



“The determinants of digital entrepreneurial intention among higher education students: A multi-group analysis”

AUTHORS

Sri Palupi Prabandari 

Erie Awalil Fakhri 

Eryadi Kordi Masli 



ARTICLE INFO

Sri Palupi Prabandari, Erie Awalil Fakhri and Eryadi Kordi Masli (2026). The determinants of digital entrepreneurial intention among higher education students: A multi-group analysis. *Problems and Perspectives in Management*, 24(1), 28-42. doi:[10.21511/ppm.24\(1\).2026.03](https://doi.org/10.21511/ppm.24(1).2026.03)

DOI

[http://dx.doi.org/10.21511/ppm.24\(1\).2026.03](http://dx.doi.org/10.21511/ppm.24(1).2026.03)

RELEASED ON

Monday, 05 January 2026

RECEIVED ON

Monday, 27 October 2025

ACCEPTED ON

Friday, 12 December 2025

LICENSE



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

JOURNAL

"Problems and Perspectives in Management"

ISSN PRINT

1727-7051

ISSN ONLINE

1810-5467

PUBLISHER

LLC "Consulting Publishing Company "Business Perspectives"

FOUNDER

LLC "Consulting Publishing Company "Business Perspectives"



NUMBER OF REFERENCES

82



NUMBER OF FIGURES

1



NUMBER OF TABLES

5

© The author(s) 2026. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Type of the article: Research Article

Received on: 27th of October, 2025

Accepted on: 12th of December, 2025

Published on: 5th of January, 2026

© Sri Palupi Prabandari, Erie Awalil Fakhri, Eryadi Kordi Masli, 2026

Sri Palupi Prabandari, Ph.D., Associate Professor, Department of Entrepreneurship, Faculty of Economics and Business, Brawijaya University, Indonesia. (Corresponding author)

Erie Awalil Fakhri, MM, Lecturer, Department of Entrepreneurship, Faculty of Economics and Business, Brawijaya University, Indonesia.

Eryadi Kordi Masli, Ph.D., Professor, Department of Business Technology and Entrepreneurship, School of Business, Law and Entrepreneurship, Swinburne University of Technology, Australia.

Sri Palupi Prabandari (Indonesia), Erie Awalil Fakhri (Indonesia), Eryadi Kordi Masli (Australia)

THE DETERMINANTS OF DIGITAL ENTREPRENEURIAL INTENTION AMONG HIGHER EDUCATION STUDENTS: A MULTI-GROUP ANALYSIS

Abstract

The university is the primary facilitator of students' entrepreneurial spirit, and digitalization is the best way to launch new businesses during university years. This study investigated the relationship between entrepreneurship education and digital entrepreneurial intention mediated by two variables, entrepreneurial motivation and entrepreneurial mindset. Data were collected from students in entrepreneurship workshops at Brawijaya University, followed by students from several public and private universities across Indonesia, with 461 respondents selected using quota sampling. Students come from exact (e.g., Physics, Chemistry, or Mathematics) and non-exact (e.g., Management, Psychology, or Law) majors, with the majority in the third year of study. The data were analyzed using structural equation modeling partial least squares (SEM-PLS). The results indicated that entrepreneurship education has a positive and significant effect on digital entrepreneurial intention (path coefficient = 0.081, $p = 0.003$). Entrepreneurial mindset does not significantly affect digital entrepreneurial intention (path coefficient = 0.043, $p = 0.256$). Entrepreneurship education significantly affects entrepreneurial motivation and entrepreneurial mindset (path coefficient = 0.423, $p < 0.001$). In addition, this study confirms the mediating role of entrepreneurial mindset on the relationship between entrepreneurship education and digital entrepreneurial intention (path coefficient = 0.284, $p < 0.001$). Surprisingly, entrepreneurship motivation failed to mediate the relationship between entrepreneurship education and digital entrepreneurial intention (path coefficient = 0.014, $p = 0.283$). Furthermore, entrepreneurship education shows no significant effect on digital entrepreneurship intention among female students and those from non-exact fields, indicating substantial individual differences in responses to such education.

Keywords

digital entrepreneurial intention, entrepreneurship education, entrepreneurial motivation, entrepreneurial mindset

JEL Classification

L26, I23, O33, M13

INTRODUCTION

Digitalization drives global economic growth and facilitates the emergence of new business models, including technology-based startups (Myovella et al., 2020). The growth of the digital economy in Indonesia has risen to 20.76 million, with 2,500 startups representing one of the key players in the ASEAN digital ecosystem (Farliana et al., 2023). The significance of digitalization on the economy in the ASEAN region is also substantial, including the opportunities following digitalization to enhance the competitiveness of small businesses and facilitate the emergence of startups (Nurdiana et al., 2023).

Universities play a significant role in stimulating entrepreneurial intentions and shaping entrepreneurial skills (Hoang et al., 2020; Meng et al., 2023). Faculty with entrepreneurship orientation, supportive university policies and culture, and access to entrepreneurship-re-



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Conflict of interest statement:

Author(s) reported no conflict of interest

lated infrastructure and networks are significant for expanding a university entrepreneurial ecosystem (Bezanilla et al., 2020; Wang et al., 2021b). Entrepreneurship education has positively influenced students' entrepreneurial intentions and behaviors (Hoang et al., 2020; Meng et al., 2023; Zhang et al., 2014). Given Naumann's (2017) recommendation to investigate the antecedents of entrepreneurial mindset due to the limited relevant research, this study examined entrepreneurial mindset as a mediating variable.

1. LITERATURE REVIEW AND HYPOTHESES

The theory of planned behavior (TPB) posits that one's activities are driven by factors affecting their intentions (Ajzen, 1991). The TPB model is commonly used to analyze individual behavior. Traditionally, entrepreneurs are inherently talented and can develop without formal entrepreneurship education. However, TPB noted that entrepreneurship education is crucial in developing their knowledge and skills (Seyoum et al., 2021). Previous studies have identified entrepreneurship education, a growth mindset, and technological knowledge as essential components worth building (Hassan et al., 2022). According to Liu et al. (2019), entrepreneurship education enhances students' attitudes, subjective norms, and perceived behavioral control, all of which shape entrepreneurial intentions. This is supported by Ndofirepi (2020), who identified psychological traits such as the need for achievement and risk-taking propensity as mediators in the link between entrepreneurship education and entrepreneurial intention.

Entrepreneurship is recognized as a critical driver of economic growth and innovation, and universities are viewed as "natural incubators" for entrepreneurs (Hasan et al., 2017). Therefore, entrepreneurship education is essential for higher education development (Fan et al., 2022). Its purpose is to require students with the knowledge, capabilities, and mindset necessary for entrepreneurship (Hoang et al., 2020; Liñán et al., 2010). It should focus on theoretical learning and emphasize practical teaching and hands-on experience (Cai et al., 2022). Integrating entrepreneurship education into professional education can increase the quality of entrepreneurial talent development (Xin & Austria, 2023).

Entrepreneurship education significantly shapes digital entrepreneurial intention among students. The integration of digital tools and technologies

into entrepreneurship education has been shown to increase students' intentions to engage in digital entrepreneurship. Lešinskis et al. (2023) suggested the positive impact of digital transformation in entrepreneurship education among Generation Z students, especially through digital tools. Wibowo et al. (2023) found that digital entrepreneurship education directly affects students' intentions to pursue digital ventures, with knowledge and inspiration serving as mediators in this process. Besides, exposure to digital fabrication technologies in entrepreneurship education has been linked to increased entrepreneurial intention. Previous research demonstrated that hands-on experience with digital technologies positively impacts entrepreneurial intentions (Monllor & Soto-Simeone, 2019). Correspondingly, Farani et al. (2017) noted that entrepreneurial knowledge shapes students' intentions to begin new digital ventures.

