

Bridging Entrepreneurship Education and Entrepreneurial Alertness: The Mediating Role of Entrepreneurial Mindset

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ARTICLE INFO	ABSTRACT
Published Online: 27 September 2024	This study examines entrepreneurship education's impact on entrepreneurial alertness, with entrepreneurial mindset serving as a mediator among management students. Therefore, entrepreneurial alertness is crucial for higher education institutions so that graduates not only become job seekers but also have the potential to create job opportunities. This study examines entrepreneurship education's impact on entrepreneurial alertness, with entrepreneurial mindset serving as a mediator among management students. The research employs a descriptive method. Data were collected through questionnaires distributed both online and offline, using non-probability sampling techniques and a purposive sampling approach. The study's population consists of management students, with a sample size of 100 students. Data were analyzed using SEM-PLS with SmartPLS 4.0 software. The results indicate that entrepreneurship education has a positive effect on entrepreneurial mindset. Furthermore, entrepreneurship education positively influences entrepreneurial alertness, and entrepreneurial mindset positively affects entrepreneurial alertness. Entrepreneurial mindset also positively mediates the effect of entrepreneurship education on entrepreneurial alertness. This research is beneficial for educational institutions in designing more effective entrepreneurship curricula and provides insights for the government to formulate policies to enhance entrepreneurial alertness. It is hoped that graduates will be able to create job opportunities, thereby contributing to economic growth.
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KEYWORDS: Entrepreneurship Education, Entrepreneurial Mindset, Entrepreneurial Alertness, Entrepreneurship	

1. INTRODUCTION

Entrepreneurship is the individual's ability to recognize and capitalize on new business opportunities that others have not pursued through risk-taking and innovation to create value and drive economic growth (Hutabarat et al., 2022). The level of education significantly affects students' entrepreneurial spirit by helping them develop the knowledge and skills necessary to start and manage businesses (Agustina & Salam, 2019). The Indonesian government encourages entrepreneurship to boost economic growth due to a decline in public interest in business. As of 2023, the entrepreneurship rate in Indonesia stands at only 3.47%, which lags compared to Singapore at 8.76%, Malaysia at 4.74%, and Thailand at 4.26% (Bhiwara, 2024). Additionally, the Global Threat Report indicates that only 19.48% of students in Indonesia aspire to become entrepreneurs (Susanto, 2024). To enhance the level of entrepreneurship, further efforts from the government and other stakeholders are needed to provide appropriate education and training, improve access to technology, and create supportive policies for entrepreneurs (Asmuruf & Soelaiman, 2022).

Chavoushi et al. (2021) explain that entrepreneurial alertness is one of the most important cognitive/psychological factors in recognizing entrepreneurial opportunities. Entrepreneurial alertness is a key cognitive ability in identifying opportunities and has garnered significant research attention in recent years. Therefore, fostering entrepreneurial alertness among students is crucial so graduates can become job creators rather than just job seekers. Entrepreneurial alertness is a component that shapes the entrepreneurial spirit, affecting information processing and entrepreneurs' perceptions of entrepreneurial orientation, as well as influencing the identification of external opportunities (Li et al., 2022). Entrepreneurial alertness needs to be continuously developed to enhance individuals' ability to capitalize on entrepreneurial opportunities in the future (Araujo et al., 2023).

Wibowo et al. (2023) explain that entrepreneurship education is a primary predictor in enhancing entrepreneurial alertness. Students who receive entrepreneurship education play a crucial role in the dynamics and flexibility of the business environment. This belief supports developing and

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including entrepreneurship education in many universities to prepare students with the skills and mindset needed for success in the entrepreneurial world (Adha & Permatasari, 2021). Chen et al. (2023) indicate that entrepreneurship education significantly positively impacts entrepreneurial alertness.

In addition to entrepreneurship education, an entrepreneurial mindset is crucial in enhancing entrepreneurial alertness. The entrepreneurial mindset is the individual's determination to engage in entrepreneurial activities (Barnard et al., 2019). This mindset is well-developed based on knowledge, skills, and information processing capacity and processes. Previous research by Pirhadi et al. (2023) and Sun et al. (2023) shows a positive and significant impact of entrepreneurial mindset on entrepreneurial alertness.

