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Modeling entrepreneurial intentions among vocational high school students: The roles of education, family, and school support

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ABSTRACT

This study explores the determinants of entrepreneurial intentions among vocational high school students, emphasizing the roles of entrepreneurial education, family support, and school support, with entrepreneurial self-efficacy as a mediating variable. Using a quantitative research approach, data were collected from 214 students enrolled in the Business and Marketing Department of a vocational high school in Indonesia. The results show that school support has a significant direct influence on entrepreneurial intentions, while entrepreneurial self-efficacy serves as a crucial mediator between external support systems and students' entrepreneurial aspirations. Notably, although school support exerts the strongest direct effect, its mediated effect through self-efficacy is comparatively smaller. These findings highlight the importance of developing robust educational frameworks, enhancing family encouragement, and strengthening institutional support to cultivate entrepreneurial mindsets among vocational students. The findings of this study have several practical implications, including the need for curriculum development, targeted teacher training in entrepreneurship education, and fostering collaboration between families and schools. This study contributes to the existing literature by proposing a comprehensive model of entrepreneurial intention formation within vocational education, particularly relevant to emerging economies.

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Keywords:
Entrepreneurial intentions; entrepreneurial education; entrepreneurial self-efficacy; family support; school support

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Introduction

Entrepreneurship is increasingly recognized as a critical engine for economic growth, innovation, and societal development across the world (Butt et al., 2022). It plays a fundamental role in reducing poverty, enhancing social well-being (Hassan, 2020), and addressing unemployment challenges. In Indonesia, unemployment remains a pressing concern, with data from the Central Bureau of Statistics (2023) revealing that 7.86 million individuals were unemployed between 2019 and August 2023. Particularly concerning is the consistently high unemployment rate among vocational high school (SMK) graduates

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(Setya, 2022). Many graduates find it difficult to transition into the workforce, often favoring the pursuit of stable jobs over venturing into entrepreneurship, largely due to the perceived risks and uncertainties associated with starting a business (Ismara et al., 2021; Ventista & Brown, 2023). As entrepreneurship is essential not only for individual self-sufficiency but also for broader economic prosperity, enhancing entrepreneurial intentions among young people becomes a strategic priority. Previous research has consistently shown that education plays a pivotal role in fostering entrepreneurial skills and intentions (Fatoki, 2014; Hoang et al., 2021). Entrepreneurial intention, considered a strong predictor of entrepreneurial behavior, is widely used to measure the effectiveness of entrepreneurship education programs (Saoula et al., 2023; Shi et al., 2020). Successful development of entrepreneurial intention can contribute to the growth of creative industries and innovation-driven economies (Anjum et al., 2021), making it a key focus area for educational institutions and policymakers alike.

In response to these challenges, the Indonesian government has placed increasing emphasis on strengthening entrepreneurship education within vocational high schools. Vocational education in Indonesia is designed to equip students with job-ready skills, yet there remains a growing realization that entrepreneurial skills are equally crucial for fostering self-employment and business creation. Various initiatives, such as curriculum revisions and specialized entrepreneurship programs, have been introduced to enhance students' entrepreneurial competencies. However, despite these efforts, vocational graduates still face barriers in translating their education into entrepreneurial action (Al-Tekreeti et al., 2024). The implementation of entrepreneurship education in vocational schools often lacks standardization, comprehensive support systems, and practical exposure to real-world business activities. Moreover, the relevance and effectiveness of entrepreneurship curricula in online business and marketing majors have come under increasing scrutiny. A robust entrepreneurship education not only imparts technical business knowledge but also cultivates entrepreneurial mindsets, self-efficacy, resilience, and opportunity recognition—traits essential for successful entrepreneurs. Hence, evaluating and improving entrepreneurship education in Indonesian vocational schools is both timely and necessary to bridge the gap between education and employment outcomes.

Previous studies have examined various factors influencing entrepreneurial intentions among students. Fatoki (2014) and Hoang et al. (2021) emphasized the central role of entrepreneurship education in shaping students' entrepreneurial mindsets. However, findings across the literature remain mixed. Some research, such as Khalifa and Dhiaf (2016) and Nowiński et al. (2019), reported that entrepreneurship education positively influences entrepreneurial intentions, while others observed minimal or no significant effects. Beyond education, external support systems such as family and school environments have also been identified as crucial determinants (Hameed & Irfan, 2019). Family support provides emotional encouragement, financial backing, and role models that can inspire entrepreneurial aspirations, whereas school support facilitates a conducive learning environment and exposure to entrepreneurial activities. Furthermore, entrepreneurial self-efficacy—the belief in one's ability to successfully perform entrepreneurial tasks—has been increasingly recognized as a vital mediating variable between external influences and entrepreneurial intentions (Saoula et al., 2023; Hareb et al., 2023). Understanding the interplay among these factors is essential, particularly in the context of vocational education, where students are expected to transition rapidly into the workforce or entrepreneurial endeavors.