The assessment and evaluation of entrepreneurship education programs remain a challenge and require further research in this area (Pittaway & Edwards, 2012; Duval-Couetil, 2013). The literature suggests that entrepreneurship education in higher education is significant for fostering entrepreneurial mindsets, skills, and intentions among students' economic growth and innovation (Ashari et al., 2021). Comprehensive and well-designed entrepreneurship education programs can develop entrepreneurial universities and support the transition toward an entrepreneurial society (Bezanilla et al., 2020; Cai et al., 2022).

Moreover, the development of creativity through entrepreneurship education has been categorized as a vital factor in building entrepreneurial intentions. Shi et al. (2020) argue that entrepreneurship education should focus on enhancing creativity, which nurtures entrepreneurial intentions. Al-Omar et al. (2024) affirmed that effective entrepreneurship education programs significantly enhance entrepreneurial intentions by equipping

students with theoretical and practical knowledge. In conclusion, the evidence strongly supports the assertion that entrepreneurship education, particularly when integrated with digital tools and experiential learning, significantly boosts students' digital entrepreneurial intention.

Entrepreneurship education strongly impacts students' entrepreneurial mindset, alertness, and intentions (Saadat et al., 2021; Wardana et al., 2020; Liao et al., 2022). Entrepreneurial mindset mediates the link between entrepreneurship education and entrepreneurial alertness (Saadat et al., 2021). Besides, entrepreneurial attitudes and self-efficacy are mediators between entrepreneurship education and entrepreneurial mindset (Wardana et al., 2020). Furthermore, cognitive mediators are essential for appealing entrepreneurial behavior, and entrepreneurial passion strengthens the link between self-efficacy, attitudes, and entrepreneurial intentions (Liao et al., 2022). These findings suggest that fostering an entrepreneurial mindset within entrepreneurship education programs is vital.

Entrepreneurship education has a strong correlation with entrepreneurial motivation and intentions. It catalyzes building entrepreneurial motivation by requiring students to have important knowledge and competencies. It provides essential knowledge, enhances competencies, and helps change attitudes toward starting a new business (Sánchez, 2013). Martínez-Gregorio (2021) emphasized that entrepreneurship education fosters graduates' transition to entrepreneurship, as it instills a sense of responsibility and encourages enterprising behavior. Similarly, Ahmed et al. (2020) noted that practical activities in entrepreneurship programs strongly influence students' perceptions and beliefs about entrepreneurship, thereby increasing their motivation to begin a new venture. It corresponds to the findings of Farhangmehr et al. (2016) that the abilities and science obtained through entrepreneurship courses significantly improve students' motivation and attitudes toward entrepreneurship.

The impact of entrepreneurship education on motivation is also mediated by some psychological factors. For example, Listyaningsih et al. (2024) suggested that entrepreneurship education enhances competencies and knowledge, which are es-

sential to motivating university graduates toward entrepreneurship. This is supported by Saadat et al. (2021) who notice that entrepreneurship education can increase entrepreneurial motivation, which shows that educational interventions can effectively shape students' entrepreneurial aspirations. In short, entrepreneurship education significantly enhances entrepreneurial motivation among students by providing essential skills, encouraging experiential learning, and offering institutional support. Entrepreneurship education prepares students for entrepreneurial challenges and inspires them to pursue their entrepreneurial aspirations.

The rise of entrepreneurial intention is a complex occurrence affected by various factors. Individual personal characteristics, such as proactive personality, are defined as entrepreneurial intention (Sun et al., 2020), creativity (Ip et al., 2018), and entrepreneurial passion (Anjum et al., 2021). Individuals with strong self-efficacy and entrepreneurial competence, including entrepreneurial knowledge and skills, are more likely to develop entrepreneurial intentions (Liu et al., 2019; Farani et al., 2017). In addition, external factors such as formal and informal entrepreneurship education and training shape entrepreneurial intention through knowledge, skills, and mindset (Do Nguyen & Nguyen, 2023). The family environment, the entrepreneurial background of parents per se, and social support from friends, peers, and the community can positively affect entrepreneurial intention (Zhang et al., 2022; Altınay et al., 2012). Situational factors such as the economic environment and regulations can also affect entrepreneurial intention (Hou et al., 2019). The correspondence between these various factors shapes the development of entrepreneurial intention, which is assumed to be the initial step in the entrepreneurial process (Joensuu-Salo et al., 2022). Entrepreneurial intention is a well-studied concept, and various theories, as well as the theory of planned behavior, have been utilized to comprehend its formation and antecedents (Kautonen et al., 2015). However, research on digital entrepreneurial intention remains limited (Wibowo et al., 2023). Furthermore, Batista-Canino et al. (2024) recommend exploring entrepreneurial intention among non-vocational university groups.

Previous studies have investigated the factors influencing entrepreneurial intentions, with a particular focus on the role of entrepreneurial mindset and digital competence. Entrepreneurial mindset has been found to impact entrepreneurial intentions, either directly or indirectly through self-efficacy (Liao et al., 2022; Jiatong et al., 2021). Digital competence also positively affects entrepreneurial intentions, mediated by individual entrepreneurial orientation (Bachmann et al., 2024). Entrepreneurial education contributes to the development of an entrepreneurial mindset and digital entrepreneurial intention (Liao et al., 2022; Jiatong et al., 2021). Additionally, perceived behavioral control and creativity have been recognized as significant factors influencing entrepreneurial intentions (Jiatong et al., 2021). The link between these factors and entrepreneurial intentions is further moderated by entrepreneurial passion (Liao et al., 2022). Developing entrepreneurial and digital competencies is fundamental to nurturing future entrepreneurs.

Previous research explored the strong correlation between entrepreneurial motivation and entrepreneurial intentions in higher education (Iffan, 2018). Intrinsic and extrinsic motivational factors, such as enjoyment, challenge, and compensation, positively affect digital entrepreneurial intentions (Ridwan & Zaki, 2023). Among female entrepreneurs, motivation shapes entrepreneurial intentions, alertness, and opportunity recognition (Alam et al., 2019). Besides, entrepreneurial knowledge indirectly influences digital entrepreneurial intentions through motivational factors toward digital entrepreneurship and perceived behavioral control (Yaghoubi Farani et al., 2017). Díez-Palomar et al. (2020) explain that education can enhance students' intrinsic motivation through engagement in successful educational activities. Besides, the study suggested that a supportive learning environment can increase students' interest in learning, which directly impacts their motivation. This is also supported by the findings of Listyaningsih et al. (2024), which reveal a direct effect of entrepreneurship education in improving entrepreneurial motivation among university students. Similarly, Purwana and Suhud (2018) found that entrepreneurial motivation increases entrepreneurial intention among university students. Therefore, motivation and knowledge are required

to enhance entrepreneurial intentions, especially in the digital domain. Understanding these factors can help educators and policymakers develop strategies to encourage entrepreneurship among students and aspiring entrepreneurs.

This study explores the mediating role of entrepreneurial mindset in the link between entrepreneurial education and digital entrepreneurial intentions. An entrepreneurial mindset is depicted by characteristics such as opportunity recognition, risk-taking, and a proactive approach to challenges, which collectively develop entrepreneurial intentions and behaviors. Research indicates that an entrepreneurial mindset can significantly enhance students' readiness to start their own ventures by equipping them with the cognitive and emotional tools necessary to drive the complexities of entrepreneurship (Handayati et al., 2020). Entrepreneurial mindset refers to the capacity to generate innovative ideas, solve problems, develop creative fissions, and pursue opportunities (Kuratko et al., 2021). According to Wolcott et al. (2021), fostering a growth mindset in students through education can help them develop through effort and learning. Educational programs that teach a growth mindset have been proven to improve students' resilience to failure and academic performance (Díez-Palomar et al., 2020). Previous research on the role of entrepreneurship education in fostering mindset has also been investigated (Cui et al., 2021; Krueger, 2015; Sun et al., 2023). Structured educational programs emphasizing experiential learning and real-world problem-solving can effectively nurture an entrepreneurial mindset among students. For instance, programs incorporating cognitive training and hands-on projects have been found to enhance students' capability to identify venture business chances and assess their viability (Costa et al., 2018; Chen et al., 2021). Moreover, besides improving students' knowledge, integrating entrepreneurial principles into the curriculum enhances their motivation and self-efficacy, which are crucial for entrepreneurial success (Jung & Lee, 2020; Saadat et al., 2021). Entrepreneurial activities can strengthen this positive mindset, which leads to a strong entrepreneurial culture within educational institutions that can be affected by a supportive university (Wesarat et al., 2022). Then, as students develop these attributes, they become

better prepared to recognize and utilize entrepreneurial chances (Indriyani et al., 2020; Cao & Ngo, 2019). Thus, an entrepreneurial mindset can bridge the relationship between entrepreneurship education and the promotion of digital entrepreneurship intentions.

