

## Designing a Paradigmatic Model of Organizational Ecology Management in Education: A Qualitative Study

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**Purpose:** Organizational ecology helps to managers so that can look at the organization from a different perspective and take steps towards its growth and improvement. Therefore, the current research was carried out with the aim of designing a paradigmatic model of organizational ecology management in education.

**Methodology:** The current research was qualitative which carried out on specialist and expert professors in the field of population ecology and organization in the field of education and similar organizations in 2022 year. The research sample was 15 people, which whose number was determined according to the principle of theoretical saturation, and they were selected by purposive sampling method. The tool of the current research was a depth semi-structured interview, which its validity and reliability were confirmed, and its data were analyzed with the coding method based on grounded theory of Strauss and Corbin (2000).

**Findings:** The findings of the present research showed that the organizational ecology management in education had 85 concepts, 36 sub components and 12 main components. In this study, the main components in the category of causal conditions were included problems related to macro policy making and abandonment and in the circle of the lack of importance of the organizational ecology discussion, in the category of intervening conditions were included weakness in completing the criteria of positive and progressive organizational indicators and managerial and institutional gaps, in the category of background conditions were included factors related to the macro system, in the category of strategies were included culture and organizational management strategies, attitudinal and discourse strategies, interactive strategies and social influence strategies and in the category of consequences were included social and cultural development, institutional and educational development and political development.

**Conclusion:** According to the identified concepts and sub and main components for the organizational ecology management in education, organizational specialists and planners can accordingly take an effective step towards improving organizational ecology in education.

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## 1. Introduction

Education is a vast governmental organization that operates as a cultural and social environment and is considered a driver of societal development and progress. Therefore, it is expected that this educational organization is equipped with committed and capable human resources to have sufficient flexibility to consciously adapt to every new scientific situation and to enhance its productivity, efficiency, and effectiveness (Nasiri ValikBani, Gholtash, and Sarchahani, 2016). Educational organizations must be continuously evolving and changing since society is constantly undergoing changes and transformations, and educational organizations (such as education departments) must find ways to respond to future challenges based on available resources and past experiences (Yazdani Ghadi, Jabari, and Azma, 2023). The education department is a public sector institution focused on the elevation of public knowledge and culture and, given the significance it can have in meeting people's needs, should be subject to scrutiny and research (Wang, 2021). Organizational pathology in the education department includes examining structural and organizational damages to educational, cognitive, emotional, and skill needs in this educational system, which lead to reduced performance of the education department (HabibiDost, Fadavi, and Farhadi, 2021). The mission of management in the education department is to utilize the experiences, talents, and intellectual abilities of human resources, especially administrators and teachers (Mehta, Teymouri, Puthuparampil-Mehta, Sawh, Paty, Kostun, and et al., 2023). Education is among the most important human systems whose task is human development. Moreover, every society expects its education system to produce individuals who are balanced, adaptable, emotional, responsible, and rational, and this educational system is at the forefront of other systems (Ceresia, 2017). The efficiency and effectiveness of this educational system depend on effective and efficient management, and as the education system becomes more complex and extensive, it is necessary that the selected managers for these positions have undergone the necessary professional training (Tezer and Ozreberoglu, 2015). The most fundamental characteristic of intelligent organizations in the 21st century is the emphasis on knowledge and information, powerful tools that can create changes in the world and lay the groundwork for innovation (Tilley, 2023).

One of the critical issues in the education department is the management of organizational ecology. Organizations are the main social pillars of the present, and management is the most crucial factor in their life, growth, prosperity, or demise. A purposeful educational and social institution has clear plans, focusing on conscious ecology and defined boundaries, carrying out specific activities aligned with a set of predetermined and common goals. Hence, the understanding of the organization should be such that it not only aids managers in their private lives but also equips them with cognitive tools for leading their organizations. Nowadays, both organizations and the people working within them are highly complex, and the networks of relationships and ecologies arising from the interaction of humans and organizations are intricately intertwined (Ozturk and Dil, 2022). Organizational ecology provides a concept for self-regulation, where ecological functions regulate themselves through self-organizing processes and maintain their continuity in relation to internal and external pressures (Vark and Reino, 2020). Organizational ecology believes that creating or developing new categories stems from processes of consensus and interaction among members and influential agents within the organization (Sadr, Etebariyan, Ebrahimzadeh, and Pirvavi Vanak, 2019).

