

## Presenting the Development Model of Educational Organizations with Emphasis on the Entrepreneurship Drivers in Higher Education

Sakineh Yzdani Ghadi<sup>1</sup>, Negin Jabari<sup>\*2</sup>, Fereydoon Azma<sup>3</sup>

1. PhD student, Department of Educational Management, Gorgan Branch, Islamic Azad University, Gorgan, Iran.

2. Associate Professor, Department of Educational Management, Gorgan Branch, Islamic Azad University, Gorgan, Iran (Corresponding Author).

3. Associate Professor, Department of Educational Management, Gorgan Branch, Islamic Azad University, Gorgan, Iran.

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**Purpose:** The development of educational organizations plays an important role in creating a competitive advantage for organizations. Therefore, the aim of this study was to presenting the development model of educational organizations with emphasis on the entrepreneurship drivers in higher education.

**Methodology:** This study in terms of purpose was applied and in terms of implementation method was descriptive from type of cross-sectional. The research population were included all faculty members of Golestan province universities, numbering 1023 people. The sample size was calculated based on Cochran's formula 279 people, which were selected by stratified random sampling method. The research tool was 80 question researcher-made questionnaire on the development of educational organizations with emphasis on entrepreneurial drivers, which whose content validity according to the opinion of experts was calculated as 0.74. Data were analyzed with exploratory factor analysis and structural equation modeling methods in SPSS-21 and Smart PLS-3 software.

**Findings:** The findings showed that the development of educational organizations with emphasis on the entrepreneurial drivers had 80 items in 12 components and 5 dimensions. Dimensions were included entrepreneurial and knowledge-based education and research (with two components of entrepreneurial and knowledge-based research and entrepreneurial and knowledge-based education), structural-organizational (with four components of structure and organization, leadership management, human resources and financial resources and academic independence), technological development and growth (with one component of technological development and growth), policy making of science and technology and the governance system of the higher education system (with two components of development of entrepreneurial mission and perspective and policy making) and contextual factors (with three components of support factors, interaction and communication and cultural-social factors) which whose factor load of all was higher than 0.60, their average variance extracted was higher than 0.50 and their reliability with using Cronbach's alpha and combined methods was calculated higher than 0.70. Also, the development model of educational organizations with emphasis on the entrepreneurship drivers in higher education had a good fit. In addition, the development model of educational organizations with emphasis on the entrepreneurship drivers in higher education on each of the dimensions and each of the dimensions on its components had a direct and significant effect ( $P < 0.001$ ).

**Conclusion:** The development model of educational organizations with emphasis on the entrepreneurship drivers in higher education designed in the present research can help the experts and planners of the higher education system in designing plans to improve educational organizations.

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1. Corresponding Author: [neginjabbary@gmail.com](mailto:neginjabbary@gmail.com)

## 1. Introduction

The current dynamic and complex environment has brought about variable and unpredictable conditions for universities, and the globalization era, information revolution, and knowledge production have made various organizations subject to powerful, complex, and variable forces (Bastas and Liyanage, 2019). The current rapid and accelerated changes caused by changes in production technologies and service delivery methods make organizational development necessary for the implementation of strategic decisions to maintain survival and continuity (Aljabhan, 2023). From a systemic point of view, organizations need change, development, and organizational development to survive and maintain their dynamism. In fact, organizational development is a managerial effort that reflects changes in organizational perspectives, values, beliefs, and culture, and is an appropriate approach to implementing changes and transformations (Olszak, 2022). Organizational development is not a universally accepted concept in the humanities, and it aims to develop organizational structure, organizational culture, management system development, and achieve organizational goals through joint cooperation of organization members (Chen & Levy, 2023). Organizational development is the melting of traditional thoughts, beliefs, and behaviors, and the establishment of novel values and new systems, that is, the adaptation of organizations to the latest changes and transformations in society (Gallan et al., 2021). This structure is a systemic and scientific approach to organizational change, which considers various structural and technological aspects, and gradually and in the long run deals with change and improvement of the organization (Mican, Fernandes, and Araujo, 2023). Organizational development involves changes and transformations that lead to personality and identity transformation of the organization, changing its behavior and performance, and elevating the quality of the university's relationship with the environment (Kupilas, et al., 2023). This structure is a long-term effort by senior managers to improve the organization's capacity to solve problems and challenges and achieve the renewal processes of the organization through effective management, and it requires movement towards the third wave organization for competitive advantage (Stechert & Balzerkiewitz, 2020). Organizational development improves organizational performance and is based on the process of training and changing employees and organizational members' values and perspectives (Lopez-Cabarcos, Vazquez-Rodriguez, Pineiro, and Caby, 2020).