Despite the growing body of research on entrepreneurial intentions, significant gaps remain. Much of the existing literature has focused predominantly on university students in developed countries, with limited attention given to vocational high school students, especially in emerging economies like Indonesia (Sahid et al., 2024; Shi et al., 2020; Sim et al., 2023). Furthermore, there is a lack of comprehensive models that integrate entrepreneurship education, family support, and school support, with

entrepreneurial self-efficacy serving as a mediating factor, particularly in the vocational education context. Given that 2.2 million vocational graduates in Indonesia were reported to be neither pursuing higher education nor entering the workforce as of 2024 (Central Bureau of Statistics, 2024), there is an urgent need to identify and address the factors influencing their entrepreneurial intentions. This research is motivated by the pressing need to provide practical insights for policymakers, educators, and other stakeholders aiming to strengthen entrepreneurship outcomes among vocational graduates. It also seeks to fill the theoretical gap by proposing a more integrated and contextualized model of entrepreneurial intention formation.

Therefore, this study aims to investigate how entrepreneurial education, family support, and school support influence the entrepreneurial intentions of vocational high school students in Indonesia, with entrepreneurial self-efficacy acting as a mediating variable. By focusing on students majoring in online business and marketing, the study targets a group with direct relevance to entrepreneurial careers. The findings are expected to contribute significantly to the theoretical understanding of entrepreneurial intention formation in vocational contexts and offer practical recommendations for enhancing curriculum design, teacher training, and collaboration between schools and families. In doing so, the study not only expands the existing literature, predominantly centered on university students, but also provides actionable insights for improving the employability and entrepreneurial outcomes of vocational high school graduates in emerging economies.

Hypotheses Development

Self-efficacy refers to an individual's belief in their ability to successfully execute actions required to achieve specific goals (Bandura & Walters, 1966). In the entrepreneurial context, individuals with higher self-efficacy perceive challenges as surmountable and are more likely to engage in entrepreneurial activities (Otache et al., 2021). Entrepreneurial education plays a critical role in enhancing students' entrepreneurial self-efficacy by providing relevant skills, knowledge, and practical experiences. Exposure to entrepreneurial curricula, business simulations, and experiential learning strengthens students' belief in their entrepreneurial capabilities (Mozahem & Adlouni, 2021; Nowiński et al., 2019; Qin, 2024). Several empirical studies have found that students who undergo comprehensive entrepreneurial education demonstrate higher levels of self-efficacy compared to their peers without such exposure. Therefore, this study proposes the following hypothesis:
H_1: Entrepreneurial education positively influences entrepreneurial self-efficacy.

Family support has long been recognized as a vital external factor in shaping entrepreneurial outcomes. Families provide emotional encouragement, financial resources, and social capital, all of which reduce the perceived risks and uncertainties associated with entrepreneurship (López-Núñez et al., 2022; Maran et al., 2022). A supportive family environment fosters a sense of security and boosts confidence, particularly when family members themselves possess entrepreneurial experience (Bazan et al., 2020; Portuguez Castro & Gómez Zermeño, 2020). Research shows that students who receive encouragement and backing from their families are more likely to develop stronger entrepreneurial self-efficacy, perceiving entrepreneurial careers as achievable and desirable. Based on this theoretical and empirical foundation, the following hypothesis is formulated:
H_2: Family support positively influences entrepreneurial self-efficacy.

Educational institutions play a pivotal role in fostering entrepreneurial attitudes by creating an environment that nurtures self-efficacy. Schools that offer structured entrepreneurship programs, mentorship opportunities, and access to entrepreneurial resources positively impact students' confidence in their entrepreneurial abilities

(Moraes et al., 2018; Saeed et al., 2015). In particular, vocational schools, which blend theoretical learning with practical application, can significantly influence entrepreneurial self-efficacy when supportive environments and real-world exposure are provided (Turker & Selcuk, 2009). Through activities like business competitions, internships, and hands-on projects, schools help students build the competence needed for entrepreneurial success. Thus, this study hypothesizes:
H_3: School support positively influences entrepreneurial self-efficacy.

Entrepreneurial self-efficacy is widely regarded as one of the most robust predictors of entrepreneurial intentions. It reflects an individual's confidence in performing entrepreneurial tasks effectively and overcoming potential barriers (Dissanayake, 2014; Laviolette et al., 2012). High levels of entrepreneurial self-efficacy encourage risk-taking, opportunity recognition, and resilience, all essential elements of entrepreneurial behavior. Empirical studies consistently report that individuals with stronger entrepreneurial self-efficacy demonstrate higher entrepreneurial intentions (Peng & Tao, 2022; Puni et al., 2018; Roy et al., 2017). In light of these findings, the following hypothesis is proposed:
H_4: Entrepreneurial self-efficacy positively influences entrepreneurial intentions.