Organizational ecology borrows some of its core concepts, especially its fundamental logic, from natural sciences and particularly biology. Organizational ecology theory envisions organizations like animal and plant species living in specific environments and growing or declining in particular environmental conditions. Consequently, instead of studying individual organizations, the world of organizations is divided into distinct populations, examining a specific type of organizational population. A set of organizations engaging in similar activities, having similar patterns of resource consumption, constitute a population. Populations result from processes that distinguish one set of organizations from another (Manjula, Lingappan, Mukhopadhyay, and Kumar, 2019). Management of ecological and social systems is a broad, coherent system of biophysical and social factors that interact regularly in a flexible and sustainable manner,

defined across multiple spatial, temporal, and organizational scales, and may involve interconnected hierarchies (Khodadadi, Tavakoli, and Anabestani, 2022). According to organizational ecology, four principles filter the process of organizational evolution. The first principle is internal organizational change, which may be purposeful or blind. Purposeful changes are the organization's deliberate response to environmental pressures, whereas blind changes occur independently of environmental pressures, by chance or luck. The second principle is natural selection; beneficial changes that enable the organization to acquire more resources from the environment increase adaptability and survival chances. The third principle is the preservation of organizations adapted to the environment and the transmission of their capabilities to subsequent generations. The fourth principle is the struggle for survival, which involves competing with other organizations for scarce resources (Roth, 2014).

The main topic of organizational ecology is its natural selection, where the environment selects organizations based on superiority, coherence between organizational forms, and environmental characteristics for survival. In this context, emphasis is placed on three processes in analysis and evolution: creating diversity, selecting certain forms over others, and preserving those forms. The chosen type reproduces itself, marking the start of a new selection cycle for variability (Donaldson, 2009). Just as studying animal ecology facilitates understanding wildlife, understanding organizations or studying social systems collectively and considering their encompassing conditions becomes easier. The broader perspective of ecology shifts attention from individual organizational problems in alignment with the environment, making it irrelevant and enabling focus on the organization as a group member of related organizations that coexist or compete with other organizational sets. The environment of each organizational set primarily comprises other organizations. Therefore, the existence and life of each group of organizations are limited by one or more other organizational groups, thereby giving organizational ecology its subject matter (Hannan and Freeman, 1989). If a society has organizations of various forms, the likelihood that one of the types will adapt to new conditions is high, quickly utilizing new circumstances. If the different organizational forms existing in a society are relatively limited, the society must adapt by changing the existing organizational forms. Although this type of adaptation takes time and results in lost opportunities (Arthur, Nicholson, Sibani, and Christensen, 2016).

In recent years, the country's education system has faced numerous problems, including the lack of theory-based native foundations derived from the value system, absence of targeted cultural engineering, deviation from the primary mission and focusing on peripheral aspects, lack of participatory engagement and interaction with the cultural background, and inability to utilize the pool of educated workforce (Moghali, Darvish, Abbasi, and Mohammadi, 2016). Therefore, it is crucial to consider the processes, strengths, and weaknesses of the education system with fresh perspectives so that this organization can align itself with new models and requirements, one of which is examining it through ecological organizational management. Additionally, the results of this study can significantly assist experts and planners in educational organizations, especially the education department, in better understanding the current situation in terms of organizational ecological management and designing and implementing programs in this area, thereby improving and enhancing the current status of the education department. Consequently, organizational ecology helps managers view the organization from a different perspective and take steps towards its growth and elevation. Therefore, the present research aims to design a paradigmatic model of ecological organizational management in education. As a result, this study seeks to answer two main questions about ecological organizational management in the education department:

- 1- What are the paradigmatic factors of ecological organizational management in the education department?
- 2- What is the paradigmatic model of ecological organizational management in the education department?

## 2. Methodology

The present qualitative research was conducted on expert and specialist professors in the field of population and organizational ecology in education and similar organizations in 2021. The research sample consisted of 15 individuals, selected through purposive sampling based on the principle of theoretical saturation. The criteria for inclusion in this study were that the individuals had valuable experiences in the phenomenon under study, with a minimum of 10 years of work experience and research or studies in the relevant field. It should be noted that after selecting the samples from identified expert and specialist professors in the field of population and organizational ecology in education and similar organizations, the importance and necessity of the research were explained to them, along with the conditions of the study and the impossibility of face-to-face interviews due to the COVID-19 pandemic, and the need to record interviews for repeated and multiple reviews while observing ethical considerations and guidelines. After their agreement to participate in the research, necessary coordination was made regarding the timing of online interviews.