Educational organizations must constantly change and develop because society is constantly changing, evolving, and transforming, and educational organizations need to find a way to respond to future challenges based on their facilities and past experiences to effectively play their key role in society (Hashemi, Fallah, and Taheri, 2022). Higher education is exposed to complexities and environmental and internal forces that necessitate continuous adaptation and competition. Therefore, change is now a necessity for higher education and universities, not an opportunity, and strategic change in universities requires the development of capacities and competencies or organizational development to respond to environmental needs (Cernicova-Buca, 2010). Organizational development in higher education can create an environment for enhancing the capacity of higher education to respond more effectively and efficiently to environmental requirements through the development of targeted capabilities and competencies (Garbanzo-Vargas, 2016). In implementing organizational development in higher education institutions, attention should be paid to the values, perspectives, beliefs, and organizational culture of higher education. This is because the most important characteristics of higher education institutions include multidimensional goals and ambiguity in the university's mission, a large audience, difficulty in developing standards, a need for scientific independence and freedom, duality in control and management, and a tendency toward power centers and emphasis on specialized power (Ririhena & Notanubun, 2021).

For organizational development, including development in educational organizations, attention to entrepreneurship drivers is necessary. Entrepreneurship is the process of creating initiatives, innovations, and new businesses through identifying and discovering opportunities and utilizing various resources (Long et al., 2021). In recent years, entrepreneurship has been recognized as one of the most important factors in the economic development of societies, playing a special role in the development of innovative

technologies, including information technology, which in turn has had a significant impact on the entrepreneurship process (Wu et al., 2022). Entrepreneurship is a product of the interaction between individual characteristics and environmental events and affects individuals' decisions in carrying out entrepreneurial activities (Yi et al., 2019). Today, this construct has become an unparalleled factor in the development, growth, and prosperity of human societies, through which all factors, resources, and facilities are comprehensively mobilized and evolve towards achieving social ideals, resulting in positive economic, social, educational, and cultural outcomes (Shuli, Hua, and Junlin, 2018). Entrepreneurship is a process that transforms into a strategic development tool, especially for economic development in societies, requiring the creation of entrepreneurial opportunities, the generation and cultivation of ideas, and the empowerment mechanism of individuals for the implementation of entrepreneurial processes (Stevenson and Josefy, 2019). This construct is a type of behavior that creates a wide range of activities that create value, providing the context for innovation, employment, and economic development (Gregori, Holzmann, and Wdowiak, 2021). Success in entrepreneurship and innovative businesses depends on many factors such as appropriate infrastructure, constructive cooperation between entrepreneurs and local suppliers of goods and services, institutional service quality, and appropriate supportive laws and policies (Maresch, Harms, Kailer, and Wimmer-Wurm, 2016). Drivers, forces, and important trends play a role in the reconstruction of future living spaces, and thus human drivers have a significant role as facilitators in achieving goals and improving the quality of life (Pirdadeh Beyranvand, Ahmadvand, and Sharafi Sarabi, 2019). Entrepreneurial higher education plays an important role in producing knowledge and providing desirable cultural values, and an entrepreneurial university can create development and value creation by adopting a strategy based on optimizing the existing situation in all areas (Bergmann, Geissler, and Hundt, 2018).