This study aims to investigate the role of entrepreneurship education and entrepreneurial mindset in enhancing entrepreneurial alertness among students and explore the role of entrepreneurial mindset as a mediating variable between entrepreneurship education and entrepreneurial alertness. This research is valuable for educational institutions in designing more effective entrepreneurship curricula and provides insights for the government to formulate entrepreneurship education policies to enhance entrepreneurial alertness. Graduates are hoped to be able to take on roles as job creators, thereby contributing to economic growth.

Based on the background explained the research model is illustrated in Figure 1.

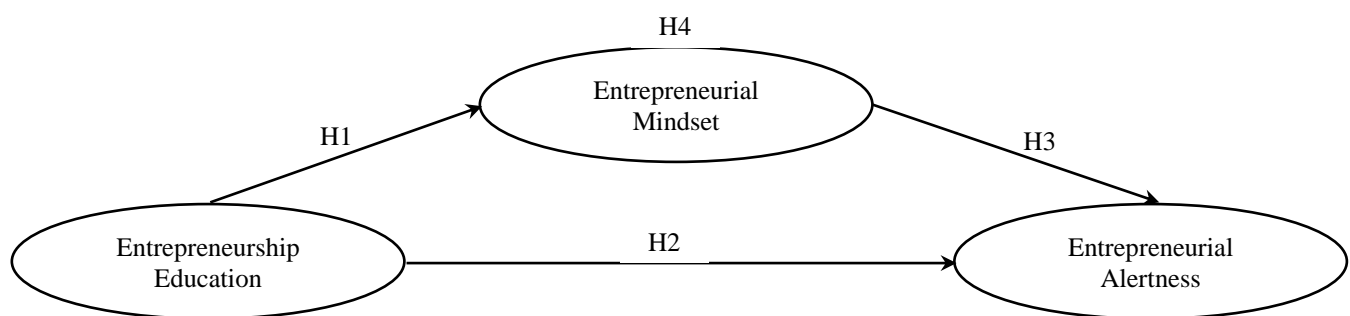


Figure 1. Research Model

Entrepreneurship education involves learning activities that enhance knowledge, skills, attitudes, and personal characteristics related to entrepreneurship (Wardana et al., 2020). It effectively increases entrepreneurial abilities (Saadat et al., 2022). Entrepreneurship education is heterogeneous, where extracurricular activities provided by entrepreneurship programs positively impact an entrepreneurial mindset (Cui et al., 2021). Research by Saadat et al. (2022) found that entrepreneurship education positively and significantly affects entrepreneurial mindset. Entrepreneurship education can shape students' entrepreneurial mindset, including their ability to identify and capitalize on opportunities in the field of entrepreneurship (Li et al., 2023).

H₁: Entrepreneurship education has a positive impact on entrepreneurial mindset.

Many experts have recognized entrepreneurship education as an effective tool for fostering entrepreneurship (Saadat et al., 2022). It is a primary predictor in enhancing entrepreneurial alertness (Wibowo et al., 2023). Entrepreneurship education provides students in-depth entrepreneurial knowledge, improves their ability to recognize opportunities and risks, and fosters their enthusiasm and commitment to entrepreneurial activities (Chen et al., 2023). High entrepreneurial alertness can also motivate individuals to discover entrepreneurial opportunities and stimulate their desire to start a business

(Edigbo et al., 2021). Entrepreneurship education can increase students' awareness and understanding of entrepreneurial opportunities, enhancing their vigilance towards the business environment (Chen et al., 2023).

H₂: Entrepreneurship education has a positive impact on entrepreneurial alertness.