The tool for this research was semi-structured in-depth interviews. All interviews were conducted online due to the COVID-19 pandemic, with each interview with expert and specialist professors in the field of population and organizational ecology in education and similar organizations lasting an average of 45 minutes. The interview duration continued until a rich descriptive understanding of the research-related topics was obtained. As interviews were conducted with multiple individuals, to prevent ambiguity and bias, the interview questions were predetermined. Therefore, the interview plan was categorized as semi-structured, but the questions were flexible to allow free expression of views and experiences by the samples. After each interview, the researcher transcribed the recorded interviews and, after reviewing and coding, began to determine the main and subsidiary categories based on concepts. During this process, interview questions were continuously reviewed and revised so that after 15 interviews, the codes became repetitive or, in other words, theoretical saturation was achieved. In this study, the validity and reliability of the research tool were confirmed by methods of credibility, transferability, dependability, and confirmability. The main questions of the semi-structured in-depth interviews for the expert and specialist professors in the field of population and organizational ecology in education and similar organizations are visible in Table 1.

**Table 1.** Main questions of the semi-structured in-depth interview for expert and specialist professors in the field of population and organizational ecology in education and similar organizations

Row	Question
1	What do you think are the most important factors for establishing an evidence-based and up-to-date management in Iran's education system?
2	Based on your research and professional experience, what are the main obstacles to ecological management in Iran's education system? Which parts of the organizational management do these obstacles relate to?
3	Based on your experience, what are the most important consequences of ecological management for the education system? In other words, how will this management affect the quality of education?
4	Based on your experience, what are the most important consequences of ecological management for teachers, managers, and students?
5	What other factors outside the education system can deeply and positively or negatively affect the quality of education?
6	Based on your experience, what intermediary conditions can strengthen the likelihood of establishing efficient educational management or what factors contribute to professional management?
7	Based on your lived experience, what strategies do you suggest for improving ecological management in Iran's education system?

The data of this research were analyzed after interviewing 15 expert and specialist professors in the field of population and organizational ecology in education and similar organizations using coding based on the grounded theory of Strauss and Corbin (2000). The aim of using this approach was to explore and discover

the main and subsidiary components and concepts associated with ecological management in the education system.

### 3. Findings

Demographic information of the interviewed expert and specialist professors in the field of population and organizational ecology in education and similar organizations can be seen in Table 2, which shows that most of them were male (73.33%), over 50 years old (46.67%), and had a work experience of 11-20 years and over 30 years (each 40%).

**Table 1.** The results of subjects' demographic information

Characteristic	Value	Frequency	Percentage (%)
Gender	Male	11	73.33
	Female	4	26.67
Age (Year)	41-45	3	20.00
	46-50	5	33.33
	> 50	7	46.67
Work Experience (Year)	11-20	6	40.00
	20-30	3	20.00
	> 30	6	40.00

The coding based on grounded theory of ecological management in education is visible in Table 3, showing that ecological management in education consisted of 85 concepts, 36 subsidiary components, and 12 main components. In this study, the main components in the category of causal conditions included problems related to macro-policy and neglect, and the importance of ecological management in the circle of importance. The main components in the category of intervening conditions included weaknesses in completing the criteria of positive and progressive organizational indicators and managerial and institutional gaps. The main components in the category of contextual conditions included factors related to the macro system. The main components in the category of strategies included cultural and organizational management strategies, attitudinal and discursive strategies, interactive strategies, and social impact strategies. The main components in the category of consequences included social and cultural development, institutional and educational development, and political development.

**Table 2.** Coding Based on Grounded Theory of Organizational Ecology Management in Education" and is structured into four columns: Category, Main Component, Sub-component, and Concept

