed based on the research questions and relevant literature, focusing on themes such as leadership behaviors, decision-making processes, support for creativity, and perceptions of organizational innovation culture (Kaliraj et al., 2024; Kanalikova & Rakovská, 2024). The semi-structured format ensured consistency across interviews while allowing flexibility to explore emerging themes and individual experiences in greater depth. The second instrument involved direct non-participant observation of key organizational meetings, including weekly team discussions, project evaluations, and quarterly strategic planning sessions.

Data Analysis Technique

The data analysis process was conducted iteratively and concurrently with data collection following the principles of grounded theory methodology (Escandon-Barbosa & Salas-Paramo, 2025; Kanalikova & Rakovská, 2024). The analysis involved three major stages of coding. The first stage, open coding, involved a detailed line-by-line examination of interview transcripts, observation notes, and documentary materials to identify preliminary concepts and categories. In the second stage, axial coding, relationships among categories were established to generate broader themes concerning leadership practices and their implications for innovation management. The final stage, selective coding, focused on identifying the core theoretical category representing the evolution of creative leadership as the central phenomenon of the study. During this stage, all categories were systematically integrated to construct a coherent explanatory process model.

RESULTS AND DISCUSSION

he longitudinal data collection over a 36-month period yielded a comprehensive and multi-faceted dataset. This dataset documents the evolution of leadership and innovation management at the case company, “Innovatech.” The volume and type of data collected across the three years of the study are summarized below, providing a quantitative overview of the empirical foundation for this research. The consistency in data collection methods across the three years ensures a balanced and comparable dataset for longitudinal analysis.

Table 1. Summary of Longitudinal Data Collected (Years 1-3)

Data Type	Year 1	Year 2	Year 3	Total
Semi-Structured Interviews	15	15	15	45
Hours of Observation	42	40	41	123
Documents Analyzed	25	38	51	114

The collected data provides a rich tapestry of organizational life at Innovatech. The 45 semi-structured interviews resulted in over 700 pages of verbatim transcripts, capturing the detailed perspectives and experiences of the founders and their employees. The 123 hours of direct observation generated approximately 350 pages of detailed field notes, chronicling real-time interactions, decision-making processes, and cultural nuances within team meetings and strategic sessions. The 114 internal documents, ranging from project proposals and product roadmaps to internal communications, offered an unobtrusive view into the formalization of innovation processes over time.

The data collectively represents a dynamic record of the co-evolution of creative leadership and innovation management. The interviews provide the “emic” perspective, offering deep insight into how participants perceived and interpreted leadership actions and their impact on the climate for creativity. These narratives reveal the shifting expectations and roles within the organization as it matured. The interview data is crucial for understanding the motivations behind leadership decisions and the felt experience of the innovation culture.

Observational and documentary data provide a vital “etic” perspective, serving to triangulate and contextualize the accounts gathered from interviews. The field notes capture leadership behaviors as they occurred, offering an unfiltered view that mitigates the potential for retrospective bias inherent in interviews. The documents, in turn, provide a formal record of the tangible outputs of the innovation process, such as the increasing sophistication of project planning, which reflects a direct outcome of evolving leadership strategies. This multi-method approach ensures a robust and credible representation of the complex phenomena under investigation.

Initial analysis of the data from Year 1 revealed a dominant leadership paradigm best described as Visionary-Driven Centralization. The founders, particularly the CEO, were the primary source of all major ideas and strategic direction. Interview data from this period is replete with phrases like “the CEO’s vision” and descriptions of a hands-on, directive leadership style. Observational data confirmed this, showing founders leading every creative meeting, making final decisions on all features, and actively participating in day-to-day technical problem-solving.

Data from Years 2 and 3 showed a marked transition toward a new leadership paradigm, characterized as Facilitative Empowerment. By Year 3, interview transcripts highlighted a shift in language, with employees frequently mentioning “team autonomy,” “ownership,” and “psychological safety.” The CEO was described more as a “coach” or “sounding board” than a director. Observational data from this period showed founders stepping back from direct project management, instead facilitating brainstorming sessions, asking probing questions, and empowering designated team leads to make significant decisions.