Entrepreneurial mindset is considered a critical element in the learning journey towards the effectiveness of entrepreneurship education (Quality Assurance Agency, 2018). It reflects the ability to identify and capitalize on opportunities in the field of entrepreneurship (Davis et al., 2016). Sun et al. (2023) explain that entrepreneurial mindset plays a crucial role in shaping entrepreneurial alertness. In their research, Pirhadi et al. (2023) found a positive and significant effect of entrepreneurial mindset on entrepreneurial alertness. Entrepreneurial mindset is reflected in vigilance towards opportunities, risk-taking tendencies, optimism, communication and collaboration, creativity and innovation, critical thinking, and future orientation, all of which enhance entrepreneurial alertness (Cahyani et al., 2022).

H₃: Entrepreneurial mindset has a positive impact on entrepreneurial alertness.

Ahadi and Kasraie (2020) explain that developing an entrepreneurial mindset through entrepreneurship education is crucial in enhancing entrepreneurial alertness. Saadat et al.

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(2022) indicate that entrepreneurial mindset positively and significantly mediates the effect of entrepreneurship education on entrepreneurial alertness. Daspit et al. (2023) reveal that entrepreneurial alertness is the stage at which aspiring entrepreneurs can identify opportunities for action, thereby providing new insights into the value of entrepreneurial mindset in entrepreneurship education. This is consistent with the Theory of Planned Behavior, which suggests that entrepreneurial alertness is an outcome of entrepreneurship education that shapes individual entrepreneurial attitudes and that entrepreneurial mindset can be developed from subjective norms and perceived self-control (Bueckmann-Diegoli et al., 2021).

H4: Entrepreneurial mindset positively mediates the effect of entrepreneurship education on entrepreneurial alertness.

2. RESEARCH METHODS

This study employs a quantitative approach as it formulates hypotheses, collects numerical data using Likert scales, and analyzes it to conclude hypothesis testing (Sekaran & Bougie, 2016). A causal research design examines cause-and-effect relationships (Malhotra, 2020). The time horizon is a cross-sectional study since data is collected only once during the research period (Sekaran & Bougie, 2016). The population of this study consists of business management students. Non-probability sampling techniques are used, specifically purposive sampling, as the sample is selected based on specific criteria set by the researcher (Sugiyono, 2016). The sample size for this study is 100 respondents. Upon data collection, it was found that the most of respondents were female, with 54 individuals (54%). Additionally, most of respondents were from the 2022 cohort, totaling 48 individuals (48%).

Table 1. Respondent Characteristics

Description	Respondent	Percentage
Gender		
Woman	54	54%
Man	46	46%
Educational Cohort		
2019	2	2%
2020	16	16%
2021	28	28%
2022	48	48%
2023	6	6%

Source: *Data Collection Results (2024)*

Statements for each variable were measured using a 5-point Likert scale, enabling respondents to assess the statements based on the scale points. The data were then analyzed using Partial Least Squares – Structural Equation Modeling (PLS-SEM) with SmartPLS version 4 software.

3. RESULTS AND DISCUSSION

Partial Least Squares – Structural Equation Modeling (PLS-SEM) is the data analysis technique. The procedure aims to estimate the network of dependency relationships between concepts and constructs represented by measurable variables included in the integrated model (Malhotra, 2020). Validity is assessed through two criteria: Convergent validity and discriminant validity. Convergent validity is evaluated based on outer loadings, with values above 0.7, and the

Average Variance Extracted (AVE) should be greater than 0.5 to meet the requirements for convergent validity (Hair et al., 2019). Discriminant validity is examined using cross-loadings. The square root of the AVE indicates good discriminant validity for each construct and is higher than the correlation with other constructs in the model (Garson, 2016). For composite reliability, the required value is more significant than 0.7; for Cronbach's alpha, the required value is greater than 0.6 (Hair et al., 2019). The results of the convergent validity analysis show that all indicators are valid, as they have outer loadings above 0.7 and AVE values above 0.5. Furthermore, all indicators are reliable, with composite reliability values above 0.7 and Cronbach's alpha values above 0.6.