Category	Component	Sub-component	Concept
Causal conditions	Problems related to macro-level policy-making	Politicization in public education	1. Factionalism and inattention to a cohesive roadmap. 2. Government changes and subjective viewpoints towards public education. 3. Weak nationalism and lack of long-term national vision in planning and policy-making. 4. Uniform policies and disregard for the ethnic and cultural differences of various regions in Iran.
		Lack of vision in planning	5. Ignoring the cost-benefit principle in executive sector programs. 6. Lack of a cohesive roadmap for different dimensions of education. 7. No planning for becoming an educational scientific hub at the regional level and support for national knowledge.
	Neglect and	Negatory conditions	8. Unfavorable condition and status of ecological

	insignificance of organizational ecological discussion	management in education due to weak implementing organizations. 9. Absence of satisfaction-oriented view towards the organization and indifference to human resource conditions. 10. Indifference to the necessity of addressing the concept of ecological management in educational administration.
	Lack of evidence-based approach to ecological organizational management	11. Neglect of research before policy-making. 12. Insufficient attention to scientific data. 13. Non-compliance with ethics in research. 14. Failure to develop practical research aligned with organizational needs. 15. Weakness in specialization in addressing ecological management.
	Weakness in completing criteria for positive and progressive organizational indicators	16. Inadequate use of multimedia educational potentials. 17. Insufficient technological infrastructure, especially in remote areas. 18. Individualism and disregard for collective wisdom in ecological organizational management. 19. Human resource challenges and indifference to job satisfaction and mental health of employees. 20. Insufficient attention to public opinion and weakness in organizational communications.
Intervening condition	Fragmented and isolated internal management perspective	21. Absence of an institution for monitoring and identifying an ecological management roadmap. 22. The performative nature of programs and their aimlessness.
	Not leveraging the potential of independent associations and professional bodies	23. Lack of scientific-industrial associations with membership and defined union. 24. Self-centered and subjective decisions by some managers and disregard for advisory groups.
	Managerial and institutional gaps	25. Implementation of very parallel and non-uniform activities in ecological management. 26. Parallel institutions and ambiguity in the role of the executive custodian. 27. Budgetary problems and lack of attention to outsourcing and creating a competitive environment. 28. Budget and credit problems. 29. Problems and limitations related to sanctions.
	Weakness of media and public relations	30. Poor performance in cultural development and increasing knowledge. 31. Media limitations and threats. 32. Weakness in producing media programs for social persuasion. 33. Unsuitable social status of ecological management in education due to insufficient promotion.
Contextual conditions	Social and economic factors	34. The central importance of education activities in society. 35. Rapid technological changes and communication tools in relation to educational activities. 36. Disproportionate and excessive educational costs. 37. Implicit class discriminations and student dropout challenges. 38. Sanctions and budgetary payment issues. 39. Variety of schools and uncontrolled planning.
	Factors related to the macro system	40. Generational changes and different expectations of
	Cultural factors	

		families from the education system.
		41. Reduced generational resilience and egocentrism in the new generation compared to previous generations.
		42. Generational gap and lack of synchronization in curricular resource changes.
		43. Change in reference groups and organizational lack of planning to address this issue.
	Political factors	44. Extensive political interference in appointing managers.
		45. Neglect of organizational duties in providing free education for all.
		46. Lack of planning regarding the balance of privatization in the organization.
	Focus on integrated and sustainable management	47. Avoidance of politicization.
		48. Reduction of parallel executive activities and programs.
		49. Development and implementation of diverse yet cohesive vision policies.
	Emphasis on human resources and striving to improve organizational satisfaction	50. Attention to the economic needs and demands of teachers.
		51. Importance of mental health and psychosocial well-being of employees and teachers.
		52. Respectful and dignified treatment of teachers in practice.
Strategies for culture and organizational management	Serious pathology and critical view of organizational policies in various dimensions	53. External and critical view of policies and programs.
		54. Prioritization and importance assessment of executive program implementation.
		55. Conducting research to assess the most significant challenges and pitfalls of a progressive organizational culture.
	Efforts to highlight the importance of addressing organizational ecology in research and executive regulations	56. Establishment of an institution for addressing ecological management with appropriate authority and resources.
		57. Support for dissertations and theses related to the topic of ecological management.
	Historical and genealogical perspective on the challenges of the education organization	58. Historical and trend-based view of organizational changes in education for identifying challenges and capacities.
Attitudinal and discursive strategies	Focus on futurology	59. Attention to futurology studies and changing future requirements.
		60. Avoidance of dogmatism and stagnation in research studies.
	Striving to develop a national and cross-factional approach in policy-making	61. Avoidance of partisanship and conflict culture in education.
		62. Efforts to institutionalize national pride and a special position for education in its elevation.
		63. Avoidance of arbitrary treatment of opposing viewpoints.
Interactive strategies	Strengthening dynamic links with families and associations	64. Strengthening dynamic communication channels with families for a more accurate understanding of challenges and requirements.
		65. Involvement of families in the educational process.
		66. Utilization of the capacity of associations and professional institutions.