An analysis of the Year 1 data allows for the inference that the centralized, visionary leadership style was highly effective for navigating the ambiguity of the early startup phase. This approach provided clarity and decisive momentum when the company lacked established processes. A junior developer noted in an interview, “In the beginning, it was chaos, but [the CEO] always knew exactly where we were going. It made you feel secure.” The direct involvement of the founders in all projects fostered a tight-knit, high-energy culture that enabled rapid prototyping and iteration.

The shift towards facilitative leadership in the later years can be inferred as a necessary adaptation to manage increasing organizational complexity and scale. As the team grew from 8

to 25 people, the centralized model created significant bottlenecks, a fact acknowledged by a founder in a Year 2 interview: “I realized I couldn’t be the source of every good idea anymore. I was slowing us down.” The move to empower teams was a deliberate strategic choice to sustain innovation velocity by distributing creative ownership and decision-making authority throughout the organization.

A clear relationship emerged between the interview data concerning employee morale and the observational data on leadership behavior. In Year 1, while employees praised the clarity of the founder’s vision, some senior developers expressed frustration over a lack of creative autonomy. This sentiment in the interviews correlated directly with observations of meetings where founders frequently overrode technical suggestions from the team. In contrast, by Year 3, interviewees reported higher job satisfaction and creative fulfillment, which corresponded with observations of founders actively soliciting and implementing team-generated ideas.

The connection between documentary evidence and leadership evolution was also stark. The first year’s documents were sparse, consisting mainly of high-level vision statements and informal project notes. The introduction of a formal product roadmap and structured project proposal templates in Year 2 directly followed a series of strategic meetings where, as observed, the leadership team explicitly discussed the need to “scale our innovation process.” This demonstrates how leadership dialogue and strategic shifts were translated directly into tangible organizational artifacts and processes.

A critical incident from Year 1, termed “The Midnight Launch,” provides a clear illustration of the early leadership style. Two days before a major product launch, a critical bug threatened to derail the entire release. The CEO cancelled all other work, gathered the entire team into a “war room,” and personally directed the debugging effort for 36 consecutive hours. He ordered pizza, wrote code alongside the junior developers, and made the final call to push the patched version live. The launch was a success, and the event became an internal legend, emblematic of the founder’s heroic, hands-on leadership.

A contrasting vignette from Year 3, the “Project Nebula” initiative, highlights the evolved leadership approach. The goal was to explore a high-risk, high-reward new market vertical. Instead of leading it himself, the CEO appointed a mid-level product manager to lead a cross-functional “skunkworks” team. He allocated a protected budget and set only high-level goals, explicitly stating, “This is your project to run. My job is to clear roadblocks for you.” He met with the team leader weekly for coaching sessions but was not involved in the day-to-day decisions, allowing the team full autonomy to experiment, and even to fail, within the defined scope.

The “Midnight Launch” vignette explains the function and appeal of the Visionary-Hero leadership model in an early-stage startup. This directive, centralized approach was essential for crisis management and mobilizing the team with a singular focus under extreme pressure. It built camaraderie and reinforced the founder’s status as the ultimate problem-solver and visionary. However, interview data also revealed that while effective, this approach was exhausting for the team and created a dependency on the founder as the sole source of solutions.

The “Project Nebula” vignette explains the mechanics of the Facilitator-Coach model. This approach demonstrates a shift from the leader *having* the ideas to the leader *creating an environment where others can have ideas*. By providing psychological safety (permission to

fail), resources (a protected budget), and autonomy (delegated authority), the leader fostered a sense of ownership and intrinsic motivation within the team. This style was less about heroic intervention and more about systematic capability-building, creating a scalable and resilient model for innovation.

