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Designing a paradigmatic model of digital leadership for managers at Islamic Azad University of Tehran province: a mixed methods approach

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ABSTRACT

The present study was conducted with the aim of providing a digital leadership model for managers at Islamic Azad University of Tehran Province. The research method was applied in terms of purpose and mixed exploratory (qualitative-quantitative) in terms of data, and in terms of nature, it was systematic data-based (paradigmatic) in the qualitative dimension and cross-sectional survey in the quantitative dimension. The statistical population of the qualitative section included professors and experts in the field of human resources with specialized doctoral degrees, and in the quantitative section, all university presidents, their deputies, heads of faculties and heads of educational groups with specialized doctoral degrees and the academic rank of assistant professor and above in educational sciences at Islamic Azad University of Tehran Province, totaling 270 people. The sampling method in the qualitative section was purposeful theoretical saturation, and 15 expert people were selected. In the quantitative section, the sample size was determined based on the Morgan formula as 159 people. In the present study, after open and axial coding, the resulting measurement tool was formatted and sent to experts for selective coding and validity. Based on this, a researcher-made questionnaire was designed and distributed randomly among the study population. Then, the collected data were analyzed using descriptive and inferential statistics, and finally, 5 dimensions, 17 components and 121 indicators were identified for the digital leadership model for managers of educational organizations. After final approval and prioritization by experts, the dimensions, components and indicators of the model were illustrated, and the model was re-validated by experts.

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INTRODUCTION

The world we live in is experiencing significant and rapid changes. Technological advancements in various fields, including education, communications, and industries, are happening at a faster pace than ever before (Asemannasab and Ghadami, 2021). These changes in the realm of technology and communications today are causing interactions among organizational members to undergo transformations and adapt to new working structures (Sow and Aborbie, 2018). This era of entering the digital age is referred to as the digital transformation. Leadership has always been one of the most critical and complex topics in the field of organizational management (Klein, 2020). It can be surmised that the long-term success of contemporary companies is often attributed not only to having sufficient resources but also to having a digital leadership style (Bormann and Rowold, 2018). In the digital age, educational organizations at all levels face new and continuous challenges and complexities. This compels leaders to have exceptional abilities to create solutions for and solve contemporary problems. Additionally, many management experts believe that long-term organizational success finally comes through leadership that is value-centered, credible, and often team-based (Kuechler and Stedham, 2018). Educational leaders are gradually gaining acceptance and special attention in the realm of management roles worldwide (Dela Rosa and Marivic, 2022). The challenges and opportunities facing leaders in educational organizations are, in many respects, similar to those in other industries. However, depending on the type and level, there are various aspects unique to educational organizations that

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expose them to distinct and different challenges. Like organizations in other industries, all educational organizations involve leadership and communication with people, and they all work within legal, economic, socio-cultural, and political environments. Many of them are also directly or indirectly engaged in the global arena (Shami Zanjani and Irandost, 2018; Solis et al., 2014). Furthermore, educational organization leaders worldwide, like leaders in other industries, are confronted with a rapidly changing technological landscape (Esen, 2022). According to Toffler's perspective, the information revolution poses two challenges for educators and those who lead them. Even the best experts and professionals need to transform into learners of new information related to new presentation techniques, new communication methods with colleagues, and how to acquire and analyze information and apply it to the educational institution. Even with immersion in learning, one cannot access all contemporary knowledge. A university leader must facilitate a kind of learning and transfer of information acquisition and analysis skills to the university community.

Considering the above-mentioned points, the authors seek to answer the following questions in this study:

1. What is the paradigmatic pattern of digital leadership for managers in educational organizations from the perspective of experts?

2. What are the reasons, consequences, backgrounds, intervening factors, strategies, and outcomes of the mentioned pattern from the experts' perspective?

3. How do users perceive the fit of the pattern, dimensions, components, and indicators of the mentioned pattern?

METHODOLOGY

The present research is applied in terms of objectives. It employs a mixed exploratory approach, combining qualitative and quantitative data. The qualitative dimension adopts a data-driven systemic (paradigmatic) approach, while the quantitative dimension follows a descriptive cross-sectional method. The qualitative population comprises experts in the field of human resources holding specialized doctoral degrees that have authored, researched, and gained practical experience in this domain. Using purposive sampling and reaching theoretical saturation, 15 expert individuals were selected. The quantitative population consisted of 270 university presidents, their deputies, faculty deans, and heads of educational departments holding specialized doctoral degrees and academic ranks of assistant professor and above in the field of educational sciences at the Islamic Azad University of Tehran Province. With the assistance of Morgan's table, a sample size of 159 (71 females and 88 males) was determined.

