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The Role of Entrepreneurship Education on Entrepreneurial Mindset with Regard to the Mediating Role of Entrepreneurial Attitude and Self-Efficacy

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ABSTRACT

Objective: The purpose of the present study was to investigate the role of entrepreneurship education on entrepreneurial mindset with regard to the mediating role of entrepreneurial attitude and self-efficacy of the second-year vocational school students of Susangerd city.

Methods: This research, categorized as applied research based on its purpose, was conducted in a descriptive-survey manner. The statistical population included all associate students of Susangerd city in the 2022-2023 school year. A sample comprising 217 persons, selected based on random sampling method, completed the questionnaire of Vishnu War dana et al. (2020). In order to analyze the data, descriptive statistics and structural equation model (SEM) were used.

Results: The findings of the research showed that entrepreneurship training has a positive and significant relationship with entrepreneurial self-efficacy, entrepreneurial attitude and entrepreneurial mindset ($p<0.05$). On the other hand, entrepreneurial self-efficacy has a positive and significant relationship with students' entrepreneurial attitude ($p\leq0.05$). In addition, entrepreneurial self-efficacy and entrepreneurial attitude have a large entrepreneurship education effect on the entrepreneurial mindset of second-year vocational school students in the Susangerd city. to fit the model from The GOF index was used, and this index showed that the present study has a favorable fit (GOF=0.29).

Conclusions: This study suggests that entrepreneurship education can effectively enhance the entrepreneurial mindset of students by improving their entrepreneurial attitude and self-efficacy. Such education plays a crucial role in shaping the mindset, attitude, and behavior of students as entrepreneurs, and encourages them to pursue entrepreneurship as a career path. These findings have significant implications for educators, policymakers, and other stakeholders in the education sector.

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Introduction

Ongoing rapid changes and developments in the world in the scientific and technical sectors, challenges in rapid succession to the socio-economic system, reduction in underground resources and increased poverty and unemployment have further pushed policymakers and thinkers to heed the concept of entrepreneurship to the point that they present entrepreneurship-based development as the final model of development. (Darini et al., 2022). In developed and emerging nations, entrepreneurship has turned into an effort for more economic welfare (War dana, 2020). Furthermore, Doran et al., Kumar and Raj showed that entrepreneurship stimulates national economic growth. That indicates that the more entrepreneurs in a society, the higher the welfare and the lower the poverty will be (Halvarsson et al., 2018; Sutter et al., 2019). In fact, entrepreneurship constitutes one of the most important economic, cultural and agricultural aspects having taken up added significance. Market conditions, policies and society's nature are among factors adding to the urgency of entrepreneurship (Bosire et al., 2016).

Discussions and debates about the possibility of entrepreneurship education aside, developing an entrepreneurial mindset among students through correct education is a basic need of society, which can be viewed as a subjective habit that requires learning (Handayati et al., 2010). Nicolai and Jacob define entrepreneurial mindset as the capacity to distinguish new opportunities, vigilance and ability to successfully benefit from opportunities (Nicolai and Jacob, 2011). Scientists lay emphasis on entrepreneurial mindset as significant variables in entrepreneurship studies (Allen, 2020; Ajor and Alikor, 2020; Kouakou et al., 2019; Schaefer and Minello, 2019). And they support the view that an entrepreneurial mindset facilitates the possibility of attitudes about some results required for entrepreneurship studies. Furthermore, some of these studies maintain that entrepreneurship education can stimulate the students' mindset about entrepreneurship (Daniel, 2016; Zhang et al., 2002). Therefore school-level entrepreneurship education requires an appropriate teaching approach so as to allow students to acquire basic business experiences, which would improve their entrepreneurial mindset (Ndou et al., 2018) Therefore, the first influential variable on entrepreneurial mindset is entrepreneurship education. Wang and Wong believe that business education is a determining factor in enabling people to understand and develop a business theory. Therefore, entrepreneurship education textbooks can be used for designing entrepreneurship education (Toghraei et al., 2019). Entrepreneurship education has a systematic

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nature, seeking to change the general system of education, including teachers and students, objectives, content, teaching methods, and to organize technology and integrate entrepreneurial spirit into the very fabric of education system. That can help the education system to develop capacities require for various functions of entrepreneurial gender education, research, management and social services (Bahmani, Arasti and Hosseini, 2017).