### Research background

Modarresi Saryazdi, Abbaspour, and Modarresi Saryazd (2022) concluded that 99 criteria, 15 sub-components, and 4 components, including entrepreneurial strategy (with entrepreneurial vision, innovative strategy development, foresight and visionary development strategy, and innovative and entrepreneurial concept development in the university mission), committed and entrepreneurial leadership (with professional and empowered management, supportive and comprehensive management with commitment and entrepreneurial orientation, and differentiated and transformative management), internal university capacities (with physical resources, human resources, financial resources, and knowledge resources), and environmental conditions (with positive, developed and variable environment, cross-organizational support mechanisms, policies governing society, and industry and regional characteristics and conditions) were identified as effective strategic drivers for creating an entrepreneurial university.

Bakhshi Jahromi, Moazzami, Kavousy, and Hosseinpour Saadatabadi (2021) in a study on the pattern of entrepreneurship development in teacher training universities identified 74 concepts and 16 dimensions and components in six main themes. The major and core themes were identified in the form of six-dimensional conditions, including commercialization of research activities, investment development, nine financial mechanisms, development of job skills, phenomenon-oriented development of entrepreneurship education, development of social networks and collaborative learning, environmental conditions, identity development and norm development, intervention conditions, focus on changes and external support, strategic development of supportive laws and external support, and consequences, including individual and university development.

Fernandez-Nogueira, Arruti, Markuerkiaga, and Saenz (2018) in a study on university entrepreneurship concluded that this structure includes effective components such as internalization, the use of active methods, mission and strategy, and management team support.

Hassani, Abolghasemi, and Moshabaki Esgahani (2018) in a study on the university entrepreneurship model in technical and vocational universities identified 70 indicators, 10 components, and 4 dimensions,

including a structural dimension consisting of a vision of entrepreneurship, supportive structure, and research system, a process dimension consisting of entrepreneurial leadership and business process, a behavioral dimension consisting of communicative and networking ability and innovation culture, and a developmental dimension consisting of entrepreneurial competencies, curriculum planning and teaching and learning processes.

Hayter and Cahoy (2018) in a study on the strategic perspective of social responsibility in higher education concluded that eight effective factors on university entrepreneurship include university entrepreneurship programs, characteristics of university entrepreneurs, entrepreneurship environment, financial resources, human capital, social networks, scientific, technical and product characteristics, and university management and policy.

Today's world is full of complexities that pose numerous challenges for organizations in the areas of growth and prosperity. Therefore, numerous changes, rapid technologies, and the evolution of new missions in organizations have made flexibility and preparedness for facing new conditions unavoidable. As a result, every organization needs organizational development for survival, growth, and continuity in the process of innovation and development. Consequently, it is essential that organizations seek their own development considering entrepreneurship drivers, and one of the organizations worthy of investigation in this regard is educational organizations. Educational organizations play an important role in creating a competitive advantage for organizations. Thus, the aim of this study was to provide a model for the development of educational organizations with an emphasis on entrepreneurship drivers in higher education.

## 2. Methodology

This study was practical in terms of goal and was descriptive in term of methodology and had cross-sectional execution method. The research population consisted of all faculty members of universities in Golestan province, totaling 1023 individuals. Sample size was calculated using the Cochran formula, resulting in a sample size of 279 participants selected through stratified random sampling. The research population included all faculty members of Islamic Azad University, Medical Sciences University, Natural Resources University, and Payame Noor University in Golestan province, with a total population size of 1023 (430 from Islamic Azad University, 344 from Medical Sciences University, 189 from Natural Resources University, and 60 from Payame Noor University), from which the sample size was selected using stratified sampling based on the Cochran formula. Specifically, 117 individuals from Islamic Azad University, 94 from Medical Sciences University, 51 from Natural Resources University, and 17 from Payame Noor University were randomly selected as the sample.