The results, interpreted holistically, indicate that creative leadership in a digital startup is not a static attribute but a dynamic capability that must evolve in lockstep with the organization's maturation. The journey from a centralized, visionary style to a decentralized, facilitative approach appears to be a critical adaptation required to navigate the challenges of scaling. This evolution is not accidental but is driven by the leader's growing awareness of the limitations of their initial style and a deliberate effort to build a more sustainable innovation engine.

This evolutionary trajectory suggests that effective creative leaders are defined by their metacognitive ability to reflect on their own leadership and their adaptive capacity to change it. The findings challenge the notion of a single "best" leadership style for innovation. Instead, they propose that effectiveness is contingent on the fit between the leader's behavior and the specific contextual demands of the startup's developmental stage. The core task of the creative leader is, therefore, not just to manage innovation, but to manage the evolution of their own leadership.

This longitudinal study revealed a distinct evolutionary trajectory of creative leadership within the digital startup, Innovatech. The primary finding is the transition from an initial leadership paradigm of Visionary-Driven Centralization to a more mature model of Facilitative Empowerment. This evolution was not a random occurrence but a structured adaptation to the changing internal and external demands placed upon the organization as it grew over the three-year period. The research successfully captured the dynamic, processual nature of leadership, demonstrating that its effective form is contingent upon the startup's developmental stage.

The initial phase was characterized by a top-down, heroic leadership style, where founders served as the primary visionaries, decision-makers, and problem-solvers. This approach provided essential clarity and momentum during the chaotic inception stage, unifying the team around a singular purpose. The data, exemplified by the "Midnight Launch" vignette, showed this style to be effective in crisis and crucial for establishing the initial product-market fit. It fostered a high-energy, founder-centric culture that enabled rapid execution.

As the organization scaled in size and complexity, the limitations of this centralized model became apparent, creating bottlenecks and stifling employee autonomy. The research documented a deliberate and reflective shift by the leadership team towards a coaching and empowering role. This later phase was marked by the delegation of authority, the fostering of psychological safety, and the creation of structures that promoted distributed innovation, as illustrated by the "Project Nebula" initiative. This transition was directly correlated with increased employee morale and a more resilient, scalable innovation capacity.

The findings underscore that creative leadership is not a static set of traits but a dynamic capability. The core task of the leader in a startup environment extends beyond managing innovation to managing the evolution of their own leadership approach. The study provides a clear, evidence-based model of this adaptation, mapping the specific behavioral and strategic shifts required to sustain innovation through the volatile journey of organizational growth. This process of adaptation appears to be a key determinant of a startup's long-term innovative potential.

The initial finding of a centralized, visionary leadership style aligns with foundational entrepreneurship literature, which often portrays the founder as a heroic figure whose singular vision drives the venture forward (e.g., Schumpeter, 1934). The effectiveness of this directive approach in providing clarity amidst ambiguity supports theories of leadership in high-uncertainty environments, which posit that strong, decisive guidance is critical during the nascent stages of an organization. Our study affirms this classic view but frames it as a temporary, albeit necessary, phase rather than a permanent ideal.

The observed transition to a facilitative and empowering leadership model resonates deeply with contemporary theories of creative leadership and innovation management, such as those proposed by Amabile and Khairi (2008). Their work emphasizes that as organizations mature, leaders must shift from being the primary source of ideas to becoming architects of an innovation-conducive environment. Our findings provide robust longitudinal evidence for this theoretical proposition, demonstrating *how* this shift occurs in practice over time. The study extends this literature by providing a detailed, processual account of this transition within the specific, high-velocity context of a digital startup.

This research challenges the implicit assumption of stability present in much of the cross-sectional leadership literature. By adopting a longitudinal lens, the study reveals the inadequacy of static models to explain leadership effectiveness in dynamic environments. It supports the arguments of process-oriented scholars like Pettigrew (1992), who call for research that captures change and temporality. The findings suggest that the “fit” between leadership style and organizational context is not a one-time alignment but a continuous process of adaptation and recalibration, a point often missed by studies that do not track organizations over time.

