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Proposing a Conceptual Model of E-Leadership in Iranian Governmental Organizations

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A B S T R A C T

This study was conducted with the aim of proposing a conceptual model of e-leadership in Iranian governmental organizations. The research method employed in the present study was exploratory, and the research strategy was qualitative, based on the application of a phenomenological approach. Utilizing semi-structured interviews, the study explored the perspectives, experiences, and insights of scholars and experts to identify the dimensions and components influencing e-leadership, ultimately resulting in the development of a conceptual model. The research participants included academic experts (with a minimum of 10 years of faculty experience and holding at least an assistant professorship) and active managers in governmental organizations (with a minimum of 10 years of managerial experience in the public sector). A non-probability purposive judgmental sampling method was used to select participants. Sampling continued until theoretical saturation was reached, and the researcher was ultimately able to conduct interviews with 14 individuals. The findings derived from the interview text analysis—based on the phenomenological approach and a three-stage coding process (open, axial, and selective coding)—revealed that six dimensions (main categories) and 32 components (subcategories) are influential in shaping the e-leadership model in Iranian governmental organizations. These dimensions include: (1) attention to leadership and guidance requirements (comprising 7 components), (2) attention to technical and professional requirements (comprising 7 components), (3) attention to communication and interactional requirements (comprising 3 components), (4) attention to the psychological requirements of the leader (comprising 6 components), (5) attention to the requirements for employee alignment and synchronization (comprising 3 components), and (6) attention to procedural requirements (comprising 4 components).

Keywords: *Conceptual Model, E-Leadership, Governmental Organizations, Iran.*

1. Introduction

The emergence and expansion of digital technologies have fundamentally transformed the structure, function, and leadership paradigms within organizations, particularly in the public sector. In the digital era, traditional leadership models are often insufficient to address the rapid shifts in technology, communication, and organizational expectations. Digital leadership, a construct emerging from the intersection of technological fluency and strategic leadership, has become an essential factor in steering organizations through complex and uncertain environments (Banks et al., 2022; Cortellazzo et al., 2019). In Iran, as in many countries undergoing administrative reforms, governmental organizations are increasingly recognizing the need for a leadership paradigm that embraces agility, innovation, and digital competence.

The concept of digital leadership, or e-leadership, is defined as the capability of leaders to use information technologies to influence and guide others toward achieving organizational goals in digitally mediated contexts (Maheshwari et al., 2024). Digital leaders are expected to foster digital transformation, support innovation, and create collaborative digital cultures while addressing the challenges associated with remote communication, cybersecurity, and digital literacy (AlAjmi, 2022; Ghaedamini Harouni et al., 2019). This shift in leadership is not merely a matter of integrating technology into existing systems but requires a redefinition of leadership behaviors, competencies, and strategies suited to digital ecosystems (Liu et al., 2020).

Iran's public sector, characterized by hierarchical bureaucracies and centralized decision-making structures, faces significant challenges in transitioning to digital forms of governance and leadership. While technological infrastructure and digital governance have advanced in recent years, the adoption of digital leadership frameworks remains inconsistent and fragmented (Khodadadi & Abbaspour, 2022; Mahmoodi Fard & Maleki, 2023). Bridging this gap necessitates a conceptual understanding of what constitutes effective digital leadership in the Iranian public administration context. Research indicates that without competent digital leaders, digital transformation initiatives risk failure due to resistance to change, poor communication, and lack of strategic alignment (Maheshwari et al., 2024; Mergel et al., 2019).

Numerous studies have highlighted the role of digital leadership in fostering innovation, enhancing organizational performance, and ensuring sustainability in complex environments (Norouzi et al., 2022; Sasmoko et al., 2019; Wasono & Furinto, 2018). For instance, digital leadership has been shown to significantly influence career commitment and work engagement in sectors as diverse as education, banking, and hospitality (Amelda et al., 2021; Antonopoulou et al., 2025; Ertanto et al., 2025). In the context of governmental organizations, this form of leadership is particularly relevant as it facilitates digital governance, citizen engagement, and efficient service delivery (Anwar, 2025; Rastegar et al., 2023). Yet, the conceptual underpinnings of digital leadership remain underexplored in Iranian public institutions, particularly under crisis conditions such as the COVID-19 pandemic, which underscored the urgency of digitization and agile leadership (Ghavifekr & Wong, 2022; Toutian Esfahani et al., 2024).