On the other hand, entrepreneurial attitude has been highlighted by researchers as the second determining variable in entrepreneurship studies (Jena, 2020). The attitude variable concerns the behavior of an individual and personal variable allowing for self-assessment of behavior. Application of attitude in entrepreneurship research involves the entrepreneur assessing how attractive the new business is (Reilly Krueger & Carsrud, 2000). Attitudes are expressed as the best tool describing action for entrepreneurship. Maintaining specific attitudes is believed ot result in further activity in entrepreneurship and for simply holding such specific views, entrepreneurs may be expected to undertake entrepreneurial actions (Simmones, 1999). Entrepreneurship education causes entrepreneurial attitudes to change, which would set a basis for upgrading entrepreneurial attitudes through education and push them towards entrepreneurial behavior. Beliefs and attitudes are believed to be learned and even when they are established based on family teachings and social environment they may be modified by education and learning. Rashid says research results indicate that education interventions have a direct impact on increasing the specific aspects of entrepreneurial attitude. Furthermore, previous studies show that entrepreneurship education may change attitudes in favor of entrepreneurship.

On the other hand, the fundamental impact of entrepreneurial self-efficacy on individuals' behavior has incentivized researchers to study this concept in from an aspect of entrepreneurship (War dana et al., 2020). Therefore, A third variable engaged in entrepreneurship and entrepreneurial spirit is self-efficacy. The self-efficacy concept refers to individual beliefs about their own capabilities and potential for arranging and carrying out a specific action (Grotan et al., 2019). Self-efficacy beliefs about entrepreneurship represent one of requirements for motivating entrepreneurship and undertaking efforts for necessary and mandatory entrepreneurial activities. For instance, there are some people who would like entrepreneurial and new activities, but they cannot do it, not due to lack of necessary capacity, knowledge and skill; rather because of lack of belief in their capacity and skills (Luthans,Stajckovic & Ibrayeva,20). Belief in self-efficacy indicates one's belief in

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ability in own capacities and capabilities to acquire a specific level of performance as well as the desired results. Cheng and Chiou maintain that people with strong self-efficacy beliefs are convinced they can effectively deal with events and conditions they are likely to face, are studious in fulfilling obligations and often demonstrate relatively high performance (Cheng and Chiou, 2010).

Since some maintain that self-efficacy is instrumental in the cognitive process and its skills, researchers take it into consideration in entrepreneurship research. For instance, Krueger argued that understanding entrepreneurship is important specifically with regards to how to start, manage and develop a business (Pihie and Bagheri, 2010). Handayati showed that entrepreneurship education affects positively both on the entrepreneurial intentions of students and their entrepreneurial spirit, mediating entrepreneurial spirit with the success in the relationship between entrepreneurship education and entrepreneurial intention (Handayati et al., 2020).Therefore, as the literature review shows, a few studies have been conducted on the topic of entrepreneurship to specifically address the entrepreneurial spirit of students and effective factors whereas no research has been carried out to study the effect of entrepreneurship on the entrepreneurial spirit with regard to the mediating role of the entrepreneurial attitude and self-efficacy of students in Iran. Thus, when entrepreneurial mindset is addressed as a structure, investigating the effective factors on them will be more comprehensive and more informative, which is why this research is entirely new and innovative. It can be said that entrepreneurship education should be specifically taken into consideration.

Finally, the main objective of this research is to review the role of entrepreneurship education on entrepreneurial mindset with the mediating role of entrepreneurial attitude and self-efficacy of vocational school students. This research specifically studies if entrepreneurship education materials offered at schools can lead students to embrace an entrepreneurial mindset and self-efficacy attitude and beliefs.

Material and Methods

This is applied research with descriptive method of correlation based on structural equations modelling that can study direct causal relationships, indirect relationships, relationship between variables and the variance observed in the entire model. The statistical population comprised all

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second-year vocational school students in the city of Susangerd during the school year 2023-2024, totaling 500. Using Cochran's sample size formula, 217 were selected by random sampling to fill out the questionnaire.