Entrepreneurial education is not only instrumental in developing skills and knowledge but also in directly shaping students' career aspirations toward entrepreneurship. Effective entrepreneurship programs foster entrepreneurial attitudes, innovative thinking, and opportunity-seeking behaviors (Kirkley, 2017;). Numerous studies across different educational levels confirm that students exposed to entrepreneurial education are more likely to develop intentions to start their own businesses (Nowiński et al., 2019; Pedrini et al., 2017). Entrepreneurial education also demystifies the entrepreneurial process, making business ownership a more accessible and attractive career path. Therefore, the following hypothesis is formulated:
H_5: Entrepreneurial education positively influences entrepreneurial intentions.

Family support is a critical external factor influencing entrepreneurial intentions. Families provide not only financial and logistical support but also emotional encouragement, shaping students' perceptions of entrepreneurship as a viable career option (Moussa & Kerkeni, 2021). A supportive family environment reduces fear of failure and builds entrepreneurial confidence, motivating students to pursue entrepreneurial endeavors (Sherman et al., 2016). Studies have demonstrated that students who perceive strong family support are more likely to develop entrepreneurial intentions. Based on this, the following hypothesis is proposed:
H_6: Family support positively influences entrepreneurial intentions.

In addition to family support, the school environment plays a key role in fostering entrepreneurial intentions. Schools that offer supportive learning environments, experiential entrepreneurship activities, and mentorship significantly influence students' entrepreneurial aspirations (Fayolle & Gailly, 2015; Zhao et al., 2005). Exposure to entrepreneurial ecosystems within educational institutions enables students to visualize entrepreneurship as an achievable career path. By integrating theoretical knowledge with practical entrepreneurial experience, schools can create fertile ground for the development of entrepreneurial intentions. Thus, the study hypothesizes:
H_7: School support positively influences entrepreneurial intentions.

Entrepreneurial self-efficacy not only directly influences entrepreneurial intentions but also acts as a mediator in the relationship between entrepreneurial education and entrepreneurial intentions. Gielnik et al. (2017) and Hoang et al. (2021) highlighted that entrepreneurial education enhances students' self-efficacy, which in turn strengthens their intentions to pursue entrepreneurship. Rather than entrepreneurial education

influencing intentions directly, it builds the internal belief necessary for entrepreneurial action. Consequently, the following hypothesis is proposed:
H_8: Entrepreneurial self-efficacy mediates the relationship between entrepreneurial education and entrepreneurial intentions.

Similarly, entrepreneurial self-efficacy mediates the relationship between family support and entrepreneurial intentions. Supportive family environments enhance students' entrepreneurial self-efficacy by providing encouragement, resources, and role models. This heightened self-efficacy then translates into stronger entrepreneurial intentions. Thus, the mediation mechanism suggests that family support indirectly influences entrepreneurial aspirations through its impact on self-efficacy. Therefore, the following hypothesis is formulated:
H_9: Entrepreneurial self-efficacy mediates the relationship between family support and entrepreneurial intentions.

Finally, entrepreneurial self-efficacy also mediates the relationship between school support and entrepreneurial intentions. When students perceive strong institutional support through entrepreneurial programs, mentoring, and practical opportunities, their entrepreneurial self-efficacy is enhanced (Nguyen et al., 2023; Sharma & Singh, 2024). This increased confidence empowers students to transform entrepreneurial aspirations into intentions. Therefore, the study proposes:
H_{10}: Entrepreneurial self-efficacy mediates the relationship between school support and entrepreneurial intentions.

This study builds upon the frameworks proposed by Saoula et al. (2023) and Hareb et al. (2023), who investigated the influence of entrepreneurial education, family support, and school support on entrepreneurial intentions through the mediating role of entrepreneurial self-efficacy. By adapting and extending their models, this research specifically focuses on vocational high school students in Indonesia, offering new insights into the interaction of internal and external factors shaping entrepreneurial intentions in emerging economies. Figure 1 presents the research model for this study.