The qualitative assessment tool was a semi-structured interview form, refined through open, axial, and selective coding. After reaching theoretical saturation among experts regarding the qualitative interview form, it was converted into a questionnaire by adding items. This questionnaire was then administered to a randomly selected sample. The reliability and validity of the qualitative tool were established through a three-way consensus (among data, researchers, and theory/methodology). In the quantitative section, reliability was calculated using Cronbach's alpha, yielding a total value of 0.90. The findings yielded 5 dimensions, 17 components, and 121 final indicators, forming the basis for the research questionnaire design in the quantitative phase. Questionnaire responses were designed within a seven-point Likert scale. Data were collected and analyzed.

RESULTS

The data analysis in the present study was conducted in two parts:

A) *Qualitative analysis:*

Open coding: In this phase, 88 indicators were identified through a review of national and international studies, as well as interviews with experts.

Axial coding: In this phase, 5 dimensions, 13 components, and 88 indicators were identified through expert interviews.

Selective coding: This phase involved experts in selecting and prioritizing 5 dimensions, 17 components, and 121 indicators, including high-level conditions (digital culture, digital security, digital infrastructure), ground conditions (digital communications, digital structure, digital economy), intervention conditions (digital intelligence, digital literacy, upper-level documents), strategies (leadership competencies, cognitive abilities, professional skills, human skills), and outcomes (digital university achievement, economic impacts, social impacts, environmental impacts), to develop a digital leadership model for educational organization managers (case study: Islamic Azad University, Tehran Province).

Table 1. Dimensions, components and number of constituent indicators of the proposed digital leadership model for managers of educational organizations (case study of Islamic Azad University, Tehran Province)

Dimension	Component	Number of Indicators
Causal factors	Digital culture	9
	Digital security	7
	Digital infrastructure	4
	Digital communications	6
Contextual factors	Digital structure	7
	Digital economy	7
	Digital intelligence	5
Intervening factors	Digital literacy	7
	Upstream documents	5
Strategies	Leadership competencies	8
	Perceptual abilities	10
	Professional skills	9
	Human skills	13
Outcomes	Realization of digital university	11
	Economic effects	5
	Social effects	5
	Environmental effects	3

Theoretical model validation: In this phase, the dimensions, components, and indicators of the digital leadership model for educational organization managers (case study: Islamic Azad University, Tehran Province) were validated by experts.

B) Quantitative analysis:

This section is divided into two stages:

A: Description of the data

B: Data analysis

Descriptive data: Descriptive statistical methods including mean, standard deviation, skewness, and kurtosis were used to summarize the data. The highest mean score was for the digital literacy component (M = 6.11), while the lowest mean score was for the environmental impact component (M = 4.09). All component score distributions had negative skewness, indicating that most participants scored above the mean. Kurtosis values were positive for all components, suggesting the data were clustered around the mean (Table 2). Moreover, descriptive statistical analysis (mean, standard deviation, skewness, and kurtosis) were used to analyze the data (Table 3).

Table 2. Breakdown of study population by academic position

Academic Rank	Frequency	Percentage
Professor	24	9.15%
Associate Professor	40	16.25%
Assistant Professor	85	46.53%
Instructor	10	29.6%
Total	159	100%

Table 3. Statistical Characteristics of Component Scores (n = 159)

Factors	Mean	Std. Deviation	Skewness	Kurtosis
Digital culture	14.96	15.971	-2.181	8.741
Digital security	16.93	29.869	-2.20	2.254
Digital infrastructure	16.14	43.35	-0.791	1.148
Digital communications	16.28	28.778	-1.439	3.373
Digital structure	15.23	54.594	-0.827	0.048
Digital economy	15.12	25.413	-1.078	2.225
Digital intelligence	15.98	26.871	-1.115	4.499
Digital literacy	16.11	91.143	-0.979	3.353
Upstream documents	15.1	85.374	-0.7	-3.5
Leadership competencies	15.54	12.453	-1.125	3.77
Perceptual abilities	15.65	23.368	-0.76	1.133
Professional skills	16.23	33.493	-1.093	9.43
Human skills	15.34	21.463	-1.195	7.07
Realization of Digital University	15.7	80.737	-1.367	8.61
Economic impacts	15.29	88.065	-2.01	5.16
Social impacts	15.6	83.188	-1.347	5.37
Environmental impacts	14.9	13.22	1.342	4.53

After determining the factor loadings and significant coefficients for each indicator with the components, and the components with dimensions (referred to as the measurement model), a structural or general model was constructed. The path diagram of digital leadership at Islamic Azad University was then developed.

Path analysis

The standard beta coefficients, gamma (path coefficients), and t-values for each path from the exogenous digital leadership variables to the endogenous variables (dimensions) were calculated and interpreted. The structural model shows how the latent variables are related to each other. The coefficients and indicators indicate the relative strength of each path.