In order to measure the search variables, the Vishnu Ward ana et al. questionnaire (2020) was used, which comprised variables of entrepreneurship education (3 questions), entrepreneurship attitude (4 questions), entrepreneurship mindset (4 questions), and self-efficacy (3 questions) based on the five-point scale. The translated questionnaire was sent to 10 entrepreneurship schools, after which some modifications were made thereto based on the teachers' views to finally get their endorsement for validity. The questionnaire was then distributed among 50 members of the research's statistical population and its reliability was calculated using Cronbach's alpha (a=0/83). Once endorsed in terms of both reliability and validity, the questionnaire was distributed among the statistical population.

The research tool reliability was measured by Cronbach's alpha at 0.821 for entrepreneurship education, 0.819 for entrepreneurial spirit, 0.806 for entrepreneurial self-efficacy and 0.832 for entrepreneurial attitude. (War dana et al,.2020). The validity of the questionnaire was measured by convergent and divergent validity that is used specifically for structural equation modelling. For convergent validity assessment, the average variance extracted (AVE) measure was used for first-order variables, which yielded the following results: 0.673 for entrepreneurship education, 0.596 for entrepreneurial spirit, 0.634 for entrepreneurial self-efficacy and 0.614 for entrepreneurial attitude. Since all AVE values are greater than 0.4, the convergent validity of this questionnaire is deemed acceptable. In divergent validity, the traits of a construct are compared with those of other constructs in the model. That is done by comparing the square root of AVE for each construct with the correlation between the constructs. The results showed that the square root of AVE for each construct has been greater than the correlation between that construct and other constructs. Therefore, the divergent validity of constructs is acceptable. In order to measure the discriminant and divergent validity, cross-loading is used.

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Table 1. Research Factor Loading

Variables	Parameter	Standard Coefficient	P-value
Entrepreneurship Education	Question 1	0.81	9.758
	Question 2	0.78	12.144
	Question 3	0.87	13.432
Entrepreneurial Spirit	Question 4	0.64	7.612
	Question 5	0.80	9.646
	Question 6	0.88	10.304
	Question 7	0.75	9.277
Entrepreneurial Self-Efficacy	Question 8	0.77	11.673
	Question 9	0.78	11.843
	Question 10	0.84	9.812
Entrepreneurial Attitude	Question 11	0.77	12.778
	Question 12	0.79	13.190
	Question 13	0.71	11.488
	Question 14	0.85	9.845

As this table shows, factor loading values for all of research variables are greater than 0.4. Therefore, all of them lie within the acceptable range and the validity of the construct is confirmed by cross-loading.

Ethical considerations: The participants' consent to participate in the research was obtained, and the research purpose was explained in a way that did not create bias in the participants. Furthermore, every effort was made to ensure that participants did not experience physical or psychological discomfort due to their participation in the research, and they were free to withdraw from the research at any time if they did not wish to continue. The participants' information was kept completely confidential and secure, and numerical codes were used instead of names.

Data Analysis

In this investigation, First, considering that the data of each dimension of the research is continuous, the Kolmogorov-Smirnov test was used to check the normality of the data distribution. Then, in order to check the hypotheses of the research, structural equations have been used, the data obtained from this research is analyzed using PLS software and the research report is presented in the form of descriptive and inferential analysis.

Results

Demographic information examination showed that the sample included 217 respondents, who were 45% (97 persons) female and 55% (120 persons) male. First-graders accounted for 35%,

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second-graders for 33.2% and third-graders for 31.8% of the sample. In terms of residence, 65.4% of students lived in cities and 34.6% in villages. Furthermore, 22.1% were unique child, 29.5% first-child, 30.4% second child and finally 18% third child and younger in birth order.

Table 2.KMO and Bartlett's Test Results for Research Variables

Variable	KMO Index	Bartlett's Test	Degree of Freedom	Significance Level
Entrepreneurship Education	0.728	298.11	3	0.000
Entrepreneurial Mindset	0.737	419.75	6	0.000
Entrepreneurial Self-Efficacy	0.725	255.60	3	0.000
Entrepreneurial Attitude	0.804	401.37	6	0.000

As this table shows, the measure of sampling adequacy (MSA) obtained for the variables of entrepreneurship education, entrepreneurial mindset, entrepreneurial self-efficacy and entrepreneurial attitude is 0.728, 0.737, 0.725, and 0.804 respectively, all being greater than 0.7. Furthermore, the significance level measured for all research variables is smaller than 0.05, indicating the adequacy of samples for confirmatory factor analysis.