A critical dimension of digital leadership involves the ability to align human resources, organizational culture, and technology with strategic objectives. Research has identified several core competencies for digital leaders, including the ability to manage digital change, promote innovation, and build technological capabilities within teams (Asfahani, 2025; Nasrun, 2025). Moreover, digital leaders must demonstrate emotional intelligence, resilience, and visionary thinking in contexts of uncertainty (Shah Hosseini et al., 2019; Susilowati, 2025). In this regard, digital leadership extends beyond technical competence; it entails a comprehensive set of cognitive, relational, and strategic skills that enable the leader to navigate a rapidly evolving digital landscape (Artüz & Bayraktar, 2021; Baglama et al., 2022).

While digital leadership has been extensively studied in the private and educational sectors, its application in the public sector—especially in developing countries—remains relatively limited. In Iran, recent studies have attempted to define the parameters of e-leadership, particularly in crisis management and educational administration (Kiakojouri, 2024; Toutian Esfahani et al., 2024). For example, Yasemi et al. (2023) emphasized the role of digital leadership strategies in sports organizations and their impact on individual and organizational performance (Yasemi et al., 2023). However, these insights must be extended to core public service domains such as municipal governance, ministerial management, and policy implementation.

Leadership in digital contexts is not only about adopting technology but also about transforming mindsets, structures, and decision-making processes (Banks et al., 2022;

Cortellazzo et al., 2019). Digital leaders must rethink hierarchical models of control and replace them with participatory, network-based approaches that empower employees and promote collective intelligence (AlAjmi, 2022; Wiyono et al., 2023). In addition, digital leadership is closely linked to organizational learning, knowledge management, and adaptive capability—all of which are critical for public organizations striving to remain effective in times of volatility (Baglama et al., 2022; Maheshwari et al., 2024).

The need for a localized and contextualized understanding of digital leadership in Iranian governmental organizations is therefore evident. While global frameworks offer valuable guidance, they must be adapted to the unique institutional, cultural, and political contexts of Iran. As some scholars argue, digital transformation in public administration cannot be divorced from issues of national governance, policy coherence, and citizen trust (Kargar Shorki et al., 2022; Rastegar et al., 2023). Accordingly, any effort to conceptualize e-leadership in this setting must take into account the realities of bureaucratic inertia, limited digital infrastructure, and regulatory constraints (Mahmoodi Fard & Maleki, 2023; Norouzi et al., 2022).

In this context, the present study seeks to propose a conceptual model of e-leadership tailored to Iranian governmental organizations. Drawing on the phenomenological method and in-depth interviews with experts in public administration and digital transformation, the research identifies the key dimensions and components that constitute effective digital leadership in this sector. The model aims to bridge the gap between theoretical insights and practical implementation by highlighting the organizational, technical, psychological, and strategic requirements of digital leadership.

This research contributes to the literature in several ways. First, it builds on previous studies that emphasize the strategic role of digital leaders in public governance and institutional performance (Ghaedamini Harouni et al., 2019; Mergel et al., 2019). Second, it responds to the growing body of research on leadership under digital disruption, highlighting the need for resilience and adaptability among leaders in government (Amelda et al., 2021; Asfahani, 2025). Third, it offers a culturally grounded and context-sensitive model that reflects the specific challenges and opportunities facing Iranian public organizations in their digital transformation journey (Khodadadi & Abbaspour, 2022; Shah Hosseini et al., 2019).

Furthermore, this study aligns with global efforts to redefine leadership in the age of digitalization. As Antonopoulou et al. (2025) and Anwar (2025) demonstrate, digital leadership is becoming a central pillar in the design of future-ready organizations (Antonopoulou et al., 2025; Anwar, 2025). By identifying core competencies, strategic enablers, and organizational levers, this research contributes to a nuanced understanding of how digital leadership can be operationalized in complex public systems. It also serves as a practical guide for policymakers, managers, and leadership development professionals who aim to promote digital governance and enhance public service delivery in Iran and similar contexts.