The importance of entrepreneurship education in building entrepreneurial motivation is widely acknowledged. For instance, enhanced entrepreneurship education is positively correlated with increased entrepreneurial motivation and intentions among students (Hassan et al., 2022; Mónico et al., 2021). Furthermore, this relationship recommends that structured educational programs can effectively cultivate an entrepreneurial mindset. Moreover, risk perception shapes entrepreneurial motivation. Studies indicate that students who perceive entrepreneurial risk as a threat may experience reduced motivation to engage in entrepreneurial activities (Yin & Wu, 2023). Conversely, those who view risk as an opportunity prefer to pursue entrepreneurship. This duality in risk perception suggests the need for educational programs to address and reshape students' understanding of entrepreneurial risk to raise their motivation for innovation (Yin & Wu, 2023).

One of the primary motivations for entrepreneurship is achievement, which has been shown to correlate positively with entrepreneurial intentions. This relationship is supported by studies demonstrating that persons with a high need for accomplishment are more likely to pursue entrepreneurial ventures due to their desire for success and freedom (Kong & Choo, 2022; Saif & Ghania, 2020). Furthermore, psychological factors have been emphasized as mediators in this relationship. For instance, entrepreneurial passion can enhance motivation and drive individuals to overcome defiance in their entrepreneurial journey (Saif & Ghania, 2020). The TPB has been amply formed to elucidate how attitudes, subjective norms, and perceived behavioral control influence entrepreneurial intentions. Furthermore, the theoretical framework suggests that positive attitudes toward entrepreneurship, shaped by motivational factors, can increase the intention to start new ventures (Qamari et al., 2022; Jubari et al., 2018). In this

study, intrinsic motivations, as well as personal fulfillment and a passion for innovation, alongside extrinsic motivations, such as financial rewards, significantly shape entrepreneurial intentions (Barba-Sánchez & Atienza-Sahuquillo, 2017).

The purpose is to provide insights into how entrepreneurship education shapes digital entrepreneurial intention among university students in Indonesia, emphasizing the mediating roles of entrepreneurial motivation and mindset. The study aims to provide fresh insights into the relevant area. First, the study extends the available literature in the education sector by explaining the link between entrepreneurship education and digital entrepreneurial intention. Second, it employs a double mediation mechanism, comprising entrepreneurial mindset and entrepreneurial motivation, in the link between entrepreneurship education and digital entrepreneurial intention. Third, we adopt the theory of planned behavior as the foundation for positioning entrepreneurship education as a key factor in enhancing digital entrepreneurial intention.

Based on the literature review, the following hypotheses are proposed:

- H1: *Entrepreneurship education significantly affects digital entrepreneurial intention.*
- H2: *Entrepreneurship education significantly affects entrepreneurial mindset.*
- H3: *Entrepreneurship education significantly affects entrepreneurial motivation.*
- H4: *Entrepreneurial mindset significantly affects digital entrepreneurial intention.*
- H5: *Entrepreneurial motivation significantly affects digital entrepreneurial intention.*
- H6: *Entrepreneurial mindset mediates the relationship between entrepreneurship education and digital entrepreneurial intention.*
- H7: *Entrepreneurial motivation mediates the relationship between entrepreneurship education and digital entrepreneurial intention.*

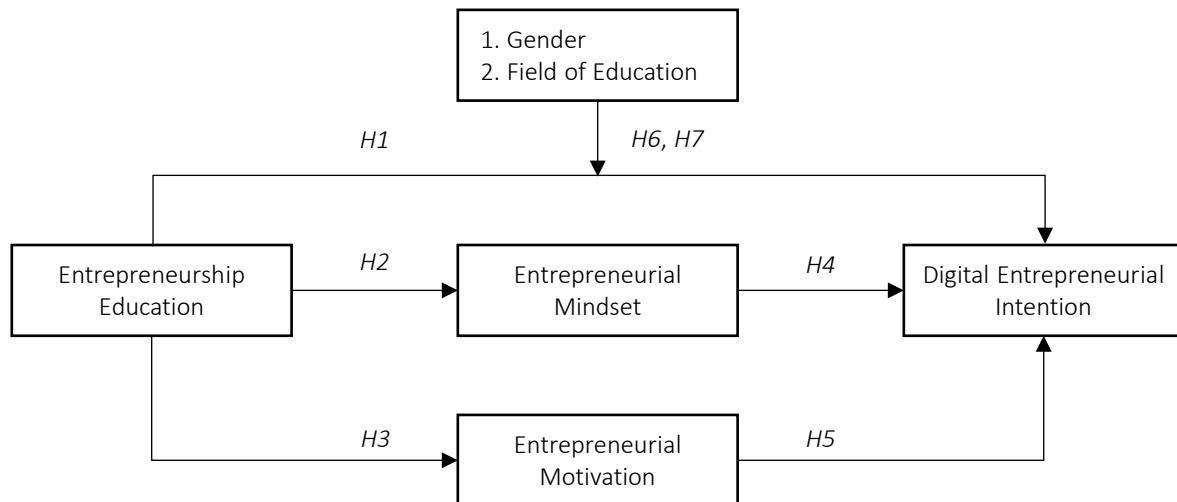


Figure 1. Conceptual framework

2. METHODOLOGY

2.1. Research design

Quantitative approach employed to address the research hypotheses (Figure 1). The study used quota sampling to collect data from 461 students at public and private universities in Indonesia. The population consisted of students enrolled in the independent entrepreneurial academy at Brawijaya University, Indonesia. Respondents were asked to complete a questionnaire with 28 statements designed to gather their perceptions of entrepreneurship education, entrepreneurial mindset, entrepreneurial motivation, and digital entrepreneurial intentions, and to do so anonymously to minimize bias. Subsequently, we employed SEM-PLS procedures, beginning with the development of research instruments based on theoretical constructs, followed by content validity checks and data collection in accordance with the sampling criteria. The cleaned dataset was then analyzed using SmartPLS through two main stages: evaluations of the measurement model and the structural model (Hair et al., 2019). The measurement model was assessed through indicator loadings, composite reliability, Cronbach's alpha, AVE, and discriminant validity using HTMT. Once all criteria were met, the structural model was examined by assessing collinearity, path coefficients, significance levels using bootstrapping, and the values of R^2 , f^2 , and Q^2 to determine the model's predictive strength. In addition, this study conducted a multi-group analysis (MGA) to

compare differences between respondent groups, such as gender or field of study, using the MGA procedures available in SmartPLS. Mediation and moderation analyses were carried out where relevant, and all results were interpreted to address the research hypotheses and objectives.

2.2. Measurement development

To ensure validity and reliability, the study adopted statement items from previous research. Entrepreneurship education was measured using four items proposed by Walter and Block (2016) and Do Nguyen and Nguyen (2023), while the entrepreneurial mindset was measured using four items from Wardana et al. (2020) and Munawar et al. (2023). Entrepreneurial motivation was measured using eleven items from Adeel et al. (2023). Finally, digital entrepreneurial intention was measured using eight items from Wibowo et al. (2023). All statements were based on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Two control variables were used: gender (male and female) and field of study (STEM and non-STEM). These control variables were included to gain more specific and detailed comparisons of the results. The control variables were analyzed using multi-group analysis with SmartPLS version 4.