The specific leadership behaviors identified in the later stages fostering psychological safety, providing autonomy, and acting as a coach directly corroborate the empirical findings of studies like Google’s Project Aristotle, which identified psychological safety as the most critical attribute of high-performing, innovative teams. Our case study provides a rich, qualitative narrative that illustrates the mechanisms through which leaders actively cultivate this safety. It moves beyond correlation to provide a causal explanation, showing how a leader’s conscious decision to change their style directly enabled the emergence of a more empowered and creative team culture.

The observed evolution of leadership at Innovatech signifies a process of profound organizational learning and maturation. The shift from a directive to a facilitative style is not merely a change in behavior; it is a reflection of the leadership team’s growing understanding of the nature of scalable innovation. It indicates that the founders learned that their personal capacity was finite and that the company’s long-term success depended on their ability to unlock the collective intelligence of the entire organization. This transition is a hallmark of a maturing venture moving from personality-driven success to process-driven success.

These findings are a clear sign that leadership in a startup is a developmental journey, both for the individual leader and the organization. The CEO’s acknowledgment that he was becoming a “bottleneck” represents a critical moment of self-awareness and metacognition, which is a key attribute of effective leadership. This reflective capacity enabled the leader to diagnose the limitations of their own approach and proactively redesign their role to better serve the company’s evolving needs. The results, therefore, point to leadership adaptability as a core competitive advantage.

The increasing formalization of innovation processes, as evidenced by the introduction of product roadmaps and structured proposals, signifies the necessary bureaucratization that accompanies growth. However, the leadership team managed to implement these structures without stifling creativity, a common challenge for scaling companies. This suggests that the “how” of implementation, guided by a facilitative leadership philosophy, is as important as the “what.” The leadership successfully balanced the need for structure with the need for freedom, indicating a sophisticated understanding of managing the inherent paradoxes of innovation.

Ultimately, the results signify that a startup’s innovation culture is a direct reflection of its leadership’s philosophy and behavior. The culture at Innovatech did not emerge by accident; it was intentionally cultivated and shaped by the leaders’ evolving actions. The transition from a culture of “heroic dependency” to one of “distributed ownership” is the most significant outcome of this leadership evolution. It marks the successful creation of an organization that can innovate systematically, rather than relying on the sporadic genius of its founders.

The primary theoretical implication of this study is the development of a dynamic, stage-contingent model of creative leadership. This research provides a robust empirical foundation for moving beyond static leadership theories toward more process-oriented frameworks. It contributes a nuanced understanding that leadership effectiveness is not about adopting a single “best” style but about mastering the ability to transition between styles in response to organizational growth. This has significant implications for how leadership is conceptualized and taught in business academia.

For practicing startup founders and executives, the implications are direct and actionable. The study provides a clear, evidence-based roadmap for navigating the leadership challenges of scaling. It highlights the warning signs of an outdated leadership model (e.g., bottlenecks, declining morale) and offers a template for evolving towards a more sustainable approach. This research provides founders with a framework for self-assessment and a guide for intentionally developing their leadership capabilities in parallel with their company’s growth.

For venture capitalists and investors, this study offers a more sophisticated lens for evaluating the leadership potential of founding teams. Rather than simply assessing the founder’s current vision and charisma, investors can use this framework to probe for adaptive capacity and self-awareness. They can ask questions designed to uncover whether a founder has the metacognitive skills to evolve their leadership style as the company scales. This could lead to more robust investment decisions and better post-investment support for portfolio companies.

For educators and consultants in the entrepreneurship ecosystem, the findings provide rich case material for teaching the practical realities of innovation management. The detailed vignettes and the clear evolutionary model can be used to illustrate the complex interplay between leadership, culture, and growth. This moves beyond simplistic prescriptions and provides a more realistic and powerful pedagogical tool for preparing the next generation of entrepreneurs for the dynamic challenges they will face.

The evolution in leadership style occurred primarily because the triggers for innovation and the sources of organizational friction changed as the company scaled. In the beginning, the primary challenge was creating something from nothing, a task that required a unifying, singular vision to overcome inertia. The founder’s centralized control was efficient for making rapid decisions with incomplete information. The “why” behind this initial style was the need for speed and coherence in a chaotic environment.