In conclusion, digital leadership is not a mere trend but a structural necessity in today's rapidly evolving administrative environments. Its importance in driving digital transformation, fostering innovation, and ensuring responsive public service is well established in the literature (Banks et al., 2022; Nasrun, 2025). What remains is the need for models and frameworks that translate this strategic imperative into actionable insights for public sector reform. This study represents an attempt to fill that gap by offering a grounded conceptual model of e-leadership

2. Methods and Materials

The research method employed in the present study was exploratory, and the research strategy was qualitative, based on the application of the phenomenological approach. Given the nature of the current research—which required examining and analyzing the perspectives, experiences, and opinions of experts in the field (both academic and executive)—the phenomenological method was used to extract the influential dimensions and components and, subsequently, propose a conceptual model. In this regard, after reviewing and analyzing domestic and international research literature to enrich the study's content and gain a deeper understanding of the concept of e-leadership, the researcher used a semi-structured interview tool and analyzed the collected interview codes using the phenomenological method to shape the conceptual model of e-leadership in Iranian governmental organizations.

On the other hand, the study participants consisted of academic experts (with at least 10 years of faculty experience and a minimum academic rank of assistant professor) and active managers in governmental organizations (with at least 10 years of management experience in the public sector), individuals who possessed

deep knowledge and broad perspectives regarding the research problem and its theoretical foundations. Due to the undefined number of required participants, the non-probability purposive judgmental sampling method was used. Participant selection continued until theoretical saturation occurred—meaning data collection was terminated when no new concepts emerged, and theoretical saturation was achieved. As a result, the researcher successfully conducted interviews with 14 participants.

Table 1

Demographic Description of Interviewees

No.	Educational Level	Field of Study	Organizational Position	Work Experience
1	Master's	Software Engineering	Senior IT Expert	14 years
2	Master's	Telecommunications	Head of IT Department, Kermanshah	16 years
3	Ph.D.	Human Resource Management	Director-General of HR at Ministry of Science and University of Tehran Faculty	29 years
4	Master's	ICT	Director-General of IT Department, Sanandaj	24 years
5	Master's	ICT	Senior IT Expert, Kermanshah Province	22 years
6	Ph.D.	Public Administration	Senior Advisor to the Deputy of Finance and Administration, Central Bank	23 years
7	Master's	ICT	Deputy Director of IT, Sanandaj	22 years
8	Master's	ICT	Deputy Director of IT, Sanandaj	13 years
9	Master's	Computer Science	Former Director-General of IT, Kermanshah Governorate	28 years
10	Master's	ICT	IT Director, Islamic Azad University, Kermanshah	23 years
11	Ph.D.	Computer Engineering	Faculty Member and Head of University Office, Kermanshah University of Technology	19 years
12	Ph.D.	Information Technology	Head of IT, Kermanshah	22 years
13	Ph.D.	Computer Engineering	Faculty Member, Kermanshah University of Technology	16 years
14	Ph.D.	Computer Engineering	Faculty Member, Kermanshah University of Technology	14 years

In the present study, a deductive semi-structured interview tool was used. Initially, a general question regarding the concept of e-leadership in governmental organizations and its influential dimensions and components was posed. Subsequently, based on the interviewees' perspectives and responses, more specific questions aligned with the research objectives were asked. The researcher's intent in beginning with an open-ended question was to understand the participants' viewpoints without restricting their beliefs or attitudes.

To construct the interview instrument, after coordinating with the selected participants, they were asked a set of predefined questions and requested to share their insights. Each interview lasted between 40 to 60 minutes, and the interviewer meticulously recorded the relevant data. At the end of each session, participants were asked to share any additional comments. The interview process involved sending an invitation and request for collaboration to potential participants. Upon their acceptance, face-to-face sessions were scheduled. The main interview questions included:

1. In your opinion, what factors drive the adoption of e-leadership in governmental organizations?
2. What internal (contextual) organizational conditions should be considered for the realization of e-leadership in Iranian governmental organizations?
3. What external (intervening) conditions should be considered for the realization of e-leadership in Iranian governmental organizations?
4. What are the key strategies and recommendations for realizing e-leadership in Iranian governmental organizations?
5. What consequences and outcomes do you believe the realization of e-leadership will bring to governmental organizations in Iran?