Table 2. Results of Convergent Validity and Reliability Testing

Variable	Indicator	Item	AVE	Outer Loadings	Composite Reliability	Cronbach's Alpha
Entrepreneurship Education Jiatong et al. (2021)	Interest in entrepreneurship after taking an entrepreneurship course.	EE1	0.682	0.836	0.922	0.883
	The entrepreneurship course enhances business knowledge.	EE2		0.877		

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Variable	Indicator	Item	AVE	Outer Loadings	Composite Reliability	Cronbach's Alpha
	Entrepreneurship education provides an understanding of entrepreneurial characteristics.	EE3		0.826		
	The content of the entrepreneurship course taught at the university includes the latest developments in business.	EE4		0.841		
	Entrepreneurship education facilitates the understanding of business.	EE5		0.795		
	The projects assigned help in gaining a better understanding of the business environment	EE6		0.885		
Entrepreneurial Mindset Wardana <i>et al.</i> (2020)	Frequently interacting with others.	EM1	0.712	0.720	0.884	0.919
	Able to understand information well.	EM2		0.738		
	Optimistic about the future.	EM3		0.692		
	Able to make confident choices when presented with multiple opportunities.	EM4		0.790		
	Always seizing opportunities.	EM5		0.844		
	Willing to take risks.	EM6		0.831		
	Able to tolerate uncertain outcomes.	EM7		0.694		
Entrepreneurial Alertness Pirhadi (2021)	Diligent in exploring the internet to find business opportunities.	EA1	0.579	0.865	0.887	0.877
	Frequently interacting with others to obtain information about business.	EA2		0.761		
	Actively seeking new information through various media.	EA3		0.847		
	Always keeping an eye out for new business ideas while seeking information.	EA4		0.810		
	Possesses the ability to identify profitable business opportunities.	EA5		0.842		

Source: Data analysis results using SmartPLS version 4

Next, Table 3 presents the discriminant validity test using cross-loadings. All indicators pass the discriminant validity test because the square root of the AVE for each construct is greater than the correlations with other constructs in the model.

Table 3. Results of Discriminant Validity Testing

	Entrepreneurial Alertness	Entrepreneurial Education	Entrepreneurial Mindset
EE1	0.591	0.836	0.627
EE2	0.683	0.877	0.703
EE3	0.714	0.826	0.714
EE4	0.736	0.841	0.712
EE5	0.592	0.795	0.618
EE6	0.715	0.885	0.759
EM1	0.614	0.522	0.720
EM2	0.648	0.670	0.738
EM3	0.567	0.527	0.692
EM4	0.671	0.629	0.790
EM5	0.719	0.713	0.844
EM6	0.773	0.688	0.831
EM7	0.646	0.585	0.694
EA1	0.865	0.672	0.716
EA2	0.761	0.544	0.607

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	Entrepreneurial Alertness	Entrepreneurial Education	Entrepreneurial Mindset
EA3	0.847	0.760	0.725
EA4	0.810	0.708	0.764
EA5	0.842	0.603	0.784

Source: Data Analysis Results using SmartPLS Version 4

Next, the results of the R² and Q² analyses are presented. R² values are categorized into three levels: 0.75 (strong), 0.50 (moderate), and 0.25 (weak) (Hair et al., 2019). For Q², the required value must be greater than 0 for each construct to ensure predictive relevance (Hair et al., 2019). Based on

Table 4, entrepreneurship education moderately affects entrepreneurial mindset. Additionally, both entrepreneurship education and entrepreneurial mindset have a strong effect on entrepreneurial alertness. Table 5 shows that all three constructs used have predictive relevance.

Table 4. Results of R² Testing

Variable	Coefficient of Determination (R ²)	Results
Entrepreneurial Mindset	0.672	Moderate
Entrepreneurial Alertness	0.787	Strong

Source: Data Analysis Results Using SmartPLS Version 4

Table 5. Results of Q² Testing

Variable	Predictive Relevance (Q ²)
Entrepreneurial Mindset	0.670
Entrepreneurial Alertness	0.640

Source: Data Analysis Results Using SmartPLS Version 4

Next, hypothesis testing was conducted using the bootstrapping method. The effect is considered significant if the p-value is < 0.05 (with a 95% confidence interval).