The shift was precipitated by the pressures of increasing complexity and scale. As the team grew, the cognitive load on the founders became unsustainable, and the centralized communication structure became a critical bottleneck. A single person could no longer track all the details, make all the decisions, and be the source of all ideas. The leadership style had to change because the organizational structure it was designed to manage had fundamentally changed. The “why” behind the transition was the inescapable mathematical reality of organizational growth.

This adaptation was also driven by the changing needs and expectations of the employees. As the company hired more experienced and senior talent, these individuals expected greater autonomy and creative input. The initial directive style, which was comforting to junior employees, became demotivating for senior professionals who wanted ownership of their work. The leadership team adapted its style to retain top talent and leverage their full creative potential, recognizing that human capital was their most valuable asset.

Finally, the evolution was possible because of the founders’ capacity for reflection and learning. The change was not purely reactive; it was a conscious and deliberate strategic choice based on their observation of what was no longer working. The founders possessed the humility to recognize the limitations of their own initial approach and the foresight to invest in building a more scalable system. The “why” is rooted not just in external pressures but also in the internal, psychological capacity of the leaders themselves.

The findings of this single-case study, while rich and insightful, naturally call for further research to establish the generalizability of the proposed evolutionary model. Future research should conduct multiple case studies across different industries and cultural contexts to test and refine the stage-contingent theory of creative leadership. Comparative studies of successful and failed startups could further illuminate whether the failure to adapt leadership style is a key differentiator in long-term outcomes.

Quantitative research could be developed to complement these qualitative insights. A longitudinal survey instrument could be designed to measure leadership behaviors, employee perceptions of autonomy, and innovation outcomes across a large sample of startups over time. Such research could statistically test the relationships identified in this study, such as the correlation between a shift to facilitative leadership and an increase in innovation metrics at specific stages of company growth.

A promising avenue for future inquiry is to explore the specific triggers and mechanisms that enable leaders to develop the necessary self-awareness to change their style. What experiences, coaching interventions, or peer-support structures facilitate this critical metacognitive development? Research in this area could yield practical tools and training programs designed to accelerate the development of adaptive leadership capabilities in founders.

Finally, there is a need to develop more practical tools and diagnostics for founders based on these findings. This could take the form of a “Leadership Scalability Assessment” that helps founders identify their current leadership paradigm and understand the steps needed to evolve to the next stage. Creating and validating such tools would be a significant practical contribution, translating the academic insights of this research into tangible value for the entrepreneurial community.

CONCLUSION

This study's most significant finding is the identification of a clear, two-stage evolutionary path of creative leadership required for a digital startup to successfully scale. The research reveals a necessary transition from an initial, founder-centric paradigm of Visionary-Driven Centralization to a mature, team-centric model of Facilitative Empowerment. This dynamic trajectory distinguishes itself from much of the existing literature by framing creative leadership not as a fixed style but as an adaptive capability. The core contribution is demonstrating that this evolution is a non-random, critical adaptation to manage the increasing complexity of a growing organization, directly linking a leader's ability to evolve with the startup's potential for sustained innovation.

The principal value of this research is twofold, offering both conceptual and methodological contributions. Conceptually, it advances a dynamic, stage-contingent model of creative leadership that provides a more nuanced alternative to static, universalist theories. This process-oriented framework offers a richer explanation of how leadership effectiveness is maintained over time in volatile environments. Methodologically, the study champions the power of the longitudinal single-case study approach to uncover the deep, contextual, and processual dynamics of organizational life, providing a template for future research seeking to understand *how* complex phenomena like leadership unfold over time, rather than simply what they look like at a single moment.

The primary limitation of this research is inherent in its single-case study design, which, while providing depth, restricts the statistical generalizability of the findings. The unique context of Innovatech means the specific evolutionary path may differ in other firms or industries. This limitation points directly toward a clear agenda for future research. Subsequent studies should aim to validate and refine the proposed model through comparative, multi-case analyses across diverse startup ecosystems. Furthermore, large-scale quantitative longitudinal studies are needed to test the identified correlations between leadership evolution and innovation outcomes, while focused inquiry into the psychological mechanisms enabling a leader's adaptive capacity represents another vital frontier for investigation.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; Investigation.