DISCUSSION AND CONCLUSION

Discuss the results with presenting the references

The present findings with the findings of researchers such as Malazahi et al. (2021) were consistent in terms of digital infrastructure components, digital culture. The findings of Rahmati Kohrorudi et al. (2021) are consistent in terms of the components of digital intelligence and digital economy. It is in line with the findings of Nouri et al. (2018) in terms of digital leadership and digital resources it is in line with the findings of Shin et al. (2023) in terms of the components of digital culture. It is in line with the findings of Einstein et al. Digital and digital communication have been a consistent leader, the findings of Melendres Tanucan and Negrido (2022) have been consistent in terms of the components of digital literacy, digital intelligence, human and professional skills.

The digital revolution is shaping the future of the world through a fundamental transformation. In this regard, each organizational department is expected to play its role in order to succeed in the path of this transformation. One of the key parts in this field is the leadership of human resources; So that the survival of any organization requires taking serious measures and passing through traditional processes along with changing leadership paradigms in the digital arena. Based on this, organizations are required to train and develop leaders to go along with such a journey, who coordinate human resources in the best possible way with this flow.

Organizations today are not only looking for strong leaders, but also need leaders with completely different abilities. Organizations are looking to create a new group of young, fast-paced, digitally capable leaders. Leadership today is less about the art of leading and more about the leadership challenges people face.

DECLARATIONS

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Data availability

The datasets used and/or analysed during the current study available from the corresponding author on reasonable request.

Author's contribution

Concept design: A. Khorshidi, and A. Araghieh

Processing, analysis and interpretation: A. Khorshidi, and Z. Rahmani Tabar.

Writing, review and editing: A. Khorshidi, Z. Rahmani Tabar, N. Barzegar, and B. Faghiharam.

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Competing interests

The authors declare that they have no competing interests.

REFERENCES

Asemannasab, B., and Ghadami, M. (2021). Knowledge Management in the future. Journal of Strategic Management Studies, 12(46), 221-235. DOI: https://doi.org/20.1001.1.22286853.1400.12.46.13.9

Bormann, K.C., and Rowold, J. (2018). "Construct Proliferation in Leadership Style Research: Reviewing Pro and Contra Arguments." Organizational Psychology Review 8 (2–3): 149–173. DOI: https://doi.org/10.1177/2041386618794821

Dela, R., and Marivic, A. (2022). Digital Leadership and Teachers' Performance: Basis for a Proposed Training Program. International Journal of Multidisciplinary: Applied Business and Education Research, 3(12), 2669–2685. DOI: http://dx.doi.org/10.11594/ijmaber.03.12.19

Esen, F. S. (2022). The Transformation of Leadership: Postmodern Leadership Theories (pp. 17-34). Publisher: Nobel Academic Publishing.

Kane, G. C., Phillips, A. N., Copulsky, J., and Andrus, G. (2019). How digital leadership is (n't) different. MIT Sloan Management Review, 60(3), 34-39. Google Scholar

Klein, M. (2020). Leadership characteristics in the era of digital transformation. Business & Management Studies: An International Journal, 8(1), 883-902. DOI: https://doi.org/10.15295/bmij.v8i1.1441

Kuechler, W., and Stedham, Y. (2018). Management education and transformational learning: The integration of mindfulness in an MBA course. Journal of Management Education, 42(1), 8-33. DOI: https://doi.org/10.1177/1052562917727797

Malazahi, M., Selajqa S., Hosni Ahmadiyya, S., Firouzabadi A., Jalali Juran R. (2021). Design and validation of digital leadership model in the country's education system. Strategic Management Research Journal, 81: 147-175. https://doi.org/10.22037/sdh.v8i1.38908

Melendres Tanucan, J., and Negrido, C. (2022). Digital Leadership of School Heads and Job Satisfaction of Teachers in the Philippines during the Pandemic. International Journal of Learning, Teaching and Educational Research. 21(10): 1-18. https://doi.org/10.26803/ijlter.21.10.1

Nouri, M., Shah Hosseini, M.A., Shami Zanjani, M., Abedin, B. (2018). Designing the conceptual framework of digital leadership in Iranian organizations, management and planning in educational systems, volume 12, 2, 211-242. https://doi.org/10.29252/mpes.12.2.211

Rahmati Kohrorudi, S., Shams, Gh., Shami Zanjani, M., Abolghasemi, M. (2021). Designing a Human Resources Competency Model in the Age of Digital Transformation, Iranian Journal of Educational Sociology, 101: 1-33. Google Scholar

Shami Zanjani M. and Irandost, S.h. (2018). Digital Transformation, Nasr

Shin, J., Alamgir Mollah, Md., Choi, J. (2023). Sustainability and Organizational Performance in South Korea: The Effect of Digital Leadership on Digital Culture and Employees' Digital Capabilities. Sustainability 15(3): 2027. DOI: https://doi.org/10.3390/su15032027

Solis, B., Li, C., & Szymanski, J. (2014). Digital transformation. Accessed on, 25. Google Scholar

Sow, M., and Aborbie, S. (2018). Impact of leadership on digital transformation. Business and Economic Research, 8(3), 139-148. DOI: 10.5296/ber.v8i3.13368