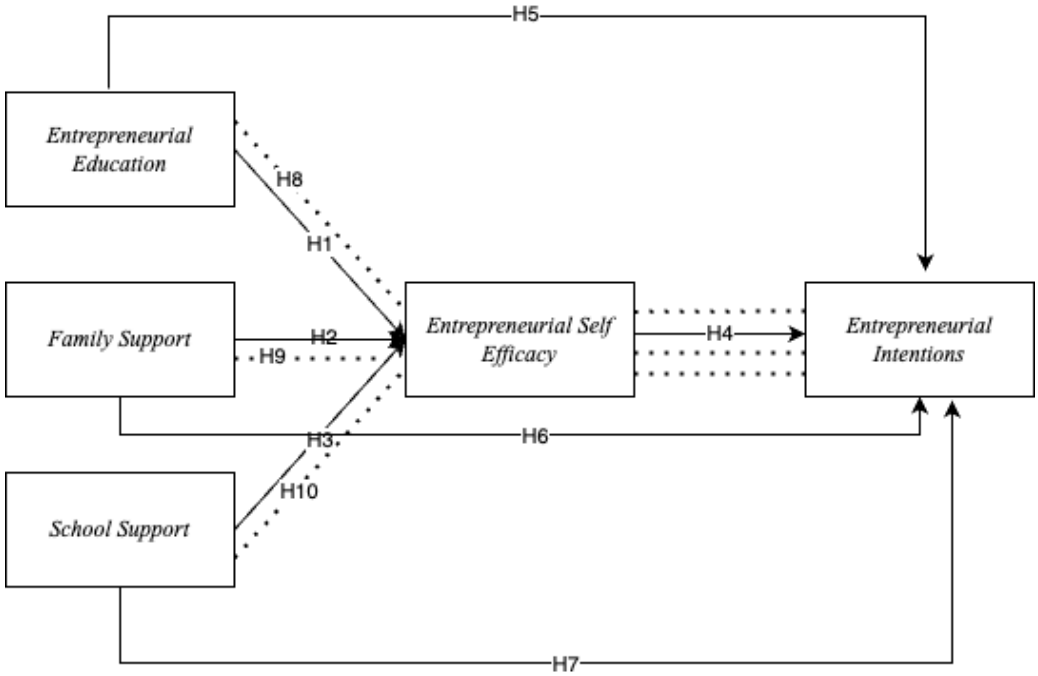

Figure 1. Research model

Method

This study employed a quantitative research approach, emphasizing the collection and analysis of numerical data to examine the relationships among entrepreneurial education, family support, school support, entrepreneurial self-efficacy, and entrepreneurial intentions (Leavy, 2017; Sekaran & Bougie, 2019). A survey method was utilized, which is appropriate for hypothesis testing and for understanding patterns across a larger population in a systematic manner. Surveys allow researchers to capture perceptions, attitudes, and behaviors in a relatively efficient manner, making them highly suitable for the objectives of this study. Data were collected at a single point in time using a cross-sectional design, enabling the analysis of associations among variables without the influence of time-based changes (Sekaran & Bougie, 2019). This design was particularly appropriate given the study's aim to model the determinants of entrepreneurial intention at a specific stage in the students' educational journey.

The research setting was vocational high schools (SMK) in Indonesia, specifically targeting students enrolled in the Online Business and Marketing Department. These students were selected because their study program places a strong emphasis on entrepreneurial knowledge and skills development. The participants were 11th and 12th grade students who had completed coursework related to entrepreneurship. A purposive sampling technique was used to ensure that respondents had exposure to entrepreneurial education. In total, 214 valid responses were collected via an online survey distributed through Google Forms. The sample size exceeded the minimum required number of 138 respondents, which was determined using the G-Power statistical tool to ensure adequate power for detecting effects in the model. The unit of analysis for this study was the individual student, making it possible to capture personal perceptions of support, self-efficacy, and entrepreneurial intentions.

The instrument used for data collection was a structured questionnaire adapted from well-established studies. Each key construct—entrepreneurial education, family support, school support, entrepreneurial self-efficacy, and entrepreneurial intentions—was measured using multi-item scales on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items for entrepreneurial education were adapted from Nowiński et al. (2019); family support from López-Núñez et al. (2022); school support from Saeed et al. (2015); entrepreneurial self-efficacy from Mozahem and Adlouni (2021); and entrepreneurial intention from Peng and Tao (2022). A pilot test was conducted on 30 students to refine the instrument in terms of clarity and reliability. Based on the pilot results, minor modifications were made to improve the phrasing of items to better fit the local context and student understanding.

For data analysis, this study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4.0 software. PLS-SEM was selected because of its ability to model complex relationships among latent variables, its suitability for exploratory research, and its robustness in handling small to moderate sample sizes (Ghozali & Latan, 2015). Furthermore, PLS-SEM does not require strict assumptions about data normality, making it an appropriate choice given the nature of the collected data. The analysis proceeded in two main stages: first, evaluating the measurement model by assessing construct reliability (Cronbach's alpha and composite reliability), convergent validity (average variance extracted, or AVE), and discriminant validity; second, evaluating the structural model to test the hypothesized relationships between constructs. The significance of path coefficients was assessed using the bootstrapping method with 5,000 resamples, ensuring robust estimation of standard errors and confidence intervals. Model fit was also evaluated using the Standardized Root Mean Square Residual (SRMR) to ensure the model's adequacy. This comprehensive analytical approach provided strong empirical support for the study's conclusions regarding the drivers of entrepreneurial intentions among vocational high school students in Indonesia.

Results

Participants' Data

The demographic profile of the participants, as shown in Table 1, indicates that a significant majority of the respondents were female, accounting for 87.6% (N = 184), while males represented only 12.4% (N = 26). This gender distribution reflects the broader demographic pattern within the Online Business and Marketing Department at Vocational High School, where female students tend to dominate enrollment in business-oriented study programs. This composition may have implications for interpreting the findings, suggesting that entrepreneurial education and support structures might need to be tailored to better engage female students, who constitute the primary target group. In terms of academic level, the distribution between 11th-grade and 12th-grade students was perfectly balanced, with each group comprising 50% of the sample (N = 105). This balance ensures that the data captures perspectives from students at different stages of their vocational education journey, providing a more comprehensive understanding of how entrepreneurial intentions develop over time. Additionally, the inclusion of both grades allows for potential comparison across academic stages, offering insights into whether exposure to entrepreneurial education and support systems yields cumulative effects as students progress through their studies.