Author 3: Data curation; Investigation.

CONFLICTS OF INTEREST

The authors declare no conflict of interest

REFERENCES

- Ac, I. A. C., Santoyo, K. D. P., Medina, S. R. P., Chacón, S. H., & Cetina, Y. L. (2025). Geographic Gamification Strategies in Mathematics Education: Enhancing Linear Algebra Learning at the Technological University of Cancún. In Mata-Rivera M.F., Zagal-Flores R., Elisabeth Ballari D., & León-Borges J.A. (Eds.), *Commun. Comput. Info. Sci.: Vol. 2298 CCIS* (pp. 122–137). Springer Science and Business Media Deutschland GmbH; Scopus. https://doi.org/10.1007/978-3-031-80017-7_8

- Barde, A., Thakur, R., Patel, S., Sinah, N., & Barde, S. (2024). AI-Based Smart Education System to Enhanced the Learning of Students. *Int. Conf. Adv. Comput. Res. Sci. Eng. Technol., ACROSET*. 2024 International Conference on Advances in Computing Research on Science Engineering and Technology, ACROSET 2024. Scopus. <https://doi.org/10.1109/ACROSET62108.2024.10743859>
- Candra, S., Handoko, B. L., & Lindawati, A. S. L. (2024). Impact of Gamification Elements for Student Acceptance on Gamification-enhanced Learning. *ACM Int. Conf. Proc. Ser.*, 82–89. Scopus. <https://doi.org/10.1145/3678392.3678396>
- Christodoulou Raftis, C., van Hassel, E., & Nanway Boukani, L. (2024). The impact and importance of serious games in maritime education: An empirical application. *Maritime Policy and Management*. Scopus. <https://doi.org/10.1080/03088839.2024.2442603>
- Cui, Q., & Fwuyuan, W. (2024). Adaptive Learning Strategies in Higher Vocational Education: Utilizing Concise Cases for Diverse Learning Styles. *International Journal of Instructional Cases*, 8(2), 18–37. Scopus.
- Dolly, M., Nimbarte, A., & Wuest, T. (2024). The effects of gamification for manufacturing (GfM) on workers and production in industrial assembly. *Robotics and Computer-Integrated Manufacturing*, 88. Scopus. <https://doi.org/10.1016/j.rcim.2024.102722>
- Escandon-Barbosa, D., & Salas-Paramo, J. (2025). Virtual reality in business management education: Evaluating through the TPACK (technological pedagogical content knowledge) lens. *Computers in Human Behavior Reports*, 18. Scopus. <https://doi.org/10.1016/j.chbr.2025.100634>
- Fraga, C., Cardoso, L., de Stefano, E., Lima Santos, L., & Motta, N. (2025). Mapping Gamification for Sustainable Urban Development: Generating New Insights for Tourism Education. *Tourism and Hospitality*, 6(1). Scopus. <https://doi.org/10.3390/tourhosp6010017>
- Gasner P. (Ed.). (2024). Proceedings 2024 23rd RoEduNet Conference: Networking in Education and Research, RoEduNet 2024. In *Proc. RoEduNet IEEE Int. Conf.* IEEE Computer Society; Scopus. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85208963262&partnerID=40&md5=4eeb53bad007e65f3dc01b43caa66163>
- Ghaffarifar, S., Behmanesh, F., Gholamnia-Shirvani, Z., Nikbakht, H.-A., & Nazmi, S. (2024). Designing, implementing and evaluating childbirth training protocol for undergraduate midwifery students with a computer and mobile application based on gamification method: Study protocol. *BMC Medical Education*, 24(1). Scopus. <https://doi.org/10.1186/s12909-024-06316-y>
- Hu, X., & Li, J. (2024). Research on the integrated solution of physical education based on smart campus. *Advances in Physiology Education*, 48(2), 378–384. Scopus. <https://doi.org/10.1152/advan.00006.2024>
- Kaliraj, P., Singaravelu, G., & Devi, T. (2024). Transformative Digital Technology for Disruptive Teaching and Learning. In *Transformative Dig. Technology for Dis. Teaching and Learning* (p. 279). CRC Press; Scopus. <https://doi.org/10.1201/9781032675176>
- Kamiliya, N., Syahchari, D. H., & Omar, A. (2024). Enhancing E-Learning through Gamification: Increasing User Enjoyment and Learning Outcomes. *Int. Conf. Creat. Commun. Innov. Technol., ICCIT*. 2024 3rd International Conference on Creative Communication and Innovative Technology, ICCIT 2024. Scopus. <https://doi.org/10.1109/ICCIT62134.2024.10701268>
- Kanalikova, A., & Rakovská, E. (2024). User-Friendly Tools for New Digital Education in Computer Science. In Fejedelem S. (Ed.), *ICETA - Year Int. Conf. Emerg. eLearn. Technol. Appl., Proc.* (pp. 282–287). Institute of Electrical and Electronics Engineers Inc.; Scopus. <https://doi.org/10.1109/ICETA63795.2024.10850856>
- Kuzovkova, T. A., Sharavova, O. I., & Sharavova, M. M. (2024). The Causes and Sources of the Evolution of Engineering Education Competencies in the Field of Electronics and