Conversely, the effect is insignificant if the p-value is > 0.50 (Hair et al., 2019). The results of the hypothesis testing using the bootstrapping method are shown in Table 6 as follows:

Table 6. Results of Hypothesis Testing

Hypothesis	Path coefficient	p-value	Results	Mediation Type
Entrepreneurship education → entrepreneurial mindset	0.820	0.000	Significant	-
Entrepreneurship education → entrepreneurial alertness	0.253	0.048	Significant	-
Entrepreneurial mindset → entrepreneurial alertness	0.668	0.000	Significant	-
Entrepreneurship education → entrepreneurial mindset → entrepreneurial alertness	0.548	0.000	Significant	Partial mediation

Source: Data Analysis Results Using SmartPLS Version 4

Based on the results of the first hypothesis test (H₁), it was found that there is a significant effect of entrepreneurship education on entrepreneurial mindset. This finding aligns with the research of Wardana et al. (2020) and Saadat et al. (2022), which indicates that entrepreneurship education can enhance the entrepreneurial mindset. The study results show that entrepreneurship education effectively develops the entrepreneurial mindset and fosters creative ideas.

The second hypothesis test (H₂) results reveal a significant effect of entrepreneurship education on

entrepreneurial alertness. This finding is consistent with the research by Chen et al. (2023) and Edigbo et al. (2021), which shows that entrepreneurship education can provide students with more profound knowledge, enhance their ability to recognize opportunities and risks and stimulate their enthusiasm for engaging in entrepreneurial activities. In this regard, entrepreneurship education has successfully increased students' entrepreneurial alertness. Through this education, students are encouraged to learn more about entrepreneurial activities.

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The results of the third hypothesis test (H₃) indicate a significant effect of entrepreneurial mindset on entrepreneurial alertness. This finding aligns with the research by Pirhadi et al. (2023) and Sun et al. (2023), which shows that entrepreneurial mindset plays a crucial role in shaping entrepreneurial alertness. An entrepreneurial mindset helps students identify business opportunities and strengthens their willingness to take risks and adapt quickly to upcoming changes.

Furthermore, the results of the fourth hypothesis test (H₄) reveal that the entrepreneurial mindset partially mediates the effect of entrepreneurship education on entrepreneurial alertness. These findings are consistent with the research by Saadat et al. (2022) and Ahadi & Kasraie (2020), which indicate that the entrepreneurial mindset can mediate the relationship between entrepreneurship education and entrepreneurial alertness. An entrepreneurial mindset developed through entrepreneurship education can enhance entrepreneurial alertness, making students more attuned to business opportunities.

Based on the data analysis, this study's implications indicate that entrepreneurship education has the most dominant influence on the entrepreneurial mindset. Entrepreneurship education is a crucial platform for aspiring entrepreneurs to acquire extensive knowledge in entrepreneurship. The content of entrepreneurship education can enhance the entrepreneurial mindset and increase the entrepreneurial alertness of prospective entrepreneurs. Developing an entrepreneurial mindset is also crucial for improving entrepreneurial alertness.

4. CONCLUSION AND RECOMMENDATION

4.1 Conclusion

Based on the hypothesis testing results, entrepreneurship education significantly influences the entrepreneurial mindset and alertness. Enhanced entrepreneurship education improves the entrepreneurial mindset for pursuing entrepreneurship and increases entrepreneurial alertness among business management students. The study also found that the entrepreneurial mindset significantly affects entrepreneurial alertness. Furthermore, the entrepreneurial mindset partially and significantly mediates the effect of entrepreneurship education on entrepreneurial alertness, as entrepreneurship education has a significant influence on entrepreneurial alertness.

4.2 Recommendation

Entrepreneurship education needs to be maximized by every educational institution, as it significantly enhances students' entrepreneurial mindset. Institutions should also focus on practical, hands-on experience in the field rather than just theoretical knowledge taught in the classroom. This approach will better prepare students for entrepreneurship, helping them understand how to leverage opportunities and

manage potential risks, thereby effectively developing their entrepreneurial alertness. Future research is recommended to broaden the scope of the study and include additional variables that contribute to increasing entrepreneurial alertness, which can enrich the findings and provide more applicable insights for aspiring entrepreneurs to achieve success more quickly.

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