To ensure the scientific rigor of qualitative research, the four criteria proposed by Guba and Lincoln (1982)—credibility, transferability, dependability, and confirmability—were applied as follows:

1. **Credibility**: Refers to the deliberate effort to ensure the accurate interpretation of data. To achieve credibility, participants were selected with maximum variation in experiences, and sampling continued until data saturation was achieved. The most appropriate meaning units were selected. Internal credibility was also ensured through

member checking; the interview texts and extracted codes were returned to participants for validation. Any discrepancies were addressed and clarified via follow-up, including phone communication if necessary.

2. **Dependability**: Refers to the stability of data over time and under varying conditions. This criterion, akin to reliability in quantitative research, was addressed in this study through an audit of the research process by an external reviewer to ensure consistency.
3. **Confirmability**: Indicates the linkage of findings to data sources and the emergence of results from these sources. Confirmability was ensured by providing a fully traceable research process. All stages of the study—including data collection, analysis, and theme development—were thoroughly documented, enabling auditability. Furthermore, the research process was shared with several colleagues for independent validation.
4. **Transferability**: Refers to the extent to which the findings can be applied to other contexts or groups. The inclusion of diverse viewpoints and participant experiences regarding the same phenomenon (i.e., the principle of maximum variation) enhances the transferability of the findings.

Given that the nature of the present study required analyzing the perspectives and experiences of experts (both academic and executive), the phenomenological approach was adopted. Phenomenology is a qualitative research method that explores and interprets the deep experiences, emotions, and views of sample groups concerning specific phenomena. Based on this method, the data analysis approach was inductive content analysis. Since there were no predefined categories or structures, the coding method was applied—meaning the categories and themes were derived exclusively from participants' responses rather than from prior frameworks. In this approach, data were first collected from interviews, then coded and summarized without relying on theoretical constructs, allowing for the emergence of broader categories encompassing more detailed codes.

3. Findings and Results

Following the completion of interviews with 14 participants and the achievement of theoretical saturation, the collected data were consolidated and subjected to analysis using the phenomenological method. Ultimately, the study presented a conceptual model derived from the identified categories and concepts. The stages of qualitative data analysis were as follows:

In the initial step, as detailed in the table below, the researcher extracted statements or paragraphs from each interview and assigned conceptual labels to them, which constituted the first stage of the analytical process. Open coding refers to the initial and unrestricted coding of data. At this stage, interview texts were reviewed line by line, and corresponding open codes were extracted (as shown in Table 2). After conducting 14 interviews, a total of 215 initial codes were identified.

Table 2

Sample Open Coding of Conducted Interviews (Interviews with the First Two Participants)

No.	Interview Text	Open Codes Derived from Interview	Assigned Code
Interviewee 1			
1	I believe that managers should possess innovative ideas and creativity, and not merely focus on enforcing top-down policies. As leaders, they should operationalize their own ideas and viewpoints.	Managerial innovativeness	A1
		Operationalization of ideas	A2
2	In my opinion, employee competencies and appropriate placement in suitable positions are important and critical.	Attention to employee competencies	A3
		Proper placement of employees in suitable job roles	A4
3	Traditional processes in the organization should be eliminated and replaced with new processes using modern technologies.	Elimination of traditional organizational processes	A5
		Adoption of innovative processes aligned with modern technologies	A6

4	Management needs specialized familiarity with various departments of the organization's ICT sector.	Specialized familiarity of managers with different organizational ICT domains	A7
5	Management should be familiar with up-to-date ICT technologies and even act as an innovator in this field.	Specialized familiarity with cutting-edge ICT technologies	A8
6	One of the current issues is the centralization of most activities and decisions in ministry headquarters. In my view, for the successful implementation of e-leadership as a new leadership style, creating necessary infrastructures, utilizing innovative ideas, formulating appropriate criteria for appointing managers, and training staff should be emphasized.	Eliminating decision-making centralization	A9
		Creating necessary infrastructure	A10
		Formulating appropriate managerial appointment criteria	A11
		Emphasis on employee training	A12
7	The implementation of e-leadership in organizations can lead to improved productivity and increased employee motivation.	Enhancing employee motivation	A13
8	Governmental organizations have management, but e-leadership has not yet been defined. Thus, these organizations still rely on traditional, inherited management approaches.	Revisiting traditional and inherited management methods	A14
Interviewee 2			
1	Management must have mastery over current organizational structures, tools, and responsibilities based on authority frameworks.	Accurate understanding of current organizational structure	B1
		Understanding responsibilities and levels of authority within the organization	B2
2	Their full utilization and competencies in IT tools, as well as the ability to define intermediary tools to restructure responsibilities based on the organization's e-map, are essential.	Proficiency in utilizing IT tools	B3
		Redefining responsibilities based on the organization's electronic map	B4
3	The first challenge is collecting information aligned with organizational responsibilities; the second is classifying the data and using statistics effectively in work domains.	Focus on collecting task-aligned information	B5
		Data classification and appropriate statistical utilization	B6
4	It is necessary to define a clear framework and roadmap, develop incentive tools, implement the model, and fully explain the concept to personnel for excellence at all levels.	Defining a roadmap and operational framework	B7
		Developing incentive tools	B8
		Comprehensive explanation of the model to personnel at all levels	B9
5	Mapping individual success paths and future career trajectories for each person is one of the most crucial aspects of implementing e-leadership in the organization.	Mapping individual career success and future outlook	B10
6	The emergence of absolute order in various organizational areas, ability to plan for upcoming issues, and precise execution of programs for organizational excellence are vital.	Planning for upcoming organizational issues	B11
		Precise execution of programs for organizational advancement	B12