The research process involved designing a questionnaire to measure the development of educational organizations with an emphasis on entrepreneurship drivers using researcher-led interviews, followed by content validity confirmation. Next, samples were identified and selected, and the importance and necessity of the research were explained to the participants. Ethical considerations, such as confidentiality of personal information, privacy of samples, and data analysis, were taken into account and ensured. Finally, the participants were asked to complete the research questionnaire, which included a demographic information form and an 80-item researcher-made questionnaire. The questionnaire was divided into five sections: entrepreneurial and knowledge-based education and research, structural-organizational, technological development and growth, science and technology policy, and the governance system of higher education and contextual factors. Likert scale rating was used to respond to each question, with five options ranging from strongly disagree (a score of 1) to strongly agree (a score of 5). The total score of each section was calculated using the sum of the scores of the constituent questions, where a higher score indicates a more desirable situation. The content validity of the researcher-made questionnaire was confirmed by experts at a score of 0.74. Additional psychometric indicators of the questionnaire are available in the findings section.

The data obtained from the questionnaire were analyzed using exploratory factor analysis and structural equation modeling in SPSS-21 and Smart PLS-3 software.

### 3. Findings

No dropout occurred in the samples of this study, and analyses were performed for 279 faculty members of universities in Golestan province. The frequency and percentage of demographic information of the research samples are observable in Table 1.

**Table 1.** Subjects' demographic characteristics frequencies and percentages

Variable	Value	Frequency	Percentage (%)
Gender	Male	116	41.58
	Female	163	58.42
Age (Year)	26-30	39	13.98
	31-35	54	19.35
	36-40	68	24.37
	41-45	68	24.37
	46-50	32	11.47
	>50	18	6.45
Work experience	1-5	60	21.50
	6-10	78	27.96
	11-15	61	21.86
	16-20	53	19.00
	>20	27	9.68
Academic rank	Lecturer	63	22.58
	Assistant professor	130	46.59
	Associate professor	60	21.50
	Professor	26	9.32
Faculty	Humanistics	184	65.95
	Agriculture and natural resources	15	5.38
	Fundamental sciences	33	11.83
	Medicine	12	4.30
	Engineering	35	12.54

As observed in Table 1, the majority of the present research samples were female (58.42%) and aged between 36-40 and 41-45 years old (24.37% each), had 6-10 years of work experience (27.96%), held the rank of assistant professor (46.59%), and belonged to the humanities group (65.95%). The results of the exploratory factor analysis for the development of educational organizations with an emphasis on entrepreneurship drivers in higher education are observable in Table 2.

**Table 2.** The results of the exploratory factor analysis of the development of educational organizations with an emphasis on the drivers of entrepreneurship in higher education

Dimension	Component	Items	Factors	AVE	Cronbachs	Composite reliability
Entrepreneurial and knowledge-based education and research	2 components	13	0.76	0.52	0.92	0.93
	Entrepreneurial and	8	0.72	0.68	0.87	0.91

