The future studies of the structure of academic disciplines and educational groups in Iran in the atmosphere of the fourth industrial revolution: a scenario approach

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A r t i c l e   I n f o

A B S T R A C T

The present research was conducted in order to develop scenarios for the future structure of academic disciplines and educational groups in Iran in the atmosphere of the fourth industrial revolution. The approach of the current research is mixed, in terms of practical-developmental purpose and in terms of data collection method, it is descriptive-analytical and using the scenario writing method. The statistical population includes two spectrums; Scientific documents and experts were from public institutions and universities in Tehran. The sampling method was used in the qualitative part of non-probability criterion-based targeted sampling and in the quantitative part of the available type. In data collection, data mining and semi-structured interviews were used, and in data analysis, thematic analysis methods, scenario writing methods, and Mic Mac qualitative software were used. The findings showed 16 factors that after the structural analysis of the factors and the weighting of the uncertainties with the method of importance and consensus, the duals of "individual and network knowledge production" and "worn and technological work and employment system" received the highest scores. From the interaction of these two uncertainties, 4 scenarios: competent oriented network structure with hashtag symbol; Responsive business-oriented structure with Tradesman symbol; Knowledge oriented task structure with collage symbol; And the educational island structure was achieved with the symbol of the school. In this way, the current situation of the structure of university courses and educational groups in Iran is against the developments of the fourth industrial revolution in a spectrum from transformation (hashtag scenario) to collapse (school scenario). In the near future, universities are witnessing a crisis in the production of knowledge and skills, competence and orbital competence for university graduates and preparing them to enter new markets. So; It is recommended and suggested to transition from the education-oriented island structure to the competent oriented network structure.

Keywords: *future studies, organizational structure, disciplines and educational groups, scenario writing, fourth industrial revolution.*

Introduction

Industrial revolutions have a great impact on the framework and theoretical and operational foundations of many systems. In this way, the structure of disciplines and educational groups have had important changes in the developments of industrial revolutions (Tarin et al, 2023). In Iran, the structure of educational disciplines and groups has not been able to move along with the changes caused by the industrial revolutions and the paradigms resulting from them, but they have always continued to exist under the umbrella of governments and politicians. For this reason, it still has a bureaucratic concept and lives in the age of Core discipline and hierarchical structure. It has not been able to communicate with knowledge and discourse and find a collective imagination of the future within itself and move based on distant horizons) Fazeli, 2013(. If this trend continues in the future, we will witness the inefficiency and lack of character of the current structure of educational fields and groups. The future structure of university courses and educational groups in the environment of the fourth industrial revolution is a result of major changes and transformations in the internal, exchange and external environments in social, cultural, political, economic, scientific-technological dimensions, etc. Thus, in this research, we are looking for a big and deep picture of the current situation, drivers, uncertainties and scenarios facing the future of Iranian academic disciplines and educational groups in the atmosphere of the fourth industrial revolution. So; The basic issue in the current research is that in the digitalized and full of technology of the fourth industrial revolution, what are the scenarios facing the structure of the fields and educational groups of Iran's public universities?

Methodology

The current research is based on a future research approach and scenario writing. In terms of the goal, applied-development, its nature is descriptive-exploratory, and qualitative-quantitative models (mixed sequential exploratory) were used to collect data. The statistical population of two spectrums: one; Scientific documents and documents in the field of the future of the university system and academic disciplines and educational groups and the second range of people; It includes experts and experts in the field of future research of universities in the range of public institutions and universities in Tehran. For sampling in both the qualitative and quantitative parts, a purposeful criterion-based sampling or interest criterion (selection of 129 scientific documents and 7 experts) was taken. In data collection, data mining and semi-structured interviews were used, and in data analysis, thematic analysis methods, scenario writing methods, and Mic Mac qualitative software were used.

Findings

With "study and review of scientific sources", "in-depth and semi-structured interviews" as well as the examination of "internal and external trends affecting the university system", finally the number of 16 factors or key variables in the three internal, exchange and external environments of universities with the approach the maximum agreement of experts and in terms of effects and overlaps were identified as variables or key drivers of the research. Among them, the key variables are "transformation in the work and employment systems", "new technologies" and "transformation in the knowledge production system", "knowledge-oriented supply and demand", "academic governance", "academic expansion", "professionalism". University" was selected. After examining the importance and consensus of the variables according to experts, the critical uncertainties of "individualistic and single-discipline knowledge production/network and interdisciplinary knowledge production" and "worn out and stagnant work and employment system/technological work and employment system and Dynamic" was extracted. From the interaction of drivers and uncertainties, four scenarios: competence oriented network structure with hashtag symbol; Responsive business-oriented structure with Kaseb icon; knowledge-oriented task structure with collage icon; And the educational island structure was achieved with the symbol of the school. From the interaction of these two uncertainties, 4 scenarios: competent oriented network structure with hashtag symbol; Responsive business-oriented structure with Tradesman symbol; Knowledge oriented task structure with collage symbol; And the educational island structure was achieved with the symbol of the school.

Conclusion

The current situation of the structure of university courses and educational groups in Iran is facing the developments of the fourth industrial revolution in a spectrum from transformation (hashtag scenario) to collapse (school scenario). Activism and the level of intention of the actors and stakeholders of the university determines which scenario the structure of the disciplines and educational groups will lean towards. According to the investigation and discussion with experts and specialists in the public universities of Tehran so far, determination and intention in relation to foresight and planning to enter the era of the fourth industrial revolution and change in structures and provide a technological platform in the corridor of bosses, managers, Policymakers and organizational planners of universities are not observed. Research (hosinimoghadam, 2023) confirms this. Studies show that, in practice, the process of movement of the structure of academic fields and educational groups in Iran is aimed at continuing the existing situation or the school scenario. A possible future, in which disciplines are gathered together in a tribal system called educational groups and there are no human and organizational connections between them. It has not been connected with the external environment, especially the labor market and employment system, and the production system has not benefited from its services. They consider their specialty to be learning science. Thus, if this trend continues in the near future (between 5 and 10 years), we will see a crisis in the production of knowledge and skills, competence and competency for university graduates and preparing them to enter new markets. So; It is recommended and suggested to transition from the education-oriented island structure to the qualification-oriented network structure. A structure in which disciplines and educational groups establish intra-organizational and extra-organizational communication with their stakeholders and actors and are connected in the form of network nodes and specialize, live and evolve with their stakeholders. spatially, they play a role at different local, national, regional, transnational and global levels. Nabipour (2019) calls this development democracy of knowledge.

It is suggested; The need to review the bureaucratic and hierarchical structure of academic disciplines and groups for the transition to the qualification-oriented network structure of the era of the fourth industrial revolution. Also, Conducting a research on the development of operational strategies for the Hashtag scenario in the university (competency-oriented network structure of disciplines and educational groups in the fourth industrial revolution).

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