Following the open (initial) coding stage (as shown in Table 2), the concepts entered a new arrangement during the axial coding phase. Axial coding refines and organizes the codes identified during open coding in a more focused manner, combining them into new interrelated groupings. In this phase, closely related codes and categories were merged using the axial coding method, and the final coding was extracted selectively (see Table 3).

Table 3

Findings from Axial Coding

No.	Subcategories (Derived from Grouped Open Codes)	Main Categories (Derived from Grouped Subcategories)
1	Revisiting organizational processes	Attention to procedural requirements
2	Adopting innovative, technology-aligned processes	
3	Process facilitation	
4	Enhancing process transparency	
5	Continuous employee training	
6	Employee empowerment	
7	Meritocracy	

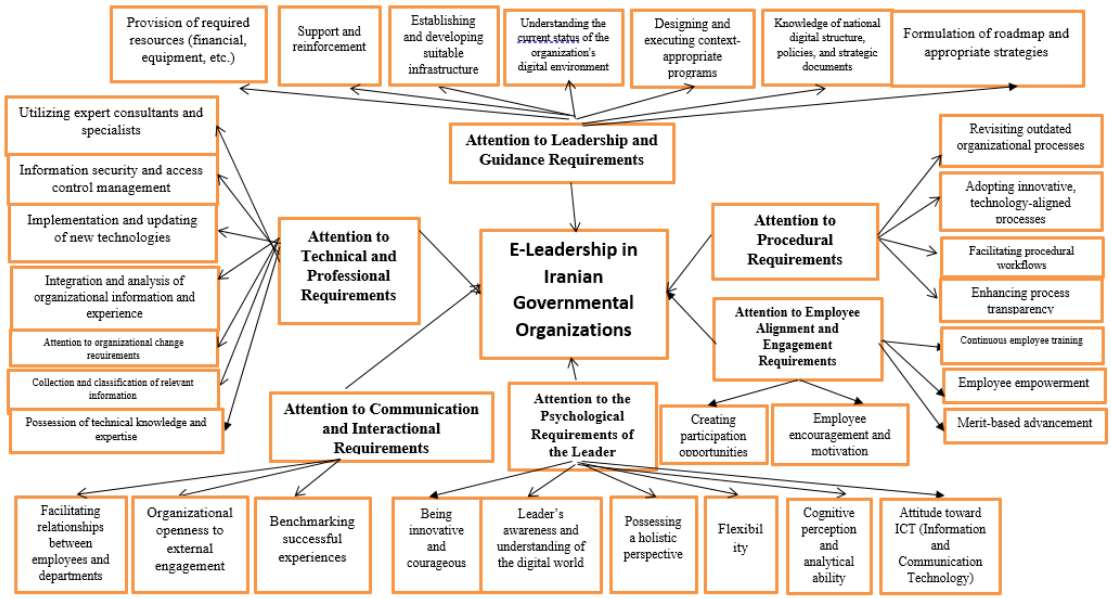
8	Employee motivation and encouragement	Attention to employee alignment and engagement
9	Cultivating participation	
10	Utilizing expert consultants and specialists	Attention to technical and professional requirements
11	Ensuring information security and access control	
12	Implementation and updating of new technologies	
13	Integration and analysis of information and experience	
14	Attention to organizational change requirements	
15	Collection and classification of relevant information	
16	Possession of technical knowledge and expertise	
17	Formulation of roadmaps and appropriate strategies	Attention to leadership and guidance requirements
18	Provision of required resources (financial, equipment, etc.)	
19	Support and reinforcement	
20	Designing and executing organization-specific programs	
21	Establishing and developing appropriate infrastructure	
22	Understanding the current state of the organization's electronic domain	
23	Knowledge of national electronic infrastructure, policies, and strategic documents	
24	Benchmarking successful experiences	Attention to communication and interactional requirements
25	Facilitating relationships between employees and departments	
26	Organizational openness to external interaction	
27	Being innovative and courageous	Attention to leader's psychological requirements
28	Manager’s awareness and understanding of the electronic world	
29	Holistic managerial perspective	
30	Cognitive perception and analytical ability	
31	Flexibility	
32	Attitude toward ICT	

