




## Evaluating the Role of Entrepreneurship Education in the Development of Entrepreneurial Mindsets of Iranian Students

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### Article Info

#### Article type:

Original Research

#### How to cite this article:

Shiri, N., Khoshmaram, M., & Mehdizadeh, H. (2024). Evaluating the Role of Entrepreneurship Education in the Development of Entrepreneurial Mindsets of Iranian Students. *Quarterly Journal of Research and Planning in Higher Education*, 30(2), 16-33.



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### ABSTRACT

Although few studies have been conducted regarding the entrepreneurial mindset of students in the higher education system, most of them have tried to explain the entrepreneurial mindset of students based on the approach of entrepreneurial traits. Considering that the results of these studies are weak and unreliable for predicting entrepreneurial mindset, Therefore, in the present study, using the cognitive approach to evaluate the role of (formal-informal) entrepreneurship education in the development of entrepreneurial mindsets among the students of the Iranian higher education system. The statistical population of the research included all students of the Iranian higher education system, 436 of whom were selected for the study. The research tool was a standard questionnaire whose validity was checked by a group of experts and its construct validity and reliability were checked by calculating Cronbach's alpha coefficient and composite reliability. The findings of the research showed that the state of entrepreneurial elaborating and implementing mindsets of the respondents was not at a favorable level. The results of structural equation modeling showed that the latent variable of non-formal entrepreneurship education had a positive and significant effect on the entrepreneurial elaborating and implementing mindsets of Iranian students. Also, the positive and significant effect of the latent variable of formal entrepreneurship education on the entrepreneurial elaborating mindset was confirmed, but its significant effect on the entrepreneurial implementing mindset of students in Iran's higher education system was not supported. According to the results of the research, it is recommended to the planners and policymakers of the higher education system to plan and implement extracurricular entrepreneurship courses in the country's higher education system. Also, in compulsory and optional entrepreneurship curricula in universities and higher education institutions, they pay more attention to practical issues and provide real and suitable conditions - such as holding start-up events - for students to gain experience and entrepreneurship.

**Keywords:** *Elaborating Mindset, Implementing Mindset, Extracurricular Training, Formal Entrepreneurship Training.*

## Introduction

Although various studies (e.g. Cui et al., 2019; Zuspan et al., 2018; Nene, 2012; Davis et al., 2015; Haultain & Parovariotomy, 2020) have addressed the issue of entrepreneurial mindset and its influencing factors. Most of these studies have used entrepreneurial personality traits to measure entrepreneurial mindset, and their results are not very acceptable among experts in this field. In addition, the aforementioned studies were conducted separately at a specific university. Therefore, taking into account this study gap, the present research, following the cognitive approach, has sought to analyze the role of formal and informal education in the development of entrepreneurial mindsets of students in Iran's higher education system. Therefore, this study has valuable theoretical and practical implications regarding the entrepreneurial mindset, which are: 1) the study of the entrepreneurial mindset using the cognitive approach as an approach that has been more accepted by researchers; 2) Investigating the effectiveness of (formal-informal) entrepreneurship education on the formation of entrepreneurial mindset among students; 3) Increasing the awareness and knowledge of researchers regarding the state of entrepreneurial mentality and factors affecting it among university students in Iran - as a developing country - which has made efforts to educate and promote entrepreneurship in the last few decades. In this regard, the following hypotheses have been formulated:

H1: Elaborating mindset has a positive and significant effect on the implementing mindset of entrepreneurship among students.

H2: formal entrepreneurship education has a positive and significant effect on students' elaborating mindset.

H3: formal entrepreneurship education has a positive and significant effect on students' implementing mindset.

H4: Informal entrepreneurship education has a positive and significant effect on students' elaborating mindset.

H5: Informal entrepreneurship education has a positive and significant effect on students' implementing mindset.

## Methodology

The statistical population of the research included all associate, bachelor, master and doctorate students in universities and institutions of the Iranian higher education system. The research questionnaire was designed electronically (online). The 447 questionnaires were completed by continuously sending the online link of the questionnaire and many follow-ups. In the initial review and refinement, 11 questionnaires with incomplete information were removed. Finally, the data of 436 questionnaires were used for analysis in this study. The data collection tool in this research was a standard questionnaire consisting of four parts in the form of open and closed-answer questions. The content validity of the research tool was checked and confirmed by experts in the field of entrepreneurship teaching and promotion and its construct validity by calculating convergent validity and discriminate validity coefficients. Cronbach's alpha coefficient and composite reliability were used to check the reliability of the research tool. Data analysis was done using SPSS version 26 and SmartPLS version 3 software. For this purpose, descriptive and inferential statistics were used to analyze the data. In the descriptive statistics section, statistics such as frequency, percentage, average and standard deviation; and in the inferential statistics section, structural equation modeling (measurement model evaluation and structural model evaluation) and the partial least squares estimation approach were used. In the evaluation section of the measurement model, the validity, reliability and fit of the measurement model of the latent variables of the research and in the evaluation section of the structural model, the hypotheses were tested in the form of the proposed research model.