2.3. Ethical consideration

We obtained ethical approval from the Ethics Committee of Brawijaya University to ensure compliance with institutional and international stan-

dards for studies involving human participants. Before taking part in the study, every participant received a clear explanation regarding the purpose of the research, the steps involved, and their freedom to discontinue participation at any stage without any consequences. Participation was voluntary and based on consent. To ensure objectivity and protect privacy, no identifying information was recorded, and all data were handled with strict confidentiality. The collected information was securely kept and used exclusively for research purposes. Respondents were recruited from entrepreneurship classes at state and private universities in Indonesia using quota sampling. Only those who provided written consent received access to the questionnaire link distributed via WhatsApp. The survey, conducted between January and March 2025 through Google Forms, collected quantitative data on entrepreneurship education, motivation, mindset, and digital entrepreneurial intention.

Data analysis was performed using SmartPLS to ensure robust and transparent statistical interpretation. All data are retained securely and can be made available for editorial verification while maintaining participant confidentiality.

3. RESULTS AND DISCUSSION

The convergent validity test used outer loadings; all items in this study have loading values > 0.70, confirming their validity (Hair et al., 2017) (Table 1). Entrepreneurship education has a loading range between 0.714 and 0.808 (Table 1). Correspondingly, the entrepreneurial mindset has a loading range between 0.716 and 0.830, while the entrepreneurial motivation exhibits a loading range between 0.717 and 0.816. Furthermore, digital entrepreneurial intention has a loading range of 0.706 to 0.796.

Table 1. Convergent validity

Items	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted	Mean	Standard Deviation
Entrepreneurship Education						
ED1	0.808	0.824	0.877	0.588	4.258	0.662
ED2	0.802				4.144	0.653
ED3	0.744				4.296	0.706
ED4	0.775				3.921	0.842
ED5	0.714				3.710	0.744
Entrepreneurial Mindset						
EMind1	0.752	0.781	0.857	0.601	3.885	0.744
EMind2	0.797				4.223	0.613
EMind3	0.830				4.173	0.620
EMind4	0.716				4.035	0.743
Entrepreneurial Motivation						
EMotiv1	0.741	0.892	0.914	0.570	4.256	0.703
EMotiv2	0.732				4.504	0.592
EMotiv3	0.717				4.065	0.738
EMotiv4	0.780				4.333	0.631
EMotiv5	0.816				4.447	0.612
EMotiv6	0.772				4.265	0.684
EMotiv7	0.722				4.278	0.675
EMotiv8	0.755				4.203	0.738
Digital Entrepreneurial Intention						
DEI1	0.721	0.880	0.905	0.544	4.120	0.695
DEI2	0.734				4.375	0.699
DEI3	0.796				4.221	0.739
DEI4	0.716				4.063	0.791
DEI5	0.758				4.548	0.598
DEI6	0.735				4.212	0.744
DEI7	0.706				4.151	0.714
DEI8	0.728				4.370	0.622

Table 2. Heterotrait-monotrait ratio

Variables	Digital entrepreneurial intention	Entrepreneurship education	Entrepreneurial mindset	Entrepreneurial motivation
Digital entrepreneurial intention				
Entrepreneurship education	0.446			
Entrepreneurial mindset	0.403	0.384		
Entrepreneurial motivation	0.812	0.484	0.478	

The construct reliability test was conducted using Cronbach's alpha (CA) and composite reliability (CR), following the recommendation of Hair et al. (2019) with a cutoff value of 0.70. Table 1 indicates that all constructs have CA and CR values > 0.70 and are considered consistent. Table 1 also demonstrates that all constructs' average variance extracted (AVE) values are > 0.50. Thus, they are valid.

Discriminant validity was tested using the heterotrait-monotrait ratio (HTMT) (Table 2). The results indicate that all constructs meet the criteria for discriminant validity, as their HTMT values are below 0.90.

A common method bias was employed to anticipate potential biases, as this paper utilized a self-admin-

istered online survey. To minimize bias, all participants were asked to consent to become respondents with anonymity. Harman's single-factor test found that the first factor only reached 30.2% of the variance, which means relatively far below the minimum criteria of 50% (Podsakoff et al., 2003).

The data analysis results for the inner model testing were based on SEM-PLS using the bootstrapping method. For hypothesis testing, we applied a cut-off *t*-statistic > 1.645 for a one-tailed test and *p*-value < 0.05 (Hair et al., 2019). This study indicates that all hypotheses are accepted (see Table 3), as their *t*-statistics range from 2.130 to 18.338 (> 1.645). *P*-values are < 0.05, except for hypotheses 4 and 7, which are rejected due to *t*-statistics < 1.645 and *p*-values > 0.05.

Table 3. Structural model results

Path	Complete Model			Conclusion
	Coefficient	t-statistic	p-value	
Entrepreneurship education → Digital entrepreneurial intention	0.081	2.130	0.003	Supported
Entrepreneurship education → Entrepreneurial mindset	0.316	6.437	0.000	Supported
Entrepreneurship education → Entrepreneurial motivation	0.423	9.265	0.000	Supported
Entrepreneurial mindset → Digital entrepreneurial intention	0.043	1.137	0.256	Rejected
Entrepreneurial motivation → Digital entrepreneurial intention	0.673	18.338	0.000	Supported
Entrepreneurship education → Entrepreneurial mindset → Digital entrepreneurial intention	0.284	7.864	0.000	Supported
Entrepreneurship education → Entrepreneurial motivation → Digital entrepreneurial intention	0.014	1.074	0.283	Rejected

Table 4. Multigroup analysis by gender

Path	Male		Female	
	Coefficient	t-statistic	Coefficient	t-statistic
Entrepreneurship education → Digital entrepreneurial intention	0.200	3.320**	-0.010	0.191 ^{n.s}
Entrepreneurship education → Entrepreneurial mindset	0.421	6.086***	0.248	3.759***
Entrepreneurship education → Entrepreneurial motivation	0.409	5.336***	0.449	8.407***
Entrepreneurial mindset → Digital entrepreneurial intention	-0.018	0.240 ^{n.s}	0.058	1.344 ^{n.s}
Entrepreneurial motivation → Digital entrepreneurial intention	0.654	10.756***	0.712	15.641
Entrepreneurship education → Entrepreneurial mindset → Digital entrepreneurial intention	0.267	4.570***	0.319	6.935***
Entrepreneurship education → Entrepreneurial motivation → Digital entrepreneurial intention	-0.008	0.230 ^{n.s}	0.014	1.165 ^{n.s}

Note: *** *p* value < 0.001; ** *p* value < 0.05; n.s = not significant.

Table 5. Multigroup analysis by field of education

Path	Exact		Non-Exact	
	Coefficient	t-statistic	Coefficient	t-statistic
Entrepreneurship education → Digital entrepreneurial intention	0.128	2.361**	0.018	0.353 n.s
Entrepreneurship education → Entrepreneurial mindset	0.339	5.933***	0.301	3.396**
Entrepreneurship education → Entrepreneurial motivation	0.457	8.584***	0.371	4.560***
Entrepreneurial mindset → Digital entrepreneurial intention	0.057	1.203 n.s	-0.011	0.157 n.s
Entrepreneurial motivation → Digital entrepreneurial intention	0.610	12.435***	0.791	19.842***
Entrepreneurship education → Entrepreneurial mindset → Digital entrepreneurial intention	0.279	6.391***	0.293	4.417***
Entrepreneurship education → Entrepreneurial motivation → Digital entrepreneurial intention	0.019	1.113 n.s	-0.003	0.137 n.s

Note: *** p value < 0.001; ** p value < 0.05; n.s = not significant.

The findings reveal that exposure to entrepreneurship education is positively associated with digital entrepreneurial intention, although the strength of this relationship remains relatively modest, thereby supporting Hypothesis 1 (H1). It aligns with Wibowo et al. (2023) who found that entrepreneurship education directly influences students' intentions to pursue digital ventures. Furthermore, consistent with the findings of Monllor and Soto-Simeone (2019), the results indicate that hands-on experience with digital technologies positively influences digital entrepreneurship intention, reinforcing the view that practical engagement in digital environments is essential for fostering entrepreneurial aspirations. Compared with previous studies, the present study not only confirms the positive role of experiential digital learning but also extends the evidence to a broader, more contemporary context among Indonesian entrepreneurship students. A notable difference from the previous studies is that while their research focused primarily on exposure to digital fabrication tools within structured innovation environments, this study demonstrates that the effect also emerges within general higher-education settings where access to digital tools and entrepreneurial experiences may vary.