The findings of the above table indicate that six main dimensions (core categories) and 32 components (subcategories) are influential in shaping the e-leadership model in Iranian governmental organizations.

Selective coding involves the process of identifying one core category and relating all other categories to it. After defining the categories, it is necessary to establish the relationships among the various categories within the framework of a unified model, which was accomplished during the selective coding phase. The aim of this phase is to form connections among the categories generated in the previous stage. The results of this coding are presented as a conceptual model in the diagram below:

Figure 1

Proposed Conceptual Model of the Research



4. Discussion and Conclusion

The findings of this study revealed that six core dimensions and thirty-two components are influential in shaping the conceptual model of digital leadership in Iranian governmental organizations. These dimensions include: (1) attention to leadership and guidance requirements, (2) attention to technical and professional requirements, (3) attention to communication and interactional requirements, (4) attention to the psychological requirements of the leader, (5) attention to employee alignment and engagement requirements, and (6) attention to procedural requirements. This framework, developed through phenomenological analysis and selective coding, highlights the multifaceted and interdependent nature of digital leadership in the public sector.

The first major finding relates to the leadership and guidance dimension, which includes strategic foresight, the development of roadmaps, resource allocation, and supportive infrastructures. This supports existing literature suggesting that digital leadership in the public sector must align strategic vision with operational execution in a rapidly evolving technological environment (Nasrun, 2025; Rastegar et al., 2023). Leaders must not only have a forward-looking perspective but also the capacity to translate vision into structured initiatives. The emphasis on designing context-appropriate programs and securing resources reinforces prior findings that e-leaders must act as both strategists and enablers of institutional change (Maheshwari et al., 2024; Mergel et al., 2019). Moreover, understanding national-level digital policies and adapting them to organizational realities resonates with research on digital governance in developing contexts (Khodadadi & Abbaspour, 2022; Mahmoodi Fard & Maleki, 2023).

The second dimension—technical and professional requirements—highlighted the necessity for digital leaders to possess both technological awareness and the ability to integrate evolving digital tools into their organizational contexts. This aligns with the growing body of literature underscoring digital competence as a critical trait for 21st-century leaders, particularly in public administration where technology uptake is often constrained by bureaucratic inertia (Ghavifekr & Wong, 2022; Liu et al., 2020). For example, the study found that digital leaders must be capable of information security management, technological upgrading, and the analysis of organizational data—skills that are closely linked to innovation capabilities (Sasmoko et al., 2019; Wiyono et al., 2023). These results further validate the assertions of Baglama et al. (2022), who emphasized that effective digital leadership requires continuous adaptation to technological change and data-driven decision-making in complex organizational ecosystems (Baglama et al., 2022).

The communication and interactional dimension of the model included components such as facilitating interdepartmental relations, external engagement, and benchmarking successful experiences. This dimension reflects the collaborative and networked nature of digital leadership, where authority is increasingly diffused across organizational boundaries (Banks et al., 2022; Cortellazzo et al., 2019). Leaders must foster horizontal communication and promote digital cultures that transcend silos. Such an approach is also aligned with research by AlAjmi (2022), which emphasizes the role of digital leaders in supporting teacher collaboration and public engagement in educational institutions (AlAjmi, 2022). Within governmental organizations, this capacity to connect internal and external stakeholders contributes to enhanced responsiveness and legitimacy in digital transformation initiatives.