Table 3. Kolmogorov-Smirnov Test Results for Research Variables

Statistical Indicators → Research Variables	**K-S z**	**Significance Level**
Entrepreneurship Education	1.142	0.232
Entrepreneurial Mindset	1.118	0.241
Entrepreneurial Self-Efficacy	1.107	0.252
Entrepreneurial Attitude	1.231	0.170

As this table shows, the significance level for all of research variables is greater than 0.05, confirming the assumed normality of data. Moreover, the Kolmogorov–Smirnov test statistic Z is smaller than +1.96 and greater than -1.96, showing with 95% certainty that there is no difference between the observed and expected frequencies. In other words, distribution is normal in the statistical population. Therefore, based on proven normality, parametric tests have been used.

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Table 4. Fit Indices for Research Model

Index	Index of Fit			Values
	Acronym	**Full Title**	**Acceptable Range**	
	NFI	Normed Fit Index	> 0.80	0.927
	CFI	Comparative Fit Index	≥ 0.90	0.921
	RFI	Relative Fit Index	≥ 0.90	0.923
	χ^2/df	Relative Chi-Square	< 3	1.998
	RMSEA	Root Mean Square Error of Approximation	0-0.08	0.065
	GFI	Goodness of Fit Index	Close to 1	0.905
	AGFI	Adjusted Goodness of Fit Index	Close to 1	0.892
	Chi-Square	-	Depending on sample size	95.922

As this table shows, fit indices – relative chi-square, GFI, AGFI, RFI, CFI and RMSEA – are measured respectively at 1.998, 0.905, 0.892, 0.923, 0.921 and 0.065, showing the final model has a good fit without any need for modification. Furthermore, all correlations between the variables in the model are significant at P<0.05.

Table 5. Results of fitting the general model

GOF	$\overline{R2}$	$\overline{Communality}$
0.29	0.13	**0.63**

The results of the conceptual design test for the research are shown in Fig. 1 (correlation coefficients).

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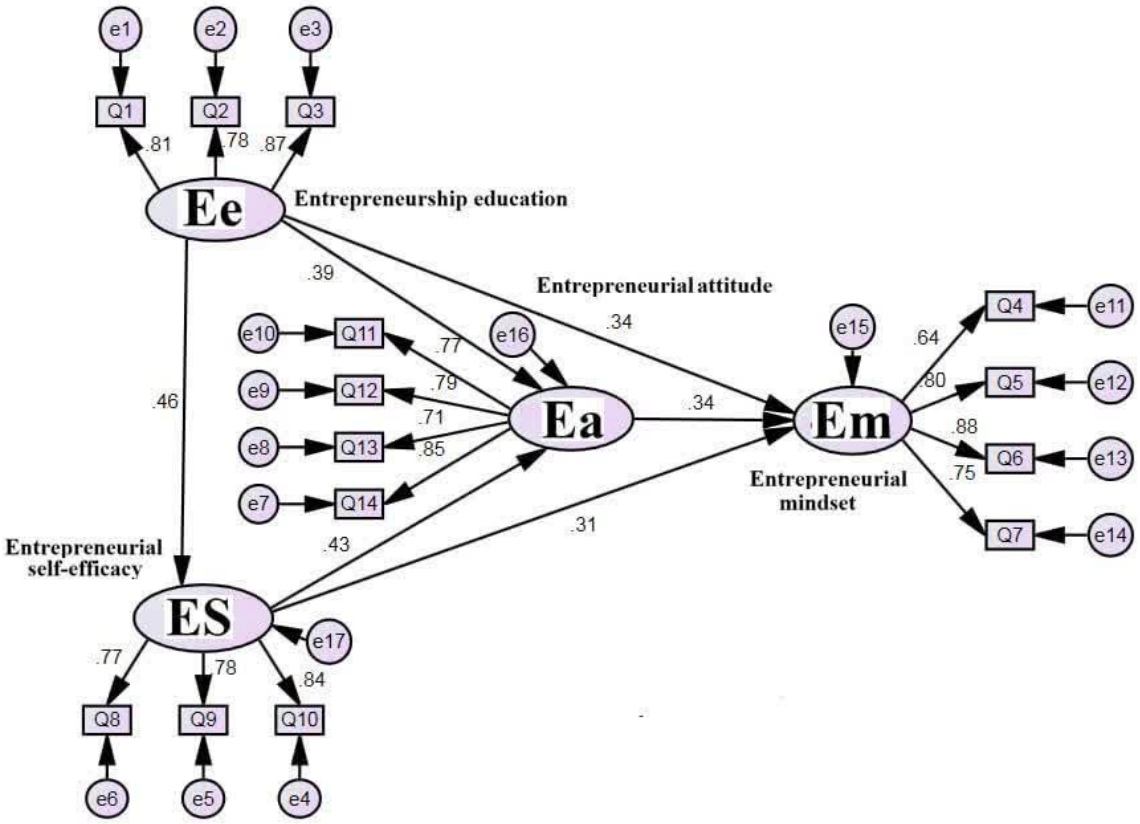