- Communications. *Intell. Technol. Electron. Devices Veh. Road Transp. Complex, TIRVED - Conf. Proc.* 2024 Intelligent Technologies and Electronic Devices in Vehicle and Road Transport Complex, TIRVED 2024 - Conference Proceedings. Scopus. <https://doi.org/10.1109/TIRVED63561.2024.10769847>
- Mitra, S., Kroeger, C. M., Wang, T., Masedunskas, A., Cassidy, S. A., Huang, R., Fontana, L., & Liu, N. (2024). Gamified Smartphone-App Interventions on Behaviour and Metabolic Profile in Patients at Risk of Cardiovascular Disease. In Bichel-Findlay J., Otero P., Scott P., & Huesing E. (Eds.), *Stud. Health Technol. Informatics* (Vol. 310, pp. 1542–1543). IOS Press BV; Scopus. <https://doi.org/10.3233/SHTI231284>
- Mitra, S., Kroeger, C. M., Wang, T., Masedunskas, A., Cassidy, S., de Ciutiis, I., Hooijenga, P. T. E., Huang, R., Liu, N., & Fontana, L. (2024). The Impact of Gamified Smartphone App Interventions on Behaviour and Metabolic Outcomes in Individuals at Risk of Cardiovascular Disease. In Bichel-Findlay J. (Ed.), *Stud. Health Technol. Informatics* (Vol. 318, pp. 172–173). IOS Press BV; Scopus. <https://doi.org/10.3233/SHTI240913>
- Montenegro C., Rocha A., & Cueva Lovelle J.M. (Eds.). (2024). International Conference on Management, Tourism and Technologies, ICMTT 2023. *Lecture Notes in Networks and Systems*, 774. Scopus. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182009896&partnerID=40&md5=bbea9f60ceae18a0409c193b1fc358fd>
- Moritani, M., & Kurihara, K. (2024). Development of an Automated Eye Drop System Using Games. *GCCE - IEEE Glob. Conf. Consum. Electron.*, 1212–1213. Scopus. <https://doi.org/10.1109/GCCE62371.2024.10760835>
- Mylonas, G., Amaxilatis, D., Paganelli, F., Chatzigiannakis, I., Koulouris, P., Falkouskaya, Y., & Markopoulos, P. (2025). Results From a Large-Scale IoT-based Intervention for Energy Saving and Sustainability Awareness via Behavior Change in 25 K-12 Schools in Europe. *IEEE Internet of Things Journal*. Scopus. <https://doi.org/10.1109/JIOT.2025.3544652>
- Oberdörfer, S., Elsässer, A., Grafe, S., & Latoschik, M. E. (2024). Superfrog: Comparing Learning Outcomes and Potentials of a Worksheet, Smartphone, and Tangible AR Learning Environment. In Bourguet M.-L., Krüger J.M., Pedrosa D., Dengel A., Peña-Rios A., & Richter J. (Eds.), *Commun. Comput. Info. Sci.: Vol. 1904 CCIS* (pp. 343–364). Springer Science and Business Media Deutschland GmbH; Scopus. https://doi.org/10.1007/978-3-031-47328-9_26
- Paliwal, S., Gannon, P., Lauricella, E., Riddett, K. E., Badurdeen, F., & Elam, A. (2025). Spaceship Earth: A Sustainable Manufacturing Game. In Kohl H., Seliger G., Dietrich F., & Mur S. (Eds.), *Lect. Notes Mech. Eng.* (pp. 856–863). Springer Science and Business Media Deutschland GmbH; Scopus. https://doi.org/10.1007/978-3-031-77429-4_95
- Roopaei, M., & Roopaei, R. (2024). Gamifying AI Education for Young Minds: The TransAI Adventure in Learning. In Paul R., Kundu A., & Bhattacharyya R. (Eds.), *IEEE World AI IoT Congr., AIoT* (pp. 129–134). Institute of Electrical and Electronics Engineers Inc.; Scopus. <https://doi.org/10.1109/AIIoT61789.2024.10578991>
- Schlechter, T., Kopylov, P., Wegen, J., Manfredi, K., Nicoletti, L., Padovano, A., Cardamone, M., Francalanza, E., & Seidl, M. (2024). Development and case study of an Industry 5.0 ready human-centric related brewing plant. *Agronomy Research*, 22(2), 956–969. Scopus. <https://doi.org/10.1515/AR.24.068>
- Shaikh, M. S., & Ali, S. I. (2025). Revolutionizing the impact of education using advanced online tools. In *Revolutionizing Educ. With Remote Exp. And Learn. Anal.* (pp. 471–488). IGI Global; Scopus. <https://doi.org/10.4018/979-8-3693-8593-7.ch028>
- Simsek, A. (2024). How will education look like in the future? *Contemporary Educational Technology*, 16(3). Scopus. <https://doi.org/10.30935/cedtech/14794>