The significant effect of entrepreneurship education on entrepreneurial mindset, as demonstrated by the data analysis, supports Hypothesis 2 (H2). This finding corresponds to Saadat et al. (2021), Wardana et al. (2020), and Liao et al. (2022), who emphasize the importance of cultivating an entrepreneurial mindset within entrepreneurship education programs. Compared with the present study, these prior works similarly highlight that entrepreneurial education shapes students' cogni-

tive foundations; however, this study extends the discussion by demonstrating that entrepreneurial mindset emerges as a direct outcome of entrepreneurship education and functions as a central driver of entrepreneurial intention. Moreover, this study underscores the critical role of cognitive mediators, such as attitudes, self-efficacy, and perceived behavioral control, in translating education into entrepreneurial behavior, offering a broader theoretical explanation of how mindset operates within the formation of entrepreneurial intention. Collectively, these insights enrich previous research by offering a more integrated understanding of how education, mindset, cognition, and passion interact to shape entrepreneurial outcomes.

Regarding the role of entrepreneurship education in entrepreneurial motivation, the current study shows a significant association between them, as evidenced by the statistical analysis, thereby supporting Hypothesis 3 (H3). Sánchez (2013) asserts that entrepreneurship education serves as a vital catalyst for enhancing entrepreneurial motivation, equipping students with the essential knowledge and skills needed to launch new ventures. Entrepreneurship education not only imparts critical knowledge and builds competencies but also positively shifts attitudes toward initiating startups. This view is corroborated by Farhangmehr et al. (2016), who argue that the skills and knowledge gained through entrepreneurship courses significantly enhance students' motivation and positively shape their attitudes toward entrepreneurship. Compared with the present study, which highlights the role of knowledge base and entrepreneurial competencies as key drivers of entrepreneurial motivation, earlier findings reinforce the idea that entrepreneurship education not only

strengthens motivation directly but also enhances the underlying capabilities that support students' entrepreneurial drive.

Surprisingly, the current study revealed that the entrepreneurial mindset does not significantly influence digital entrepreneurial intention. Consequently, Hypothesis 4 (H4) was rejected. There are a few reasons to explain this unexpected finding. Developing an entrepreneurial mindset for the digital economy requires exposure to relevant technologies. However, if students do not engage with digital tools during their education, their entrepreneurial mindset may remain underdeveloped for digital entrepreneurship (Bachmann et al., 2024). While an entrepreneurial mindset encompasses cognitive skills like creativity, opportunity recognition, and risk-taking, these attributes may not translate into digital entrepreneurial behavior if students lack hands-on experience. As emphasized by Cui et al. (2021), without practical applications, the theoretical aspects of the entrepreneurial mindset may fail to enhance strong entrepreneurial intentions. Next, the significant effect of entrepreneurial motivation on digital entrepreneurial intention (H5) was confirmed in the data analysis. According to Ridwan and Zaki (2023), both intrinsic and extrinsic motivational factors, such as enjoyment, challenge, and compensation, positively affect digital entrepreneurial intention. In the same vein, Alam et al. (2019) stated that motivation shapes entrepreneurial intentions, alertness, and opportunity recognition, suggesting that motivation and knowledge are fundamental to strengthening entrepreneurial intentions. This aligns with the comparative study Boucif et al. (2025) extending the theory of planned behavior, which demonstrates that entrepreneurial motivation not only reinforces the intention-behavior link but also enhances the predictive power of TPB, indicating that motivation functions as a key mechanism that translates intention into entrepreneurial action. In terms of the mediating role of entrepreneurial mindset, the current study revealed that entrepreneurial education significantly affects digital entrepreneurial intention through entrepreneurial mindset, as evidenced by the data analysis (t -statistic = 7.864 and $p = 0.000$). This result suggests that an entrepreneurial mindset mediates the link between entrepreneurship education and digital entrepreneurial intention. This finding aligns with Wesarat et al. (2022), who highlight that supportive university environments that encourage entrepre-

neurial activities can reinforce these positive mindsets. Furthermore, Indriyani et al. (2020) and Cao and Ngo (2019) noted that as students develop these attributes, they become better equipped to identify and exploit entrepreneurial opportunities.

However, the current study demonstrated that the role of entrepreneurship education in influencing digital entrepreneurship intention through entrepreneurial motivation was not significant. Entrepreneurial motivation failed to mediate the link between entrepreneurial education and digital entrepreneurial intention among students in Indonesia. A possible explanation is that entrepreneurial motivation in digital contexts may require a stronger focus on innovation, technology, and problem-solving. Meanwhile, traditional entrepreneurship education often emphasizes business fundamentals, which may not align with the motivational drivers of digital entrepreneurship (Bachmann et al., 2024). That said, if entrepreneurship education programs do not align with students' specific aspirations to become digital entrepreneurs, their motivational levels may remain unaffected. Another possible explanation is that motivation is often fueled by practical experiences and tangible outcomes. In the absence of adequate opportunities for hands-on learning, students may find it challenging to link their educational experiences with real-world entrepreneurial opportunities. This disconnect can diminish their entrepreneurial motivation, making it harder for them to see the practical application of their studies in the entrepreneurial field (Lešinskis et al., 2023). Thus, entrepreneurship education has a direct effect on entrepreneurial motivation, yet its effect becomes insignificant when entrepreneurial motivation is introduced as a mediating variable. The divergent findings reflect the complexity of digital entrepreneurial intention that is implicated by various factors, which highlights the multifaceted nature of how entrepreneurial education is taught and perceived, indicating that its effectiveness can vary significantly depending on several underlying variables. Moreover, Wang et al. (2021a) highlighted that access to mentors or social capital frequently acts as a mediator between entrepreneurial education and entrepreneurial intention. Similarly, Wei et al. (2019) observed that in the realm of digital entrepreneurship, motivation can often be substituted by hands-on experience or project-based training. Additionally, Yin and Wu (2023) emphasized that the dual nature of risk perception under-

scores the importance of educational programs in reshaping students' perspectives on entrepreneurial risks.

The current study examines the influence of gender and field of study on hypothesis testing within the complete model by comparing several groups. This approach aimed to ascertain how these demographic factors might affect the relationships posited in the model, thereby offering insights into the varying impacts of entrepreneurship development across different segments of the student population, as showcased in multigroup analysis (MGA) in Tables 4 and 5. Table 4 clarifies the comparison between males and females and shows that entrepreneurship education on digital entrepreneurship intention in female respondents has a weak and non-significant effect. It indicates that among female entrepreneur-

ship students in Indonesia, digital entrepreneurial intention is less likely to be influenced by entrepreneurship education. Furthermore, Table 5 presents a comparison between exact and non-exact fields, and the results indicate that entrepreneurship education on digital entrepreneurship intention for non-exact entrepreneurship students has no significant effect. Correspondingly, Rauch and Frese (2007) show that individual variability is prominent in detecting the effects of control variables such as gender. This shows that, for students studying non-exact subjects such as social science, their digital entrepreneurship intention cannot be improved through entrepreneurship education, because their departments do not offer official courses on entrepreneurship in the curriculum, so they need to look for entrepreneurship courses or workshops independently outside the departments.

CONCLUSION

The purpose of this study was to examine how entrepreneurship education shapes digital entrepreneurial intention through entrepreneurial motivation and entrepreneurial mindset. The findings demonstrate that entrepreneurship education influences digital entrepreneurial intention primarily by strengthening students' entrepreneurial mindset, while entrepreneurial motivation does not serve as a significant mediator. These results suggest that cognitive development, particularly mindset formation, plays a more decisive role than motivational factors in directing students toward digital entrepreneurship.