Table 1. Participants' data

N	Aspects	Category	Frequency	Percentage (%)
214	Gender	Female	184	87
		Male	30	12.4
	Group class	Class 11	105	50
		Class 12	105	50

Validity and Reliability

According to Ghozali and Latan (2015), the outer model—also known as the measurement model—is used to evaluate the validity and reliability of the constructs within a study. In assessing convergent validity, the guidelines suggest that the factor loadings for confirmatory research should be greater than 0.7, while an acceptable range for exploratory research lies between 0.6 and 0.7 (Ghozali & Latan, 2015). Additionally, the Average Variance Extracted (AVE) should exceed 0.5 to confirm adequate convergent validity. As shown in Table 2, all constructs in this study meet or surpass these criteria. Specifically, the factor loadings for Entrepreneurial Education (EE) range from 0.884 to 0.916, Entrepreneurial Self-Efficacy (ESE) from 0.888 to 0.944, Family Support (FS) from 0.848 to 0.914, School Support (SS) from 0.898 to 0.927, and Entrepreneurial Intentions (EI) from 0.920 to 0.954. These values indicate that each indicator strongly represents its respective latent construct. Moreover, the AVE values for all constructs—EE (0.792), ESE (0.833), FS (0.785), SS (0.837), and EI (0.880)—all exceed the threshold of 0.5, demonstrating that over 50% of the variance is explained by the constructs, thus confirming strong convergent validity.

Reliability was assessed using both Cronbach's alpha (α) and composite reliability (CR). Based on Hair et al. (2017), a Cronbach's alpha value above 0.7 indicates acceptable internal consistency. Hair et al. (2017) similarly emphasize that CR values should surpass 0.7 to confirm reliable constructs. The results in Table 2 show that all constructs demonstrate excellent internal reliability, with Cronbach's alpha values of EE (0.934), ESE (0.967), FS (0.954), SS (0.972), and EI (0.977). In parallel, the composite reliability values are equally robust: EE (0.950), ESE (0.972), FS (0.962), SS (0.975), and EI (0.981). These outcomes affirm that the measurement instruments are not only valid but also

consistently reliable across all constructs. Therefore, the measurement model in this study provides a strong foundation for further structural analysis, ensuring that the relationships among entrepreneurial education, family support, school support, entrepreneurial self-efficacy, and entrepreneurial intentions can be examined with high confidence.

Table 2. Validity and reliability

Variable	Factor Loadings	α	CR	AVE	EE	ESE	FS	SS	EI
EE	0.884 - 0.916	0.934	0.95	0.792	1				
ESE	0.888 - 0.944	0.967	0.972	0.833	0.955	1			
FS	0.848 - 0.914	0.954	0.962	0.785	0.861	0.895	1		
SS	0.898 - 0.927	0.972	0.975	0.837	0.974	0.929	0.871	1	
EI	0.920 - 0.954	0.977	0.981	0.88	0.93	0.829	0.756	0.929	1

Note(s) : α = Cronbach's alpha; CR = Composite reliability; AVE = Average variance extracted Source (s)

Structural Model

The bootstrapping analysis, conducted using SmartPLS 3.2.9 with a sample size of 210, aimed to evaluate the significance of the path coefficients within the structural model and to test the associated hypotheses. This analysis is crucial for understanding the relationships between the constructs and provides a robust framework for assessing the influence of education, family support, and school support on entrepreneurial intentions among vocational high school students.