Figure 1. conceptual design test for the research (correlation coefficients)

Table 6. Relationship between **e**ntrepreneurship education, entrepreneurial attitude, entrepreneurial self-efficacy and entrepreneurial mindset

Independent Variable		Mediator Variable		Dependent Variable	Direct Effect	Indirect Effect	Statistic t	Significant Effectiveness
Entrepreneurship Education	→	-	→	Entrepreneurial Mindset	0.34		4.385	Confirmed
Entrepreneurship Education	→	-	→	Entrepreneurial Attitude	0.39		5.185	Confirmed
Entrepreneurship Education	→	-	→	Entrepreneurial Self-Efficacy	0.46		5.836	Confirmed
Entrepreneurial Attitude	→	-	→	Entrepreneurial Mindset	0.34		3.892	Confirmed
Entrepreneurial Self-Efficacy	→	-	→	Entrepreneurial Mindset	0.31		3.914	Confirmed
Entrepreneurial Self-Efficacy	→	-	→	Entrepreneurial Attitude	0.43		5.553	Confirmed
Entrepreneurship Education	→	Entrepreneurial Self-Efficacy	→	Entrepreneurial Mindset		0.143		Confirmed
Entrepreneurship Education	→	Entrepreneurial Attitude	→	Entrepreneurial Mindset		0.134		Confirmed

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As this table shows, the entire eight research variables are confirmed. In the first hypothesis, it was known that the entrepreneurship education's effect on entrepreneurial mindset is measured at positive 0.34 with their relationship having a significance level of 4.385. In the second hypothesis, it was known that the entrepreneurship education's effect on entrepreneurial attitude is measured at positive 0.39 with their relationship having a significance level of 5.185. In the third hypothesis, it was known that the entrepreneurship education's effect on entrepreneurial self-efficacy is measured at positive 0.46 with their relationship having a significance level of 5.836. In the fourth hypothesis, it was known that the entrepreneurship attitude's effect on entrepreneurial mindset is measured at positive 0.34 with their relationship having a significance level of 3.892. In the fifth hypothesis, it was known that the entrepreneurship self-efficacy's effect on entrepreneurial mindset is measured at positive 0.31 with their relationship having a significance level of 3.914. In the sixth hypothesis, it was known that the entrepreneurship self-efficacy's effect on entrepreneurial attitude is measured at positive 0.43 with their relationship having a significance level of 5.553. Furthermore, the mediating role of entrepreneurial self-efficacy and entrepreneurial attitude in the relationship between entrepreneurship education and entrepreneurial mindset was examined. As the table shows, in addition to directly affecting entrepreneurial mindset, entrepreneurship education indirectly affects entrepreneurial mindset through entrepreneurial self-efficacy (0.143) and entrepreneurial attitude (0.134). The level of indirect effect of entrepreneurship education on entrepreneurial mindset is smaller than that of its direct effect.

Discussion

Before starting to examine the research results, it is necessary to verify the accuracy of the measurement and structural models. Fitness of measurement models involves the (convergent and divergent) reliability and validity of research constructs. Using the PLS software, the three criteria of Cronbach's alpha, composite reliability and factor loadings are used.