The multigroup analysis further reveals that the effects of entrepreneurship education vary across student subgroups. Male students from the exact sciences showed a greater increase in entrepreneurial intention when provided with robust entrepreneurship education, indicating that disciplinary background and gender shape how students internalize entrepreneurial learning. These insights highlight the need for more personalized and context-sensitive approaches in designing entrepreneurship education policies, ensuring that educational initiatives are aligned with the diverse ways in which students develop digital entrepreneurial intention.

Overall, this study underscores the importance of cultivating an entrepreneurial mindset through structured entrepreneurship education both within and beyond the classroom. Despite the limited role of entrepreneurial motivation in this study, strengthening students' cognitive readiness remains essential for fostering digital entrepreneurial behavior. Future research should explore additional psychological and contextual factors that interact with mindset, and employ longitudinal designs to capture how intentions develop into entrepreneurial action. Such efforts will enhance theoretical understanding and support universities in developing more adaptive, inclusive, and effective models of entrepreneurship education for the digital era.

AUTHOR CONTRIBUTIONS

Conceptualization: Sri Palupi Prabandari.

Data curation: Eryadi Kordi Masli.

Formal analysis: Erie Awalil Fakhri.

Investigation: Sri Palupi Prabandari.

Methodology: Erie Awalil Fakhri.

Resource: Sri Palupi Prabandari.

Project administration: Erie Awalil Fakhri.

Supervision: Eryadi Kordi Masli.

Validation: Erie Awalil Fakhri.

Writing – original draft: Sri Palupi Prabandari.

Writing – review & editing: Erie Awalil Fakhri, Eryadi Kordi Masli.

REFERENCES

- Adeel, S., Daniel, A. D., & Botelho, A. (2023). The effect of entrepreneurship education on the determinants of entrepreneurial behaviour among higher education students: A multi-group analysis. *Journal of Innovation & Knowledge*, 8(1), Article 100324. <https://doi.org/10.1016/j.jik.2023.100324>
- Ahmed, T., Chandran, V. G. R., Klobas, J. E., Liñán, F., & Kokkalis, P. (2020). Entrepreneurship education programmes: How learning, inspiration and resources affect intentions for new venture creation in a developing economy. *The International Journal of Management Education*, 18(1), Article 100327. <https://doi.org/10.1016/j.ijme.2019.100327>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Alam, M. Z., Kousar, S., & Rehman, C. A. (2019). Role of entrepreneurial motivation on entrepreneurial intentions and behaviour: Theory of planned behaviour extension on engineering students in Pakistan. *Journal of Global Entrepreneurship Research*, 9(1), Article 50. <https://doi.org/10.1186/s40497-019-0175-1>
- Al-Omar, S., Alalawneh, A., & Harb, A. (2024). The impact of entrepreneurship education on entrepreneurial intention: The moderating role of perceived governmental support. *Education+ Training*, 66(7), 777-800. <https://doi.org/10.1108/ET-07-2023-0272>
- Altınay, L., Madanoğlu, M., Daniele, R., & Lashley, C. (2012). The influence of family tradition and psychological traits on entrepreneurial intention. *International Journal of Hospitality Management*, 31(2), 489-499. <https://doi.org/10.1016/j.ijhm.2011.07.007>
- Anjum, T., Heidler, P., Amoozegar, A., & Anees, R. (2021). The impact of entrepreneurial passion on the entrepreneurial intention; Moderating impact of perception of university support. *Administrative Sciences*, 11(2), Article 45. <https://doi.org/10.3390/admsci11020045>
- Ashari, H., Abbas, I., Abdul-Talib, A., & Zamani, S. (2021). Entrepreneurship and sustainable development goals: A multigroup analysis of the moderating effects of entrepreneurship education on entrepreneurial intention. *Sustainability*, 14(1), Article 431. <https://doi.org/10.3390/su14010431>
- Bachmann, N., Rose, R., Maul, V., & Hölzle, K. (2024). What makes for future entrepreneurs? The role of digital competencies for entrepreneurial intention. *Journal of Business Research*, 174, Article 114481. <https://doi.org/10.1016/j.jbusres.2023.114481>
- Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2017). Entrepreneurial motivation and self-employment: Evidence from expectancy theory. *International Entrepreneurship and Management Journal*, 13(4), 1097-1115. <https://doi.org/10.1007/s11365-017-0441-z>
- Batista-Canino, R. M., Santana-Hernández, L., & Medina-Brito, P. (2024). A holistic literature review on entrepreneurial intention: A scientometric approach. *Journal of Business Research*, 174, Article 114480. <https://doi.org/10.1016/j.jbusres.2023.114480>
- Bezaniilla, M., García-Olalla, A., Paños-Castro, J., & Arruti, A. (2020). Developing the entrepreneurial university: Factors of influence. *Sustainability*, 12(3), Article 842. <https://doi.org/10.3390/su12030842>
- Boucif, S. A., Nawang, W. R. W., Saadallah, O., & Mursidi, A. (2025). Extending the theory of planned behavior in predicting entrepreneurial intention among university students: The role of perceived relational support. *The International Journal of Management Education*, 23(2), 101168. <https://doi.org/10.1016/j.ijme.2025.101168>
- Cai, X., Zhao, L., Bai, X., Yang, Z., Jiang, Y., Wang, P., & Huang, Z. (2022). Comprehensive evaluation of sustainable development of entrepreneurship education in Chinese universities using entropy-TOPSIS method. *Sustainability*, 14(22), Article 14772. <https://doi.org/10.3390/su142214772>
- Cao, V., & Ngo, T. (2019). Linking entrepreneurial intentions and mindset models: A comparative study of public and private universities in Vietnam. *Gadjah Mada International Journal of Business*, 21(2). <https://doi.org/10.22146/gamaijb.34753>
- Chen, K., Wan, X., & Chen, P. (2021). Learning outcomes for improving science entrepreneurship in higher education. *Sage Open*, 11(1). <https://doi.org/10.1177/2158244020974678>
- Costa, S., Santos, S., Wach, D., & Caetano, A. (2018). Recognizing opportunities across campus: The effects of cognitive training and entrepreneurial passion on the business opportunity prototype. *Journal of Small Business Management*, 56(1), 51-75. <https://doi.org/10.1111/jsbm.12348>

