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## Designing a university education model based on industry needs in the university (Case Study: Islamic Azad University, Damavand Branch)

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### Abstract

**Purpose:** Today, policymaking is of great value and importance to improve the relationship between university and industry, and university education should be based on the needs of industry and society. Therefore, the purpose of this research was to design a university education model based on the needs of the industry in the Islamic Azad University of Damavand branch.

**Methodology:** This research was applied in terms of purpose and exploratory (qualitative-quantitative) in terms of mixed methodology. The statistical population in the qualitative part included the faculty members of the Islamic Azad University, Damavand branch, and the managers and activists of industries in Damavand city. Data collection was done through semi-structured interviews with 15 members of the statistical community who were selected by purposive sampling. The interview protocol was approved both in terms of formal and content validity and in terms of reliability based on the agreement between the two coders. The research data were analyzed based on the qualitative analysis process during open, central and selective triple coding through MaxQuda 2020 software.

**Findings:** The findings showed that the model of university education based on the needs of the industry in the university based on the results of the qualitative section, among the 114 open codes identified, twelve components of the university education based on the needs of the industry including the training of employability skills, curriculum development, industrial partnerships, planning and educational development, entrepreneurial, legal and legal culture, government support, policy making, finance, infrastructure, university human resources development policies, educational and research policies were identified. Also, based on the results of quantitative analysis, the highest priority was related to the curriculum development component and the lowest priority was related to the financial component. Finally, the university education model based on industry needs was designed in the university.

**Conclusion:** According to the results of this study about the model of university education based on the needs of the industry in the university, based on the validation of the model, all dimensions of the model were valid and the model had a suitable fit.



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## Detailed abstract

**Purpose:** Human power plays an important and fundamental role in the circulation of affairs and organizational management, and investing in the training of human resources in various social, cultural, economic and industrial sectors means long-term investment, and to understand this long-term investment, foresight is needed, which among different organizations, the organization University or university education plays a big role in making this happen. Today, the role of universities in the establishment of a modern and advanced society is not hidden from anyone, and to achieve this goal, efforts must be made to educate active, responsible and democratic people on the one hand, and efforts to solve cultural, social, economic and industrial issues and problems. Helping to promote science and expanding the boundaries of science, on the other hand, is on the agenda of most universities and higher education institutions in the world. Therefore, the university is considered the most important and valuable institution responsible for providing specialized, skilled, thoughtful and efficient human resources; So that, on one hand, it is responsible for preserving and promoting the cultural values of the society, and on the other hand, it responds to the social needs of the society for the acquisition, dissemination and expansion of science and technology. The officials of the higher education and university education system always sought to achieve the best and most appropriate performance and output with the available facilities. Therefore, knowledge of the functioning of the educational system and subordinate units is always at the top of their demands. The university education system should be able to be effective in developing the characteristics of progressiveness, independence, creativity, internal control and risk-taking in students by providing suitable educational programs and identify the potential abilities of students and create the ability among them to instead of looking for their own work as Productive force in addition to creating business for themselves and others. Today's universities are in a situation where they spend most of their time on scientific and purely theoretical activities, and industries are busy with scientific and production activities. The knowledge produced in universities can create a competitive advantage for the industry, and the relationship between the industry and the university takes place in the four main areas of basic research, collaborative research, knowledge transfer and technology transfer. In a situation where universities spend most of their time on scientific and theoretical activities, industries are engaged in practical and production activities, and the knowledge produced in the university can be considered a competitive advantage for the industry. Cooperation between university and industry can lead to promotion of research and innovation and increase of capital through providing capital through industry and providing faculty members and producing science from the university side. University education can help industries in the areas of precise training of scientific concepts and models and conducting applied research required by industries in all specialized areas such as policy and strategy, innovation and research, innovation research and development, transformation of experimental knowledge into academic knowledge, fundamental and infrastructure research, Problems that require more knowledge, scientific and practical training and workshops, areas of product and tool design, design of production processes, areas of production and material and strategic planning, administrative and financial areas, training of applied graduates for industry, joint research, theoretical support From the industries and transfer of new technologies and training while serving the industry to help. The connection between university and industry and university education based on the needs of industry informs the scientific community about the real needs and problems of various organizations and institutions, and at the same time, it makes executive managers use scientific capacities in decision-making. Today, policymaking is of great value and importance to improve the relationship between university and industry, and university education should be based on the needs of industry and society. Therefore, the aim of this study was to design a university education model based on industry needs in the university.

**Methodology:** This research was applied in terms of purpose and exploratory (qualitative-quantitative) in terms of mixed methodology. The statistical population in the qualitative part included the faculty members of the Islamic Azad University, Damavand branch, and the managers and activists of industries in Damavand city. Data collection was done through semi-structured interviews with 15 members of the statistical community who were selected by purposive sampling. The interview protocol was approved both in terms of formal and content validity and in terms of reliability based on the agreement between the two coders. The research data were analyzed based on the qualitative analysis process during open, central and selective triple coding through MaxQuda 2020 software. The statistical population in the quantitative part included the faculty members of the Islamic Azad University, Damavand branch, and the managers and activists of industries in Damavand city. Data collection was done through a researcher-made questionnaire among 180 members of the statistical community who were selected by random sampling. The validity and reliability of the data collection tool was confirmed in the quantitative section. The analysis of the collected data was done in two descriptive

and inferential ways through SPSS 16 and Smart PLS software. In order to describe the data, descriptive statistics including frequency, frequency percentage, frequency distribution table, drawing graphs and describing the characteristics of respondents to the questionnaire were used. In the inferential analysis, the data was analyzed using the factor analysis method.

**Findings:** The findings showed that the model of university education based on the needs of the industry in the university based on the results of the qualitative section, among the 114 open codes identified, twelve components of the university education based on the needs of the industry, which include: training of employability skills, curriculum development, industrial partnerships, Educational planning and development, entrepreneurial, legal and legal culture, government support, policy, finance, infrastructure, university human resource development policies, educational and research policies were identified. Also, based on the results of quantitative analysis, the highest priority was related to the curriculum development component and the lowest priority was related to the financial component. Finally, the university education model based on industry needs was designed in the university.

**Conclusion:** The results of this study on the model of university education based on the needs of industry in the university can have many practical implications for experts and planners of both the university and industry fields, and they can take steps from the results of this study in order to improve the current situation of the university and industry. As a result, according to the results of this study about the model of university education based on the needs of the industry in the university, based on the validation of the model, all dimensions of the model were valid and the model had a suitable fit.