In general, if the Cronbach's alpha and composite reliability are greater than 0.7 and factor loadings greater than 0.4, the reliability of the model is accepted. In order to examine the convergent validity of the model, average variance extracted (AVE) has been used, whose acceptable value is greater than or equal to 0.5. According to numbers shown in Table 5 and Fig. 1, all research variables have

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acceptable convergent reliability and validity, implying that the research measurement model has acceptable fitness. This research also demonstrates that each construct is more correlated to itself than to other constructs; therefore, the divergent validity of the model is confirmed.

Finally, assessment of the model fitness was carried out by the goodness of fit (GOF) index. GOF is equal to 0.36, 0.1 and 0.25 for the three strong, medium and weak levels respectively. Given the GOF value of 0.29, which indicates the good fit of the model.

The purpose of this research was to investigate the role of entrepreneurship education on entrepreneurial mindset with regard to the mediating role of the entrepreneurial attitude and self-efficacy of the second-year vocational school students of Susangerd city. The results showed that entrepreneurship education has a positive and significant effect on the entrepreneurial mindset of students. These results are consistent with the findings of (Cui et al., 2019), (Handayati et al., 2020) that entrepreneurship education and culture are strongly correlated with the entrepreneurial mindset of students and that entrepreneurial mindset successfully accelerates the students' entrepreneurial intention. It is also consistent with the results of Bosire et al., (2016) research that entrepreneurship education has a positive impact on the behavior's entrepreneurial mindset, which in turn mediates the relationship between entrepreneurship education and entrepreneurial intention. Finally, it is consistent with the results of Mokhtar et al., (2021) study that entrepreneurial mindset has successfully accelerated development of entrepreneurial intention in the students. As far as these results are concerned, one can say that entrepreneurship education can significantly give rise to entrepreneurial inspirations and contributes to upgrading development of entrepreneurial mindset among students. It is yet to be known how education helps evolve entrepreneurial mindset. Most probably emotional factors largely contribute to development of entrepreneurial mindset as they play a fundamental role in entrepreneurial learning and various education plans can bring about emotional events, which successfully upgrade entrepreneurial merits (Cui & Bell, 2022). This result is consistent with the planned behavior model which stipulates that environmental factor (entrepreneurship education in our case) can result in inducing a positive attitude and sense of capability, i.e., creating entrepreneurial mindset and intention. Education can enhance individual skills and capabilities. Capabilities are behavioral preconditions leading to action. Development of theoretical knowledge about entrepreneurship and practical exercises like drafting (business plan), examining bumpy roads followed through by entrepreneurs and case study of

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operating businesses can help create ability to understand the environment, take quick action vis-à-vis environmental changes and identifying entrepreneurial opportunities, i.e. development of entrepreneurial mindset, which will finally help the process of decision-making for a new business idea and development of the sense of personal capability in the students for launching a personal business (entrepreneurial intention) (Mokhtrai et al., 2023).

Meantime, McMullen and Chair have emphasized that entrepreneurial mindset represents a sort of capacity to identify and benefit from opportunities, regardless of resources available. It implies that entrepreneurial activity is partly risky (Cui & Bell, 2022). Entrepreneurial attitudes can be changed by education (Schwarts et al., 2009). As endorsed by this research, access to appropriate entrepreneurship education, which would upgrade individual awareness and sensitivity for identifying and exploring entrepreneurship opportunities, can boost risk appetite and ambiguity tolerance, which can finally create a positive and audacious attitude vis-à-vis new business only to upgrade entrepreneurial mindset in individuals.

The research also showed that entrepreneurship education has a positive and significant effect on the entrepreneurial attitude of students, which is consistent with the findings of War dana et al. (2020), Schaefer and Minello (2019) and Mahendra et al., (2017). In explaining the findings of this confirmed hypothesis, it should be said that entrepreneurial attitude is not a natural trait; rather it is shaped and upgraded through entrepreneurship education. In other words, based on this finding, on the one hand, it can be said that entrepreneurship can be educated and that entrepreneurship education is effective on the parameters of entrepreneurial attitude while on the other it can be said that entrepreneurship and entrepreneurial attitudes can be improved through entrepreneurship education while entrepreneurial attitudes can be upgraded by the formation of entrepreneurial spirit.(Simmones,1999.) Moreover, Robinson et al. (1991) consider attitudes to be the best predictors of entrepreneurial intentions. Developed based on family and social environmental education, such attitudes are subject to modifications by education and learning. Therefore, by offering education courses on entrepreneurship, it would be possible to impact the entrepreneurial attitude of individuals and create specific behavioral intentions in them in favor of entrepreneurship.