The psychological dimension of digital leadership, encompassing creativity, risk-taking, holistic thinking, and adaptability, underscores the importance of cognitive and emotional attributes in leading digital change. This aspect resonates with studies emphasizing the human-centric side of digital leadership, particularly in contexts of uncertainty and crisis (Susilowati, 2025; Toutian Esfahani et al., 2024). As the digital environment becomes more volatile, leaders must not only understand technology but also possess emotional resilience and an openness to experimentation. This is especially relevant in the public sector, where digital initiatives often face resistance due to cultural inertia and rigid hierarchies (Anwar, 2025; Asfahani, 2025).

Furthermore, the findings demonstrate that successful digital leadership is contingent upon staff alignment and engagement. Components such as continuous training, merit-based advancement, and staff empowerment reflect a commitment to human capital development. These findings align with the literature that frames digital leadership as a relational construct, where leaders serve as facilitators of collective learning and change (Antonopoulou et al., 2025; Wasono & Furinto, 2018). This dimension also intersects with the concept of digital transformation leadership, as explored by Shah Hosseini et al. (2019), where the leader's role includes inspiring, educating, and supporting employees through digital transitions (Shah Hosseini et al., 2019).

Finally, the dimension concerning procedural requirements emphasizes the need to revisit outdated workflows and promote agile, transparent, and technology-enabled processes. This finding supports prior work that identifies process redesign as a central pillar of digital transformation (Kiakojouri, 2024; Mergel et al., 2019). Leaders must not only digitize existing procedures but also rethink organizational logic and performance metrics to align with digital realities. The emphasis on process clarity and simplification also echoes research in public sector digital governance that links procedural reform to improved service delivery and institutional trust (Norouzi et al., 2022; Rastegar et al., 2023).

Overall, the proposed model reaffirms the idea that digital leadership in public administration is a complex, multidimensional endeavor requiring both structural reforms and behavioral transformations. While prior studies have highlighted various individual aspects of digital leadership—such as innovation, strategy, or communication—this research integrates them into a cohesive framework that is specifically adapted to the Iranian context. It extends the theoretical scope of digital leadership by incorporating organizational, technical, interpersonal, and psychological dimensions into a unified model, offering a more holistic understanding of how e-leadership can drive public sector transformation.

Despite its valuable contributions, this study is not without limitations. First, the research was conducted using a qualitative methodology based on a limited number of expert interviews (n=14), which, while sufficient for reaching theoretical saturation in phenomenological studies, may not fully capture the broader variability of perspectives across different public sector organizations. Second, the contextual focus on Iranian governmental institutions may limit the generalizability of the findings to other socio-political or cultural environments. Third, the rapidly changing nature of digital technologies may render some identified components time-sensitive, requiring continuous reevaluation and model updating. Finally, while the study focused on expert perceptions, it did not include frontline employees or citizens who are directly affected by digital leadership in service delivery contexts.

Future research can build upon this study in several meaningful ways. First, quantitative studies can be designed to validate the proposed conceptual model across a broader and more diverse sample of governmental institutions using structural equation modeling or other statistical methods. Second, comparative studies could explore how digital leadership dimensions differ across sectors (e.g., education vs. healthcare) or regions (e.g., urban vs. rural). Third, longitudinal research would be beneficial to examine how the implementation of digital leadership strategies evolves over time and impacts organizational performance. Fourth, mixed-methods studies incorporating both qualitative interviews and quantitative surveys could provide richer, more triangulated insights into the practical outcomes of digital leadership. Finally, future studies could explore the intersection of digital leadership with emerging domains such as artificial intelligence, smart governance, and digital ethics to expand the theoretical horizon.

To translate the findings of this study into actionable strategies, governmental organizations should prioritize the identification and development of digital leadership competencies in their current and future leaders. Investment in continuous leadership training, with an emphasis on both technical fluency and soft skills such as adaptability, communication, and innovation, is critical. Public sector HR policies must be revised to support meritocracy and empower mid-level managers with decision-making authority. Furthermore, leadership development programs should be aligned with national digital transformation agendas and embedded into broader public administration reforms. Governmental institutions should also foster a culture of learning and experimentation by encouraging feedback, facilitating cross-departmental collaboration, and recognizing digital innovation at all organizational levels.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were considered.

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