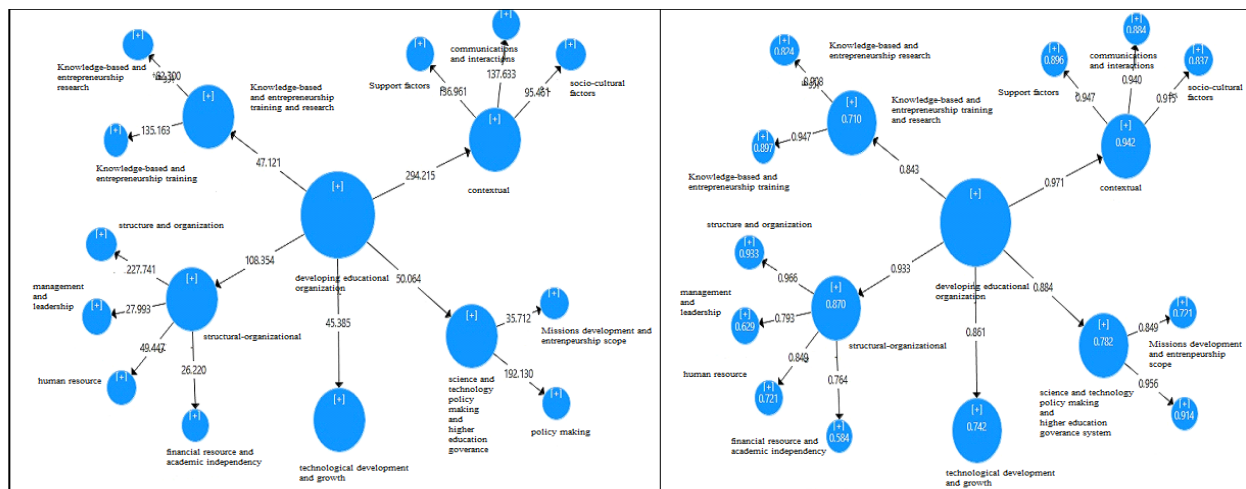
Structural-organizational	knowledge-based research					
	Entrepreneurial and knowledge-based education	5	0.79	0.56	0.88	0.90
	4 components	18	0.83	0.51	0.94	0.95
	Structure and organization	10	0.73	0.56	0.91	0.92
	Leadership management	2	0.86	0.74	0.71	0.85
	human resources	4	0.84	0.71	0.86	0.90
Technological development and growth	Financial resources and academic independence	2	0.85	0.72	0.71	0.83
	1 component	11	0.72	0.55	0.91	0.93
Policymaking of science and technology and governance system of higher education system	Technological development and growth	11	0.72	0.55	0.91	0.93
	2 components	14	0.83	0.58	0.89	0.91
	Development of entrepreneurial mission and perspective	3	0.82	0.67	0.74	0.85
	Policymaking and policy making	5	0.84	0.70	0.88	0.91
Contextual factors	3 components	24	0.74	0.51	0.95	0.96
	Supporting factors	9	0.69	0.53	0.88	0.91
	Interaction and communication	7	0.78	0.63	0.90	0.92
	Cultural-social factors	8	0.76	0.54	0.87	0.90

As observed in Table 2, the development of educational organizations with an emphasis on entrepreneurship drivers consisted of eighty items in twelve components and five dimensions. These dimensions included entrepreneurial and knowledge-based education and research (with two components of entrepreneurial and knowledge-based research and education), structural-organizational (with four components of structures and formations, executive management, human resources, and financial resources and university independence), technological growth and development (with one component of technological growth and development), science and technology policy and the governance of higher education system (with two components of entrepreneurship mission and vision development and policymaking and management), and contextual factors (with three components of supportive factors, interactions and communications, and cultural and social factors) that all of their loadings were over 0.60, the average variance extracted (AVE) was over 0.50, and their reliabilities were calculated over 0.70 using Cronbach's alpha and composite reliability.

Since the R<sup>2</sup> value for all dimensions and components were over 0.50, the Q<sup>2</sup> value for all dimensions and components were over 0.40, and the goodness-of-fit (GOF) index was over 0.60, the model of the development of educational organizations with an emphasis on entrepreneurship drivers in higher education had a suitable fit. The results of the structural equation modeling of the development of educational organizations with an emphasis on entrepreneurship drivers in higher education can be observed in Table 3 and Figure 1.