## Findings

The results of the research showed that the coefficient of the direct path of the effect of the formal entrepreneurship education variable on the elaborating entrepreneurship mindset of students is statistically significant at the error level of one percent ( $\text{Beta}=0.28$ ,  $t=5.63$ ). Also, the direct path coefficient of the variable effect of informal entrepreneurship education on students' elaborating entrepreneurship mindset is statistically significant at the error level of one percent ( $\text{Beta}=0.30$ ,  $t=5.99$ ). Therefore, the second and third research hypotheses are confirmed. The results of the research indicated that the coefficient of the direct path of the latent variable effect of formal entrepreneurship education on the implementing mindset of entrepreneurship of students is not statistically significant ( $\text{Beta}=-0.04$ ,  $t=1.01$ ). Meanwhile, the direct path coefficient of the direct effect of the

latent variable of informal entrepreneurship education on the implementing mindset of entrepreneurship of students is statistically significant at the error level of one percent ( $\text{Beta}=0.19$ ,  $t=5.22$ ). Therefore, the fourth hypothesis of the research is rejected and the fifth hypothesis of the research is confirmed. Finally, the results of the research showed that the path coefficient of the direct effect of the latent variable of elaborating mindset on the implementing mindset of entrepreneurship of students is statistically significant at the error level of one percent ( $\text{Beta}=0.72$ ,  $t=23.25$ ). Therefore, the first hypothesis of the research is confirmed.

## Conclusion

The results of the research indicated that formal and informal entrepreneurship education in Iranian universities and institutions of higher education had a positive and significant effect on the elaborating entrepreneurial mindset of students. This finding is consistent with the results of Cui et al. (2019) and Hand-ratio et al. (2020). In fact, formal and informal entrepreneurship education helps students to be able to answer some basic questions: What motivations are needed for entrepreneurship? What should students do to become entrepreneurs? What skills and abilities do they need to become entrepreneurs? How should you do business marketing? In addition, entrepreneurship education provides students with fresh and excellent experience that will help them become entrepreneurs in the future. Formal and informal entrepreneurship education provides students with the opportunity to interact with others who can receive views and opinions regarding their entrepreneurial goals (Hand-ratio et al., 2020). Therefore, their attitudes and tendencies regarding entrepreneurship (the elaborating dimension of an entrepreneurial mindset) are strengthened. Finally, the results showed that informal (theoretical and practical) entrepreneurship education in universities and higher education institutions had a positive and significant effect on students' implementing an entrepreneurial mindset. However, the significant effect of formal (compulsory and optional) entrepreneurship education on the implementing entrepreneurial mindset of students in the country's higher education system was not confirmed. These results are consistent with the findings of Cui et al. (2019) and Labi et al. (2018). The aforementioned researchers believe that informal entrepreneurship training plays an important role in the formation of entrepreneurial actions and activities (implementing mindset) by providing informal learning environments and cognitive-emotional support, as well as promoting cultural awareness of entrepreneurship (Cui et al., 2019). In addition, considering that informal entrepreneurship training - such as participation in educational workshops, entrepreneur lecture sessions, entrepreneurship competitions, face-to-face communication with entrepreneurs, entrepreneurship conferences and start-up events in the field of entrepreneurship, is a real environment to experience and test one's abilities and talents in providing the field of entrepreneurship; Therefore, they encourage a person more towards doing entrepreneurial activities and actions. This is despite the fact that formal (compulsory and optional) entrepreneurship education in Iran's higher education system is provided in the form of theoretical courses without providing the necessary conditions and facilities for gaining real experience and learning, which in an optimistic state can only improve the knowledge, attitude and entrepreneurial tendencies of students. According to the results of the research, it is recommended to the planners and policymakers of the higher education system to plan and implement extracurricular entrepreneurship courses in the country's higher education system. Also, in compulsory and optional entrepreneurship curricula in universities and higher education institutions, they pay more attention to practical issues and provide real and suitable conditions - such as holding start-up events - for students to gain experience and entrepreneurship.

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