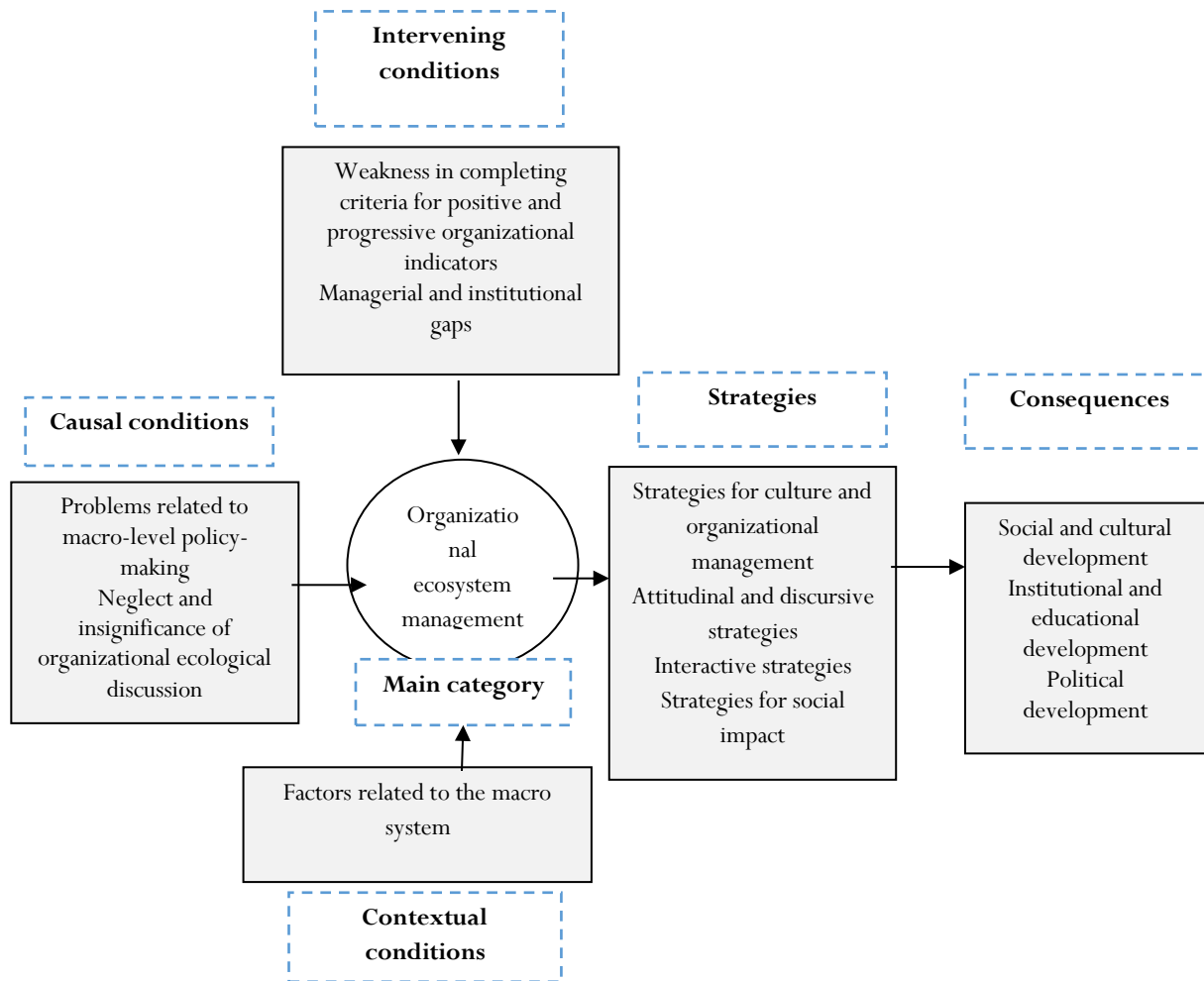
	Attention to the critical role of organizational public relations and communication with official and unofficial media	67. Efforts for more prominent and up-to-date presence in various official and unofficial media. 68. Efforts for more media penetration and exclusivity of news related to education.
	Interaction with other policy-making institutions for greater coordination	69. Seeking assistance from related organizations in policy-making and implementation. 70. Development of joint laws and policies.
	Strengthening connections with organizations and agencies to align education with societal needs	71. Efforts to assist other organizations in implementing goals in collaboration with education. 72. Holding brainstorming sessions and achieving mutual understanding. 73. Outsourcing of some tasks.
	Attention to the changing needs of society and alignment with current requirements	74. Conducting pathology research and understanding the latest value and attitudinal changes among community members.
	Efforts to create reference groups in education	75. Efforts to highlight and increase the visibility of scientific reference groups in the community through interaction with broadcasting.
Strategies for social impact	Centralizing the concept of organizational ecology in decision-making	76. Positive reference-making of scientists and luminaries in textbooks.
	Enhancing the perception of social support by families	77. Increasing the probability of attention to the necessities and survival requirements of organizations in the long term.
	Enhancing the culture of participation and social solidarity	78. Strengthening the bonds between the family institution and schools and respecting family opinions and views.
	Strengthening research culture and evidence-based policies	79. Strengthening the sense of commitment and social responsibility towards public education.
	Modeling education as an interactive and dialogue-oriented institution	80. Strengthening the respected and referential position of education in society.
	Social and cultural development	Enhancing the social impact of education
Consequences	Institutional and educational development	Centralizing the role of education in educational policy-making 82. Strengthening the leadership role of education in managing macro educational policies.
		Attention to the diversities in Iranian society 83. Avoidance of uniformity and stagnation in educational content.
	Political development	Reducing the risks of generational gap and soft war 84. Addressing the concerns of the new generation and avoiding unnecessary opposition to them.