18. Cui, J., Sun, J., & Bell, R. (2021). The impact of entrepreneurship education on the entrepreneurial mindset of college students in China: The mediating role of inspiration and the role of educational attributes. *The International Journal of Management Education*, 19(1), Article 100296. <https://doi.org/10.1016/j.ijme.2019.04.001>
19. Díez-Palomar, J., García-Carrión, R., Hargreaves, L., & Veites, M. (2020). Transforming students' attitudes towards learning through the use of successful educational actions. *PloS One*, 15(10), Article e0240292. <https://doi.org/10.1371/journal.pone.0240292>
20. Do Nguyen, Q., & Nguyen, H. T. (2023). Entrepreneurship education and entrepreneurial intention: The mediating role of entrepreneurial capacity. *The International Journal of Management Education*, 21(1), Article 100730. <https://doi.org/10.1016/j.ijme.2022.100730>
21. Duval-Couetil, N. (2013). Assessing the impact of entrepreneurship education programs: Challenges and approaches. *Journal of Small Business Management*, 51(3), 394-409. <https://doi.org/10.1111/jsbm.12024>
22. Fan, X., Tian, S., Lu, Z., & Cao, R. (2022). Quality evaluation of entrepreneurship education in higher education based on CIPP model and AHP-FCE methods. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.973511>
23. Farani, A., Karimi, S., & Motaghd, M. (2017). The role of entrepreneurial knowledge as a competence in shaping Iranian students' career intentions to start a new digital business. *European Journal of Training and Development*, 41(1), 83-100. <https://doi.org/10.1108/ejtd-07-2016-0054>
24. Farhangmehr, M., Gonçalves, P., & Sarmento, M. (2016). Predicting entrepreneurial motivation among university students: The role of entrepreneurship education. *Education + Training*, 58(7/8), 861-881. <https://doi.org/10.1108/ET-01-2016-0019>
25. Farliana, N., Murniawaty, I., & Hardianto, H. (2023). Sustainability of the digital economy in Indonesia: Opportunities, challenges and future development. *Review of Business and Economics Studies*, 11(4), 21-28. <https://doi.org/10.26794/2308-944X-2023-11-4-21-28>
26. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning. Retrieved from https://eli.johogo.com/Class/CCU/SEM/_Multivariate%20Data%20Analysis_Hair.pdf
27. Hair, J. F., Hult, G. T. M. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). SAGE Publications, Inc. Retrieved from https://eli.johogo.com/Class/CCU/SEM/_A%20Primer%20on%20Partial%20Least%20Squares%20Structural%20Equation%20Modeling_Hair.pdf
28. Handayati, P., Wulandari, D., Soetjpto, B., Wibowo, A., & Narmaditya, B. (2020). Does entrepreneurship education promote vocational students' entrepreneurial mindset? *Heliyon*, 6(11), Article e05426. <https://doi.org/10.1016/j.heliyon.2020.e05426>
29. Hasan, S. M., Khan, E. A., & Nabi, M. N. U. (2017). Entrepreneurial education at university level and entrepreneurship development. *Education+Training*, 59(7/8), 888-906. <https://doi.org/10.1108/ET-01-2016-0020>
30. Hassan, A., Anwar, I., Saleem, A., Alalyani, W. R., & Saleem, I. (2022). Nexus between entrepreneurship education, motivations, and intention among Indian university students: The role of psychological and contextual factors. *Industry and Higher Education*, 36(5), 539-555. <https://doi.org/10.1177/09504222211053262>
31. Hoang, G., Le, T., Tran, A., & Du, T. (2020). Entrepreneurship education and entrepreneurial intentions of university students in Vietnam: The mediating roles of self-efficacy and learning orientation. *Education + Training*, 63(1), 115-133. <https://doi.org/10.1108/et-05-2020-0142>
32. Hou, F., Su, Y., Lu, M., & Qi, M. (2019). Model of the entrepreneurial intention of university students in the Pearl River Delta of China. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.00916>
33. Iffan, M. (2018). Impact of entrepreneurial motivation on entrepreneurship intention. In *International Conference on Business, Economic, Social Science and Humanities (ICOBEST 2018)* (pp. 208-211). Atlantis Press. <https://doi.org/10.2991/icobest-18.2018.46>
34. Indriyani, R., Darmawan, R., & Gougui, A. (2020). Entrepreneurial spirit among university students in Indonesia. *SHS Web of Conferences*, 76, Article 01042. <https://doi.org/10.1051/shsconf/20207601042>
35. Ip, C., Wu, S., Liu, H., & Liang, C. (2018). Social entrepreneurial intentions of students from Hong Kong. *The Journal of Entrepreneurship*, 27(1), 47-64. <https://doi.org/10.1177/0971355717738596>
36. Jiatong, W., Murad, M., Bajun, F., Tufail, M. S., Mirza, F., & Rafiq, M. (2021). Impact of entrepreneurial education, mindset, and creativity on entrepreneurial intention: Mediating role of entrepreneurial self-efficacy. *Frontiers in Psychology*, 12, Article 724440. <https://doi.org/10.3389/fpsyg.2021.724440>
37. Joensuu-Salo, S., Viljamaa, A., & Varamäki, E. (2022). Sustainable entrepreneurs of the future: The interplay between educational context, sustainable entrepreneurship competence, and entrepreneurial intentions. *Administrative Sciences*, 12(1), Article 23. <https://doi.org/10.3390/admsci12010023>
38. Jubari, I., Hassan, A., & Liñán, F. (2018). Entrepreneurial intention among university students in Malaysia: Integrating self-determination theory and the theory of planned behavior. *International Entrepreneurship and Management Journal*, 15(4), 1323-1342. <https://doi.org/10.1007/s11365-018-0529-0>
39. Jung, E., & Lee, Y. (2020). College students' entrepreneurial mindset: Educational experiences override gender and major. *Sustainability*, 12(19), Article 8272. <https://doi.org/10.3390/su12198272>
40. Kautonen, T., Gelderen, M., & Fink, M. (2015). Robustness of the theory

- of planned behavior in predicting entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 39(3), 655-674. <https://doi.org/10.1111/etap.12056>
41. Kong, H., & Choo, S. (2022). Gender differences in the relationship between achievement motivation and entrepreneurial intention: A conditional process model of entrepreneurship and gender. *Sage Open*, 12(2). <https://doi.org/10.1177/21582440221097897>
 42. Krueger, N. (2015). *Entrepreneurial education in practice. Part 1: The entrepreneurial mindset*. Paris: OCDE. Retrieved from <https://www.oecd.org/content/dam/oecd/en/about/programmes/cfe/skills-for-smes-and-entrepreneurs/e360/E360-Entrepreneurial-Education-in-Practice-part-1.pdf>
 43. Kuratko, D. F., Fisher, G., & Audretsch, D. B. (2021). Unraveling the entrepreneurial mindset. *Small Business Economics*, 57(4), 1681-1691. <https://doi.org/10.1007/s11187-020-00372-6>
 44. Lešinskis, K., Mavļutova, I., Spilbergs, A., & Hermanis, J. (2023). Digital transformation in entrepreneurship education: The use of a digital tool KABADA and entrepreneurial intention of generation Z. *Sustainability*, 15(13), Article 10135. <https://doi.org/10.3390/su151310135>
 45. Liao, Y. K., Nguyen, V. H. A., Chi, H. K., & Nguyen, H. H. (2022). Unraveling the direct and indirect effects of entrepreneurial education and mindset on entrepreneurial intention: The moderating role of entrepreneurial passion. *Global Business and Organizational Excellence*, 41(3), 23-40. <https://doi.org/10.1002/joe.22151>
 46. Liñán, F., Cohard, J., & Rueda-Cantuche, J. (2010). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, 7(2), 195-218. <https://doi.org/10.1007/s11365-010-0154-z>
 47. Listyaningsih, E., Mufahamah, E., Mukminin, A., Ibarra, F. P., Santos, M. R. H. M. D., & Quicho, R. F. (2024). Entrepreneurship education, entrepreneurship intentions, and entrepreneurship motivation on students' entrepreneurship interest in entrepreneurship among higher education students. *Power and Education*, 16(3), 297-313. <https://doi.org/10.1177/17577438231217035>
 48. Liu, X., Lin, C., Zhao, G., & Zhao, D. (2019). Research on the effects of entrepreneurial education and entrepreneurial self-efficacy on college students' entrepreneurial intention. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.00869>
 49. Meng, D., Shang, Y., Zhang, X., & Li, Y. (2023). Does entrepreneurship policy encourage college graduates' entrepreneurship behavior: The intermediary role based on entrepreneurship willingness. *Sustainability*, 15(12), Article 9492. <https://doi.org/10.3390/su15129492>
 50. Mónico, L., Carvalho, C., Nejati, S., Arraya, M., & Parreira, P. (2021). Entrepreneurship education and its influence on higher education students' entrepreneurial intentions and motivation in Portugal. *Bar – Brazilian Administration Review*, 18(3). <https://doi.org/10.1590/1807-7692bar2021190088>
 51. Monllor, J., & Soto-Simeone, A. (2019). The impact that exposure to digital fabrication technology has on student entrepreneurial intentions. *International Journal of Entrepreneurial Behaviour & Research*, 26(7), 1505-1523. <https://doi.org/10.1108/ijeb-04-2019-0201>
 52. Munawar, S., Yousaf, H. Q., Ahmed, M., & Rehman, S. (2023). The influence of online entrepreneurial education on entrepreneurial success: An empirical study in Pakistan. *The International Journal of Management Education*, 21(1), Article 100752. <https://doi.org/10.1016/j.ijme.2022.100752>
 53. Myovella, G., Karacuka, M., & Haucap, J. (2020). Digitalization and economic growth: A comparative analysis of Sub-Saharan Africa and OECD economies. *Telecommunications Policy*, 44(2), Article 101856. <https://doi.org/10.1016/j.telpol.2019.101856>
 54. Naumann, C. (2017). Entrepreneurial mindset: A synthetic literature review. *Entrepreneurial Business and Economics Review*, 5(3), 149-172. <https://doi.org/10.15678/EBER.2017.050308>
 55. Ndofirepi, T. (2020). Relationship between entrepreneurship education and entrepreneurial goal intentions: Psychological traits as mediators. *Journal of Innovation and Entrepreneurship*, 9(1). <https://doi.org/10.1186/s13731-020-0115-x>
 56. Nurdiana, E. D., Hariyani, H. F., & Boedirochminarni, A. (2023). The impact of digitalization and economic openness on economic growth in ASEAN countries. *Journal of Economics & Development Studies*, 24(2), 331-345. <https://doi.org/10.18196/jesp.v24i2.18335>
 57. Pittaway, L., & Edwards, C. (2012). Assessment: Examining practice in entrepreneurship education. *Education + Training*, 54(8/9), 778-800. <https://doi.org/10.1108/00400911211274882>
 58. Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879. <https://doi.org/10.1037/0021-9010.88.5.879>
 59. Purwana, D., & Suhud, U. (2018). Investigating the effect of motivation on entrepreneurial intention: Three different approaches. *Problems and Perspectives in Management*, 16(2), 200-208. [http://dx.doi.org/10.21511/ppm.16\(2\).2018.18](http://dx.doi.org/10.21511/ppm.16(2).2018.18)
 60. Qamari, I., Azizah, S., & Farahdiba, D. (2022). Determinants of entrepreneurial intentions: Evidence from undergraduate students. *Journal of Theory and Applied Management*, 15(2), 274-285. <https://doi.org/10.20473/jmtt.v15i2.36537>
 61. Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of work and organizational psychology*, 16(4), 353-385. <https://doi.org/10.1080/13594320701595438>
 62. Ridwan, M., & Zaki, A. (2023). Indonesian students' digital entrepreneurial intention from the