- Siregar, R., Nasikun, A., & Ferdiana, R. (2024). Immersive Virtual Reality-based Serious Game for Fire Drill Education. *ICITEE - Proc. Int. Conf. Inf. Technol. Electr. Eng.*, 358-363. Scopus. <https://doi.org/10.1109/ICITEE62483.2024.10808388>
- Soundarya, N. P., Kumar, T., & Gupta, H. K. (2024). A Framework to Deploy Immersive Technologies for Effective Education. In Alareeni B. & Hamdan A. (Eds.), *Lect. Notes Networks Syst.: Vol. 1080 LNNS* (pp. 216–225). Springer Science and Business Media Deutschland GmbH; Scopus. https://doi.org/10.1007/978-3-031-67444-0_21
- Sun, G. (2024). Blockchain-Supported Platform for Collaborative Livestreaming of STEM Courses. *Int. Conf. Electron. Inf. Eng. Comput. Technol., EIECT*, 528–533. Scopus. <https://doi.org/10.1109/EIECT64462.2024.10866675>
- Tonkal, M., Wu, A., & Rogers, C. (2024). Exploring the Impact of Systems Engineering Projects on STEM Engagement and Learning. *Proc. Front. Educ. Conf. FIE*. Proceedings Frontiers in Education Conference, FIE. Scopus. <https://doi.org/10.1109/FIE61694.2024.10893437>
- Uluskan, S. (2024). EDUPERES and GAMERES: A smart interactive education platform and digital gamification for basic circuit analysis. *Computer Applications in Engineering Education*, 32(4). Scopus. <https://doi.org/10.1002/cae.22754>

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