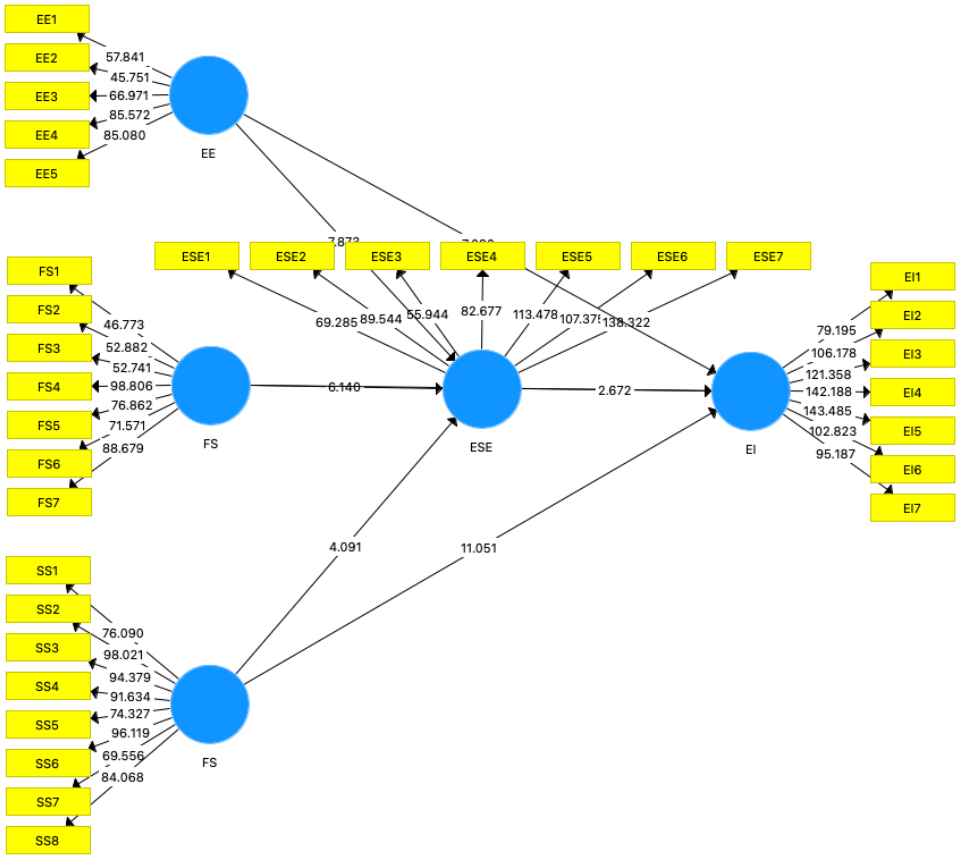

Figure 2. Result of bootstrapping analysis

The results of the bootstrapping analysis are presented in Figure 2, illustrating the structural model's path coefficients. Each path coefficient indicates the strength and direction of the relationships between the constructs. For instance, the path from Educational Support (EE) to Entrepreneurial Intent (EI) shows a significant positive effect ($\beta = 0.748$, $t = 17.841$, $p < 0.001$), suggesting that higher levels of educational support directly enhance students' entrepreneurial intentions. This finding aligns with previous research that emphasizes the pivotal role of educational environments in fostering entrepreneurial mindsets among youth.

Overall, the bootstrapping analysis confirms the structural model's reliability and validity, providing strong empirical support for the proposed hypotheses. The significant path coefficients indicate that educational, family, and school support collectively influence entrepreneurial intentions among vocational high school students. This study contributes to the understanding of how these factors interplay to foster an entrepreneurial mindset, suggesting that interventions aimed at enhancing support systems could effectively promote entrepreneurial intentions in this demographic.

Hypotheses Testing Results

This study investigates the direct and indirect effects of Entrepreneurial Education (EE), Family Support (FS), and School Support (SS) on Entrepreneurial Intention (EI), with Entrepreneurial Self-Efficacy (ESE) acting as a mediating variable. A detailed summary of these direct effect relationships is provided in Table 3. The results reveal several significant relationships that highlight the crucial role of external support systems and internal psychological factors in fostering entrepreneurial intentions among students.

First, the direct effect of EE on EI was found to be highly significant (T-statistics = 7.107, P-value = 0.000), demonstrating that exposure to entrepreneurial education significantly strengthens students' intentions to engage in entrepreneurial activities. EE also exhibited a strong positive influence on ESE (T-statistics = 8.021, P-value = 0.000), suggesting that educational interventions not only impart knowledge but also enhance students' belief in their entrepreneurial abilities. In turn, ESE significantly influenced EI (T-statistics = 2.679, P-value = 0.008), reinforcing its pivotal role as a psychological mechanism that transforms confidence into entrepreneurial ambitions.

Table 3. Direct effect

Hypotheses	Path	Standard Deviation	T Statistics	P Values	Decision
H1	EE -> EI	0,066	7,107	0,000	Accepted
H2	EE -> ESE	0,055	8,021	0,000	Accepted
H3	ESE_ -> EI	0,068	2,679	0,008	Accepted
H4	FS -> EI	0,043	2,148	0,032	Accepted
H5	FS -> ESE	0,051	5,700	0,000	Accepted
H6	SS -> EI	0,066	10,846	0,000	Accepted
H7	SS -> ESE	0,065	3,751	0,000	Accepted

Notes: EE = entrepreneurial education; EI = entrepreneurial intention; SS = school support; FS = family support; ESE = entrepreneurial self-efficacy

In terms of family influence, FS showed a significant direct effect on EI (T-statistics = 2.148, P-value = 0.032) and a robust impact on ESE (T-statistics = 5.700, P-value = 0.000). These results highlight the importance of a supportive family environment in nurturing both entrepreneurial confidence and intention. Similarly, SS demonstrated a substantial direct effect on EI (T-statistics = 10.846, P-value = 0.000) and significantly

contributed to enhancing ESE (T-statistics = 3.751, P-value = 0.000). This underscores the critical role of schools not only in fostering entrepreneurial mindsets but also in building the self-efficacy necessary for students to pursue entrepreneurial paths. Overall, these findings confirm that EE, FS, and SS directly influence entrepreneurial intentions and self-efficacy, with ESE serving as an essential intermediary linking support systems to entrepreneurial outcomes.