- perspective of self-determination theory. *Journal of Applied Business Administration*, 7(2), 209-218. <https://doi.org/10.30871/jaba.v7i2.6255>
63. Saadat, S., Aliakbari, A., Majd, A. A., & Bell, R. (2021). The effect of entrepreneurship education on graduate students' entrepreneurial alertness and the mediating role of entrepreneurial mindset. *Education+ Training*, 64(7), 892-909. <https://doi.org/10.1108/ET-06-2021-0231>
 64. Saif, H., & Ghania, U. (2020). Need for achievement as a predictor of entrepreneurial behavior: The mediating role of entrepreneurial passion for founding and entrepreneurial interest. *International Review of Management and Marketing*, 10(1), 40-53. <https://doi.org/10.32479/irmm.8949>
 65. Sánchez, J. C. (2013). The impact of an entrepreneurship education program on entrepreneurial competencies and intention. *Journal of Small Business Management*, 51(3), 447-465. <https://doi.org/10.1111/jsbm.12025>
 66. Seyoum, B., Chinta, R., & Mujtaba, B. G. (2021). Social support as a driver of social entrepreneurial intentions: The moderating roles of entrepreneurial education and proximity to the US small business administration. *Journal of Small Business and Enterprise Development*, 28(3), 337-359. <https://doi.org/10.1108/JSBED-08-2020-0306>
 67. Shi, Y., Yuan, T., Bell, R., & Wang, J. (2020). Investigating the relationship between creativity and entrepreneurial intention: The moderating role of creativity in the theory of planned behavior. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01209>
 68. Sun, H., Ni, W., Teh, P., & Lo, C. (2020). The systematic impact of personal characteristics on entrepreneurial intentions of engineering students. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01072>
 69. Sun, J., Shi, J., & Zhang, J. (2023). From entrepreneurship education to entrepreneurial intention: Mindset, motivation, and prior exposure. *Frontiers in Psychology*, 14, Article 954118. <https://doi.org/10.3389/fpsyg.2023.954118>
 70. Walter, S. G., & Block, J. H. (2016). Outcomes of entrepreneurship education: An institutional perspective. *Journal of Business Venturing*, 31(2), 216-233. <https://doi.org/10.1016/j.jbusvent.2015.10.003>
 71. Wang, Q., Sun, Z., & Wu, C. (2021a). The impact of university innovation and entrepreneurship education on entrepreneurial intention from the perspective of educational psychology. *Frontiers in Psychology*, 12, Article 745976. <https://doi.org/10.3389/fpsyg.2021.745976>
 72. Wang, S., Wu, X., Xu, M., Chen, Q., & Gu, Y. (2021b). The evaluation of synergy between university entrepreneurship education ecosystem and university students' entrepreneurship performance. *Mathematical Problems in Engineering*. <https://doi.org/10.1155/2021/3878378>
 73. Wardana, L. W., Narmaditya, B. S., Wibowo, A., Mahendra, A. M., Wibowo, N. A., Harwida, G., & Rohman, A. N. (2020). The impact of entrepreneurship education and students' entrepreneurial mindset: The mediating role of attitude and self-efficacy. *Heliyon*, 6(9). <https://doi.org/10.1016/j.heliyon.2020.e04922>
 74. Wei, X., Liu, X., & Sha, J. (2019). How does the entrepreneurship education influence the students' innovation? Testing on the multiple mediation model. *Frontiers in Psychology*, 10, Article 1557. <https://doi.org/10.3389/fpsyg.2019.01557>
 75. Wesarat, P., Benrit, P., Panrod, W., Tongsamsi, K., Useng, N., Kaewsaeng-on, R., & Tansui, D. (2022). Identifying students' entrepreneurial mindset for the bachelor of business administration program, faculty of humanities and social sciences, prince of Songkla university. *Kne Social Sciences*, 7(14), 1-11. <https://doi.org/10.18502/kss.v7i14.11946>
 76. Wibowo, A., Narmaditya, B. S., Suparno, Sebayang, K. D. A., Mukhtar, S., & Shafiai, M. H. M. (2023). How does digital entrepreneurship education promote entrepreneurial intention? The role of social media and entrepreneurial intuition. *Social Sciences & Humanities Open*, 8(1), Article 100681. <https://doi.org/10.1016/j.ssaho.2023.100681>
 77. Wolcott, M. D., McLaughlin, J. E., Hann, A., Miklavec, A., Beck Dallaghan, G. L., Rhoney, D. H., & Zomorodi, M. (2021). A review to characterise and map the growth mindset theory in health professions education. *Medical Education*, 55(4), 430-440. <https://doi.org/10.1111/medu.14381>
 78. Xin, Y., & Austria, R. S. (2023). Entrepreneurship education practice and challenges in e-commerce in higher vocational colleges. *Frontiers in Educational Research*, 6(24). <https://doi.org/10.25236/fer.2023.062409>
 79. Yaghoubi Farani, A., Karimi, S., & Motaghed, M. (2017). The role of entrepreneurial knowledge as a competence in shaping Iranian students' career intentions to start a new digital business. *European Journal of Training and Development*, 41(1), 83-100. <https://doi.org/10.1108/EJTD-07-2016-0054>
 80. Yin, L., & Wu, Y. (2023). Opportunities or threats? The role of entrepreneurial risk perception in shaping the entrepreneurial motivation. *Journal of Risk and Financial Management*, 16(1), Article 48. <https://doi.org/10.3390/jrfm16010048>
 81. Zhang, L., Li, Q., Zhou, T., Li, C., Gu, C., & Zhao, X. (2022). Social creativity and entrepreneurial intentions of college students: Mediated by career adaptability and moderated by parental entrepreneurial background. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.893351>
 82. Zhang, Y., Duysters, G., & Clodt, M. (2014). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International Entrepreneurship and Management Journal*, 10(3), 623-641. <https://doi.org/10.1007/s11365-012-0246-z>