Convergence of different political groups and strengthening national strategic thinking.

85. Enhancing empathetic and political solidarity views.

Considering the primary components identified for organizational ecological management in education, the paradigmatic model of organizational ecological management in education can be seen in Figure 1.



**Figure 1.** the paradigmatic model of organizational ecological management in education

#### 4. Discussion

Organizational ecological management plays a crucial role in improving the state of education. Therefore, this research was conducted with the aim of designing a paradigmatic model of organizational ecological management in education.

The findings of this study showed that organizational ecological management in education consists of 85 concepts, 36 subcomponents, and 12 main components. In this study, the main components in the category of causal conditions included macro policy-making issues and neglect, as well as the lack of importance of organizational ecological discourse. The intervening conditions included weaknesses in fulfilling the criteria of positive and proactive organizational indicators and managerial and institutional gaps. The contextual conditions encompass factors related to the macro system. Strategies include cultural and organizational management strategies, attitudinal and discursive strategies, interactive strategies, and social impact

strategies. The outcomes include social and cultural development, institutional and educational development, and political development.

In interpreting these findings, it can be said that to gain a deeper and better understanding of the more distant influential situations on the education system, the ecological model can be helpful. The concept of ecology, or ecosystem science, was first introduced in psychology to study human growth and behavior, where the individual is situated in a system of complex relationships among five ecosystems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem. The first level, or microsystem, is the contextual system where the teacher is directly involved, with the innermost part of the ecosystem being the cognitions that the teacher can develop in activities, rules, and interpersonal relationships with students, friends, and relatives. The second level, or mesosystem, is responsible for connecting and interacting between two or more contexts where the teacher is present. The mesosystem is a system of microsystems depicting the relationships between teachers and the innermost context on one side, and relationships between teachers, colleagues, and managers on the other. The third level, or exosystem, follows the mesosystem and includes communications and procedures between two or more contexts. Although the teacher is not directly involved in the exosystem, they are indirectly affected by the processes and changes in that context. The fourth level, or macrosystem, includes major overarching organizations at the social level where individuals are influenced by ideologies, values, beliefs, norms, lifestyles, laws, and customs of a specific culture, beyond the control of teachers. The fifth level, the chronosystem, represents the factor of time and indicates the relationships between individuals and between individuals and the environment. Now a clearer picture of these findings can be had. The findings of this study in this section showed that macro system factors in three subcomponents - social and economic factors, cultural factors, and political factors - play a role in one main component of macro system factors in the paradigmatic model of organizational ecological management in education as contextual factors. From these findings, it can be concluded that to develop an accurate model of organizational ecological management in education, one must pursue managerial boundaries at the more distant levels of the macro system. In other words, merely focusing on education as an isolated and separated organization from other social, cultural, and political components is a disregard of ecological thinking.