**Table 3.** Structural equation modeling results of educational organizations development model with emphasis on entrepreneurship drivers in higher education

Effect of...	Path coefficient	t-value	p	Result
Development of educational organizations based on entrepreneurial and knowledge-based training and research	0.84	47.12	0.001	Approved
Development of educational organizations on technological development and growth	0.86	45.38	0.001	Approved
Development of educational organizations based on contextual factors	0.97	294.21	0.001	Approved
Development of educational organizations on structural-organizational	0.93	108.35	0.001	Approved
The development of educational organizations on science and technology policymaking and the governance system of the higher education system	0.88	50.06	0.001	Approved
Entrepreneurial and knowledge-based education and research on entrepreneurial and knowledge-based education	0.94	135.16	0.001	Approved
Entrepreneurial and knowledge-based education and research on entrepreneurial and knowledge-based research	0.90	82.32	0.001	Approved
Structural-organizational on structure and organization	0.96	227.74	0.001	Approved
Structural-organizational on leadership management	0.79	27.99	0.001	Approved
Structural-organizational on human resources	.84	49.44	0.001	Approved
Structural-organizational on financial resources and academic independence	0.76	26.22	0.001	Approved
Policymaking of science and technology and the governance system of the higher education system on the development of the mission and perspective of entrepreneurship	0.84	32.71	0.001	Approved
Policymaking of science and technology and governance system of higher education system on policymaking and policymaking	0.95	192.13	0.001	Approved
Contextual factors on support factors	0.94	136.96	0.001	Approved
Contextual factors on interaction and communication	0.94	137.63	0.001	Approved
Contextual factors on cultural-social factors	0.91	95.46	0.001	Approved

**Figure 1.** The results of modeling the structural equations of the development model of educational organizations with an emphasis on the drivers of entrepreneurship in higher education based on standard coefficients and t-values

As observed in Figure 1 and Table 3, the model of the development of educational organizations with an emphasis on entrepreneurship drivers in higher education had a direct and significant effect on each dimension and each component ( $p < 0.001$ ).

#### 4. Conclusion

To gain a competitive advantage, it is necessary to develop educational organizations. Therefore, the aim of this study was to provide a model for the development of educational organizations with an emphasis on entrepreneurship drivers in higher education. The findings of this study showed that the development of educational organizations with an emphasis on entrepreneurship drivers had 80 items in 12 components and 5 dimensions. The dimensions included entrepreneurship and knowledge-based education and research (with two components of entrepreneurship and knowledge-based research and knowledge-based entrepreneurship education), structural-organizational (with four components of structure and formation, leadership management, human resources, and financial resources and university autonomy), technological development and growth (with one component of technological development and growth), science and technology policy and governance system of higher education (with two components of entrepreneurship mission and vision development and policy-making), and contextual factors (with three components of supportive factors, interaction and communication, and cultural and social factors) which all had a factor load above 0.60, an average extracted variance above 0.50, and a reliability above 0.70 using the Cronbach's alpha and composite reliability methods. Additionally, the model of development of educational organizations with an emphasis on entrepreneurship drivers in higher education had a good fit. Furthermore, the model had a direct and significant effect on each dimension and component.

One of the limitations of this study is the limited research history on the development of educational organizations with an emphasis on entrepreneurship, the absence of a standardized tool for the development of educational organizations with an emphasis on entrepreneurship, and the use of a researcher-made questionnaire. Additionally, the research community is limited to university faculty members in Golestan province, and the results are not analyzed according to the type of university. Therefore, conducting further research on the development of educational organizations with an emphasis on entrepreneurship, creating tools in this field, analyzing the results according to the type of university, and conducting research on the development of educational organizations with an emphasis on entrepreneurship by other faculty members and even educational officials and managers in other provinces are recommended. The results of this study regarding the model of developing educational organizations with an emphasis on entrepreneurship in higher education have many practical implications for experts and planners in the higher education system. Therefore, they should take advantage of the model designed in the present study regarding the model of developing educational organizations with an emphasis on entrepreneurship in higher education. As a result, the results of this study can significantly help experts and planners in designing programs to improve educational organizations.

#### Ethical Considerations

Ethical considerations, including confidentiality, preservation of the privacy of samples, and data analysis were observed in this study.

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#### Authors' Contributions

In this study, one person was responsible for data collection, data analysis, and the initial writing of the paper, and other people were responsible for supervising the data analysis and writing of the paper.

#### Conflict of Interest

There was no conflict of interest in this study.



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