The research also showed that entrepreneurship education has a positive and significant effect on the entrepreneurial self-efficacy of students, which is consistent with the findings of War dana et

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al., (2020). In explaining the findings of this confirmed hypothesis, it should be said that entrepreneurship education enhances students' capacity to identify new job opportunities or topics. They can think more creatively and commercialize new ideas by developing new products. That would create a sense of self-efficacy among students (Darini et al., 2022). Furthermore, due to its role in steering the entrepreneurial intentions of students, entrepreneurship education has turned into a key topic in entrepreneurship studies. Entrepreneurship education covers one's ability to stimulate ideas, be creative and innovative in project management in the direction of entrepreneurship. Therefore, entrepreneurship education can result in the self-efficacy of students, in which case, when entrepreneurship education is appropriately combined with learning activities in an open space, the students' self-efficacy increases. Another reason pertains to the role of entrepreneurship education as a mediator between the learning environment in an open space and entrepreneurial self-efficacy, which can present an eternal experience and enhance entrepreneurial self-efficacy. Finally, it can be concluded that entrepreneurship education. Finally, it can be concluded entrepreneurship education is an effective tool for internalizing experience, knowledge, values and norms among other things for students.

The research also showed that entrepreneurial self-efficacy has a positive and significant effect on the entrepreneurial mindset and attitude of students, which would improve as the mindset's self-efficacy vis-à-vis entrepreneurship increases. That is consistent with the findings of Wardana et al., (2020), Aima et al., (2020) and Botsaris et al. (2016). In explaining the findings of this confirmed hypothesis, it should be said that self-efficacy is a sort of self-confidence and when people feel more self-efficacious, they hold a more positive attitude (emotional, cognitive and behavioral aspect) vis-à-vis challenging issues like entrepreneurship. Such persons show less stress and therefore think more deeply about issues and consider the positive and negative aspects of issues more precisely (Darini et al., 2022). Moreover, entrepreneurial self-efficacy improves entrepreneurial attitude. When students believe that such individuals and groups support their entrepreneurial behavior they find a positive attitude vis-à-vis entrepreneurial activities, which would finally trigger entrepreneurial activities and strengthen their intention for such activities.

A significant finding of this research was the enhanced effect of entrepreneurship education on entrepreneurial mindset through the mediating role of entrepreneurial self-efficacy and entrepreneurial attitude. The results showed that entrepreneurial self-efficacy and entrepreneurial

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attitude can, like a mediator, cause entrepreneurship education to affect the entrepreneurial mindset of second-year vocational school students. This moderating role had not been reported in previous students and it seems that this finding has somewhat managed to bridge the gap between entrepreneurship education and entrepreneurial mindset in theory.

This study has a number of limitations. Due to the periodical nature of the study, causality is not assured. The statistical population was limited to the city of Susangerd and therefore the results could not be generalized. In order to be able to generalize the results, the research is suggested to be conducted in all cities and schools. Furthermore, as the questionnaires were self-reporting, which students filled out by themselves, dishonesty and bias is not ruled out. Therefore, in order to achieve more accurate results in future research, other methods of data gathering, including interview, are suggested. Finally, it is suggested that research be conducted constantly with new, larger and more diverse samples in order to study the longitudinal role of education in entrepreneurship.

Given the research results regarding the impact of entrepreneurship education on entrepreneurial mindset through the mediating role of entrepreneurial self-efficacy and entrepreneurial attitude, it is suggested that entrepreneurship education be incorporated into the syllabus of students to improve the image of entrepreneurship as an acceptable occupational option. Because it can impact the students' intentions vis-à-vis entrepreneurship. Moreover, designing and presenting entrepreneurship education materials, using practical and active methods with the help of state-of-the-art technology and in compliance with the students' interests and needs, incentivizing and upgrading students attending entrepreneurship courses through such plans as issuance of entrepreneurship certificate and recommending to entrepreneurship centers for engagement, organizing field visits to private institutes and centers associate with entrepreneurship throughout school years are among other solutions.

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Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Payame Noor University.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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