The causal conditions effective in the organizational ecological management model in education summarize in two main components - macro policy-making problems and neglect and the lack of importance of the organizational ecological discourse - and four subcomponents - politicization in public education, weakness in planning vision, negative conditions, and lack of evidence-based approach to organizational ecology. This indicates that organizational ecological management in Iranian education faces serious challenges such as lack of planning, dispersion, absence of strategic thinking, and not being considered important, placing the paradigmatic model of organizational ecological management in education in an unsuitable state.

The intervening conditions effective in the organizational ecological management model in education consist of two main components - weaknesses in fulfilling the criteria of positive and forward-thinking organizational indicators and managerial and institutional gaps - and six subcomponents - flaws in organizational technological advancement, challenges related to organizational culture, fragmented and isolated internal management perspective, not leveraging the potential of independent associations and professional bodies, supra-organizational institutions and powers, and weakness of media and public relations. These components can impact organizational ecological management in the education organization and lead to a decline in its performance.

The effective strategies in the organizational ecological management model in education summarize in four main components - cultural and organizational management strategies, attitudinal and discursive strategies, interactive strategies, and social impact strategies - and eighteen subcomponents - attention to integrated and sustainable management, importance to human resources and striving for organizational satisfaction improvement, serious pathology and critical view of organizational policies in various dimensions, efforts to highlight the importance of addressing organizational ecology in research and executive regulations, trend

and need analysis of organizational challenges, focus on futurology, efforts to form a national and cross-factional approach in policy-making, strengthening dynamic links with families and associations, attention to the critical role of organizational public relations and communication with official and unofficial media, interaction with other policy-making institutions for greater coordination, strengthening connections with organizations and agencies to align education with societal needs, attention to the changing needs of society and alignment with current requirements, efforts to create reference groups in education, centralizing the concept of organizational ecology in decision-making, enhancing the perception of social support by families, enhancing the culture of participation and social solidarity, strengthening research culture and evidence-based policies, and modeling education as an interactive and dialogue-oriented institution. The aforementioned strategies indicate a move towards ecological management in education through organizational flexibility and dynamism. Flexibility and dynamism play an important role in constructing, integrating, and reconfiguring resources to cope with highly dynamic environments. This approach emphasizes the development of management capabilities for organizational combinations and technological and functional skills. In fact, this approach has a greater ability to deal with dynamic and rapidly changing environments compared to the resource-based approach. Dynamic and flexible organizations have multiple resources and assets for performing missions and achieving their goals, and some of these resources and assets are very valuable and strategic, playing a central role in gaining a competitive advantage for the organization.

The outcomes of organizational ecological management in education consist of three main components - social and cultural development, institutional and educational development, and political development - and five subcomponents - strengthening the social impact of education, centralizing the role of education in educational policy-making, attention to the diversities in Iranian society, reducing the risks of the generational gap and soft war, and convergence of different political groups and strengthening national strategic thinking. One of the tools that can lead the organization to these outcomes is knowledge management, which, as an interdisciplinary field, provides a comprehensive approach for drawing a broad and holistic organizational vision and focuses on creating and utilizing knowledge and achieving organizational effectiveness through concentration on attracting, selecting, organizing, and disseminating information.

One of the problems of this study is that since there were no precise models in the field of organizational ecological management in education in domestic and foreign studies and the variety of components was very high, the model of this study is very complex. Another limitation of this study was the inherent limitations of findings derived from qualitative research, which accompanies the generalization of results with a level of error. Additionally, the findings of this study were limited to a specific community of individuals and should be generalized with caution. Finally, considering the limitations of the research and based on the concepts obtained in the strategies section for improving ecological management in education, the following suggestions are presented. In general, it is suggested that a political and practical package be prepared and implemented to improve organizational ecological management in education, aligned with the research findings and considering the contextual, causal, and intervening factors. Of course, for this purpose, the strategies identified in this study can be used to achieve the desired outcomes.

### **Ethical Considerations**

The authors of this study strived to adhere to all ethical points and considerations.

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### Authors' Contributions

The first author of this study was responsible for data collection and analysis and initial article writing, and other authors were responsible for supervising data analysis and final article writing.

### Conflict of Interest

The authors of this study declare that there was no conflict of interest in this study.