This study further explored the mediating role of Entrepreneurial Self-Efficacy (ESE) in the relationships between Entrepreneurial Education (EE), Family Support (FS), and School Support (SS) on Entrepreneurial Intentions (EI). The findings indicate that EE significantly influences EI through the mediation of ESE, with a T-statistics value of 2.939 and a P-value of 0.003, thereby supporting hypothesis H8. Similarly, FS was found to significantly affect EI via ESE, as shown by a T-statistics value of 2.127 and a P-value of 0.034, confirming hypothesis H9. In addition, SS demonstrated a significant indirect effect on EI through ESE, with a T-statistics value of 2.016 and a P-value of 0.044, supporting hypothesis H10.

These results collectively affirm that ESE serves as a critical mediating variable that channels the positive impacts of educational experiences, family encouragement, and school-based support into heightened entrepreneurial intentions. This underscores the essential role of both external support systems and internal psychological readiness in fostering students' entrepreneurial ambitions. A detailed summary of the indirect effects tested in this study is provided in Table 4.

Table 4. Indirect effect

Hypotheses	Path	Standard Deviation	T Statistics	P Values	Decision
H8	EE -> ESE -> EI	0,027	2,939	0,003	Accepted
H9	FS -> ESE -> EI	0,025	2,127	0,034	Accepted
H10	SS -> ESE -> EI	0,022	2,016	0,044	Accepted

Notes: EE = entrepreneurial education; EI = entrepreneurial intention; SS = school support; FS = family support, ESE = entrepreneurial self-efficacy

Discussion

Entrepreneurship has long been recognized as a key driver of economic growth, social development, and innovation (Butt et al., 2022; Hassan et al., 2020; Yousaf et al., 2020). It contributes not only to increasing national income and job creation but also to fostering societal resilience through the production of new goods and services (Nasip et al., 2017; Wiklund et al., 2019). In the Indonesian context, promoting entrepreneurship is critical for addressing youth unemployment and encouraging self-sufficiency, particularly among vocational school graduates (Triatmanto & Bawono, 2023). Against this backdrop, the present study investigated the factors influencing entrepreneurial intentions (EI) among vocational high school students, focusing on entrepreneurial education (EE), family support (FS), school support (SS), and entrepreneurial self-efficacy (ESE).

The results strongly affirm the significant role of EE in shaping students' EI. This finding is consistent with prior research, which emphasizes that a curriculum rich in entrepreneurial content—offering real-world experiences, project-based learning, and exposure to entrepreneurial role models—greatly enhances students' entrepreneurial outlook (Fayolle & Gailly, 2015; Kotler et al., 2022; Hatammimi & Wulandari, 2014). Grounded in the Theory of Planned Behavior (TPB), EE serves as a critical antecedent to EI by enhancing students' attitudes, perceived behavioral control, and subjective norms related to entrepreneurship (Ahmed et al., 2020; Kirkley, 2017; Pedrini et al., 2017; Vu et al., 2024). The significant direct relationship between EE and EI identified in this study suggests that effective entrepreneurship education—tailored to meet industry demands

and emphasizing practical, hands-on learning—can indeed cultivate a stronger entrepreneurial mindset among students (Riyanda et al., 2021; Ventista & Brown, 2023).

Importantly, the study also highlighted the mediating role of ESE in the relationship between EE and EI. Students who acquire entrepreneurial knowledge and skills through education tend to develop a stronger belief in their capabilities, which in turn fosters their entrepreneurial intentions. This mediating mechanism confirms prior findings (Adu et al., 2020; Nowiński et al., 2019; Puni et al., 2018; Saoula et al., 2023; Shahab et al., 2019; Xu et al., 2023) and highlights a critical nuance: entrepreneurial education alone is insufficient unless it successfully builds students' self-efficacy. Without the confidence to apply entrepreneurial skills and knowledge, students may hesitate to translate their intentions into entrepreneurial action (Hatammimi & Rosniawati, 2023; Tan & Wijaya, 2024).

The role of family support (FS) in nurturing EI was another key finding. Consistent with earlier research (Saoula et al., 2023), this study confirmed that FS—including financial resources, emotional encouragement, and access to social and business networks—significantly boosts students' EI. Family support not only eases financial barriers but also fosters psychological readiness by reinforcing students' confidence and resilience. The indirect effect of FS on EI through ESE further strengthens the argument that emotional and resource-based support from family members plays a formative role in shaping students' self-belief, which then translates into entrepreneurial aspirations. Without sufficient family encouragement, students may lack the motivation to pursue entrepreneurial ventures, regardless of their educational background.