### References

- Arthur R, Nicholson A, Sibani P, Christensen M. (2016) [The tangled nature model for organizational ecology](#). *Computational and Mathematical Organization Theory*. 23(1): 1-31. doi:10.1007/s10588-016-9214-4
- Ceresia F. (2017). Sunny Island. An interactive learning environment to promote systems thinking education for primary school students. *Procedia – Social and Behavioral Sciences*. 237: 980-985. doi: [10.1016.j.sbspro.2017.02.139](#)
- Donaldson L. (2009). *Organization theory as a positive science*. Oxford Publisher: In Book of The Oxford Handbook of Organization Theory: 39-62. doi: [10.1093.oxfordhb.9780199275250.003.0002](#)
- HabibiDost M, Fadavi MS, Farhadi H. (2021). Identification and pathology of organizational syndromes in education. *Iranian Journal of Educational Sociology*. 4(2): 127-138. [10.52547.ijes.4.2.127](#)
- Hannan MT, Freeman J. (1997). *Organizational ecology*. Cambridge: Harvard University Press.
- Khodadadi A, Tavakoli M, Anabestani A. (2022). An analysis of effective factors on the management of ecological and social complexities in the preservation of rural natural resources (Case study: Villages of Lorestan province). *Journal of Geography and Environmental Hazards*. 11(1): 279-303. [Persian] doi: 10.22067.geoh.2022.72675.1112
- Manjula M, Lingappan V, Mukhopadhyay P, Kumar L. (2016). Ecosystem services approach for revitalizing agriculture in India. *Current Science*. 116(5): 723-727. doi: [10.18520.cs.v116.i5.723-727](#)
- Mehta M, Teymouri M, Puthuparampil-Mehta B, Sawh C, Paty P, Kostun ZW, et al. (2023). Outcomes of the V-Healthy education and awareness program that empowers high school students to understand and diagnose vascular disease risk factors. *Journal of Vascular Surgery*. 77(4): 1245-1249. doi: [10.1016.j.jvs.2022.12.014](#)
- Moghali A, Darvish H, Abbasi N, Mohammadi F. (2016). Study and ranking the factors influencing on transformational organization model in Fars education organization (Case study: Fars province education organization). *Public Management Researches*. 9(31): 29-50. [Persian] doi: [10.22111.jmr.2016.2512](#)
- Nasiri ValikBani FS, Gholtash A, Sarchahani Z. (2016). The relationship between employee empowerment and job performance and productivity of manpower in the department of education of Fars province. *Journal of Managing Education in Organizations*. 4(2): 63-90. [Persian]
- Ozturk O, Dil E. (2022). Bibliometric analysis of organizational ecology theory (OET): To review past for directing the future of the field. *Ege Akademik Bakis Dergisi*. 22(2): 195-212. doi: [10.21121.eab.980638](#)
- Roth S. (2014). Booties, bounties, business models: A map to the next red oceans. *International Journal of Entrepreneurship and Small Business*. 22(4): 439-448. doi: 10.1504.IJESB.2014.064272
- Sadr M, Etebariyan A, Ebrahimzadeh R, Pirvavi Vanak M. (2019). Typology of cultural organizations based on the organizational population ecology: Repertory grid approach. *Quarterly Journal of Public Organizations Management*. 7(1): 41-66. doi: [10.30473.ipom.2019.38773.3057](#)
- Tezer M, Ozrecberoglu N. (2015). Students' view of the problems faced with the measurement and evaluation system in the primary school mathematics education system. *Procedia – Social and Behavioral Sciences*. 186: 856-861. doi: [10.1016.j.sbspro.2015.04.196](#)
- Tilley JL. (2023). School resources, peer inputs, and student outcomes in adult education. *Economics of Education Review*. 96: 102441. doi: [10.1016.j.econedurev.2023.102441](#)
- Vark A, Reino A. (2020). Practice ecology of knowledge management—connecting the formal, informal and personal. *Journal of Documentation*. 77(1): 163-180. doi: [10.1108.JD-03-2020-0043](#)
- Wang Z. (2021). Mind the gap: Examining migrant-native disparities in reading performance and subjective wellbeing among 15-year-old students in different education systems. *International Journal of Educational Research Open*. 2: 100087. doi: [10.1016.j.ijedro.2021.100087](#)

Yazdani Ghadi S, Jabari N, Azma F. (2023). Presenting the development model of educational organizations with emphasis on the entrepreneurship drivers in higher education. *Iranian Journal of Educational Sociology*. 6(3): 33-42.