School support (SS) also emerged as a significant predictor of EI, both directly and indirectly through ESE. Schools that provide facilities such as business incubation programs, internships, entrepreneurship competitions, and professional mentoring create a conducive environment for entrepreneurial development (Hareb et al., 2023; Mathew et al., 2017). This study found that while SS significantly influenced EI, its impact was somewhat less pronounced compared to EE and FS when mediated by ESE. This suggests that while schools play an essential foundational role, the quality and depth of the support provided—such as access to entrepreneurial networks and real-world market opportunities—may determine the extent of its influence on students' self-efficacy and subsequent entrepreneurial ambitions.

The relatively lower mediating effect of ESE in the SS-EI relationship may point to a gap in how vocational schools currently deliver entrepreneurship support. Many vocational institutions, especially in developing countries like Indonesia, still struggle with outdated curricula, limited industry linkages, and a shortage of trained entrepreneurship educators. Therefore, while infrastructural support exists, it may not always be sufficiently experiential or personalized to build students' confidence (Nowiński et al., 2019). This finding implies that school-based initiatives must go beyond mere provision of resources; they must actively engage students in entrepreneurial experiences that strengthen their belief in their entrepreneurial capabilities.

Another critical contribution of this study is the development of an integrated model that combines EE, FS, SS, and ESE in predicting EI among vocational students. The findings enrich the entrepreneurship literature by offering a comprehensive view that bridges internal psychological factors with external support systems. Previous models often treated these elements in isolation; by emphasizing the mediating role of ESE, this study provides a nuanced understanding of how entrepreneurial intentions are formed and sustained over time (Hatammimi & Rosniawati, 2023; Xu et al., 2023). This integrated approach is particularly valuable in vocational education settings where students may come from diverse socioeconomic backgrounds and may not have prior exposure to entrepreneurial practices.

Despite these positive outcomes, it is important to acknowledge potential challenges that vocational students may still face after graduation. Even when equipped with strong EI, adequate FS, SS, and high ESE, students may encounter difficulties such as

limited access to capital, weak market networks, regulatory barriers, and a lack of market understanding. As emphasized by prior research (Nasip et al., 2017; Wiklund et al., 2019), entrepreneurial success also requires dynamic capabilities, adaptability to market demands, and effective resource utilization—areas that vocational education must increasingly address.

In terms of theoretical implications, this study advances the application of the Theory of Planned Behavior (TPB) in entrepreneurship research by demonstrating the mediating role of ESE between educational and social supports and entrepreneurial intentions. It confirms that external supports (education, family, school) enhance students' perceived behavioral control via self-efficacy, thereby increasing their intention to become entrepreneurs. Practically, the findings offer important insights for policymakers, educators, and families. Vocational schools should revamp their curricula to focus more on experiential learning, industry collaboration, and entrepreneurial mentoring to build stronger ESE among students. Families should be encouraged to play an active role by offering emotional and financial support and exposing students to entrepreneurial activities. Policymakers must prioritize programs that integrate school-based entrepreneurship initiatives with broader community and industry engagement to build sustainable entrepreneurial ecosystems for youth. Together, these implications suggest that fostering entrepreneurial intentions among vocational students is not merely a matter of individual talent or education alone; it is the outcome of an ecosystemic approach that cultivates knowledge, confidence, support, and opportunity simultaneously.

Conclusion

This study reveals the pivotal role of entrepreneurial self-efficacy (ESE) as a mediating factor linking entrepreneurial education (EE), family support (FS), and school support (SS) to the development of entrepreneurial intentions (EI) among vocational high school students. The findings reveal that comprehensive support from schools, robust encouragement from families, and effective delivery of entrepreneurship education by qualified educators are essential in nurturing students' confidence, skills, and entrepreneurial capabilities. Notably, school support emerged as the most influential factor in fostering EI, highlighting the critical importance of providing practical facilities, entrepreneurship laboratories, and real-world experiential learning opportunities. These insights offer valuable theoretical contributions by integrating internal and external factors within the Theory of Planned Behavior (TPB) framework, while also presenting practical implications for educational institutions, policymakers, and families seeking to enhance entrepreneurial outcomes among youth.

Despite its contributions, this study has several limitations that warrant consideration. First, the sample was limited to vocational students specializing in online business and marketing within a specific region of Indonesia, which may restrict the generalizability of the findings. Second, reliance on self-reported survey data introduces the possibility of response bias, potentially affecting the accuracy of the results. Third, the use of a cross-sectional design limits the ability to observe the evolution of entrepreneurial intentions and related factors over time. Future research should aim to broaden the sample to include diverse regions and vocational fields, utilize mixed methods combining quantitative surveys with qualitative interviews to enrich the data, and adopt longitudinal approaches to capture dynamic changes in entrepreneurial attitudes and behaviors. Such efforts would provide a more comprehensive understanding of how educational and social supports interact over time to shape entrepreneurial trajectories.

Authors' Declaration

The authors made substantial contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

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