

The Effect of Entrepreneurial Education on Entrepreneurial Intention Through Individual Entrepreneurial Orientation in Double Track Program Students at Mojokerto Private High School

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Abstract

As one of the most influential factors, entrepreneurial intention can determine whether individuals will take concrete steps toward the business world or not. This study aims to determine the direct and indirect effects of entrepreneurial education on entrepreneurial intention through individual entrepreneurial orientation. The research method used is quantitative with a cross-sectional design. The research sample consists of 253 respondents from Al-Hidayah High School and Tamansiswa High School in Mojokerto City. The results show that entrepreneurial education has an effect on proactivity. Entrepreneurial education influences risk-taking. Entrepreneurial education influences innovation. Proactivity influences entrepreneurial intention. Risk-taking does not influence entrepreneurial intention. Innovation influences entrepreneurial intention. Proactivity has a mediating effect on entrepreneurial education on entrepreneurial intention. Risk-taking does not have a mediating effect on entrepreneurial education on entrepreneurial intention. Innovation does not have a mediating effect on entrepreneurial education on entrepreneurial intention.

Keyword: Entrepreneurship education, Entrepreneurship orientation, Entrepreneurial intention

INTRODUCTION

Indonesia is one of the developing countries. A country can be classified as a developing or developed country based on its economic growth. According to Sofia (2017), a country's economic growth is influenced by the existence of entrepreneurs. Macroeconomically,



entrepreneurs can boost a country's economic growth due to their role in creating added value and new jobs (Hisrich et al., 2017). The ratio of start-up entrepreneurs in Indonesia reached 35.21% of the total workforce. Then, the ratio of established entrepreneurs in August 2023 reached 3.04% of the total workforce (BPS, 2023). In line with this, the government continues to strive to accelerate the development of the entrepreneurial ecosystem by setting a national entrepreneurship ratio target of 3.95% and new entrepreneur growth of 4% in 2024 (Kemenko, 2022).

Despite the government's efforts to increase the entrepreneurship ratio in Indonesia, the biggest challenge faced by prospective entrepreneurs is how to develop their abilities and strengths to be able to compete in an increasingly competitive global market. An entrepreneur is required to be able to turn obstacles into opportunities and provide solutions to the problems that arise around them. According to Khamimah (2021), this requires individuals to have a resilient mindset and a creative attitude in facing change. For this reason, personal skills and strengths must be prepared in order to compete in this era of globalization. These strengths include mastery of technology, self-confidence, and the ability to see opportunities carefully (Zamzami & Maemunah, 2020). In the era of industry 4.0, personal excellence is very important in maintaining global competitiveness (Susanti et al., 2021).

The personal excellence possessed by an entrepreneur not only benefits themselves, but can also contribute to society and open up new job opportunities. This makes entrepreneurship one of the concrete solutions to overcoming unemployment (Zimmerer et al., 2008). Entrepreneurs also contribute to social development because they are able to empower the community through economic activities (Kurniawan, 2021). Therefore, the development of entrepreneurship is an important part of the national economic development strategy (Tambunan, 2019).

However, even though entrepreneurship can be a solution to reduce unemployment, the unemployment problem in Indonesia is still very large, especially among high school graduates. Based on BPS (2024) data, the open unemployment rate (TPT) for high school graduates is 7.05%, while vocational school graduates have a TPT of 9.01%. On the other hand, university graduates have an unemployment rate of 5.02%, while elementary school graduates or equivalent have a rate of 10.32%. This shows that high school/vocational school graduates are the educational group with the highest open unemployment rate compared to other levels. This shows that there is a gap between the world of education and the needs of the world of work (Suharti & Pramono, 2020). The low readiness of high school graduates to compete in the world of work is a challenge that needs to be addressed systematically in secondary education (Hidayat, 2022).





Senior high schools (SMA) have a strategic role in preparing the younger generation to face the world of work. Many high school students are still focused on their dreams of continuing to higher education, without considering other alternatives such as entrepreneurship (Yuliana, 2020). On the other hand, the high school curriculum does not fully encourage the development of practical skills relevant to the world of work or business (Nugroho & Fitriani, 2021). In fact, high school age is a crucial phase in character building and future orientation (Prasetyo, 2023).

Therefore, schools need to provide a more effective approach to prepare students for the world of work. One way to do this is by integrating entrepreneurial education from an early age. Effective entrepreneurial education is believed to shape the mentality and skills needed to be economically independent.

Thus, to overcome this problem, more efforts are needed to instill an entrepreneurial spirit among students, which can begin by providing integrated entrepreneurial education in the curriculum. The spirit of starting a business must be cultivated from school. With the promotion of entrepreneurial education at the high school level, both integrated into the curriculum and student activities, it is hoped that graduates will be prepared to be independent and no longer focused on becoming job seekers after graduation (Saptono et al., 2020). In addition, the role of schools in creating an ecosystem that supports entrepreneurial interests is an important factor for success (Sulaiman, 2021).

This includes private high schools in Mojokerto Regency, which contribute to the unemployment rate in East Java Province (Mukhlason et al., 2020). Karyaningsih (2020) states that one of the factors supporting entrepreneurial growth in a country lies in the role of entrepreneurial education and a conducive entrepreneurial environment.

A supportive environment, such as business communities, training, and financial support, greatly influences the growth of entrepreneurial spirit (Putra & Lestari, 2021). Therefore, collaboration between schools, communities, and the government is important in building a strong entrepreneurial ecosystem (Rahmawati, 2022).

As a good first step, the East Java Provincial Government has taken the initiative to address these issues through the implementation of education programs oriented towards practical skills (Disdik Jatim, 2022). The local government has also partnered with the industrial and private sectors to participate in preparing students to be more ready for work or to start a business (Wijayanti, 2021). This step is considered important to respond to the challenges of employment in the modern era (Yusuf & Anshori, 2020).

The double track program is one of the strategic efforts initiated by the East Java Provincial Government to respond to these challenges. This program is designed to provide





additional skills training for high school students, so that graduates not only have academic abilities, but also ready-to-use vocational skills (Disdik Jatim, 2022). In terms of regulations, the implementation of this program refers to East Java Governor Regulation Number 35 of 2018 concerning the Implementation of Skills Education in High Schools (Permendikbud, 2021). This initiative demonstrates the government's seriousness in producing competent and competitive graduates (Handayani, 2022).

In general, private schools must be attractive so that many students choose them as their place of education (Sunyoto & Setiyawan, 2021). Of course, each school has its own flagship program to differentiate itself from others, including private high schools in Mojokerto. One of them is the double track program, which is offered as a flagship program to attract students (Safitri et al., 2022). However, not all private schools are authorized by the local government to implement this double track program, as there are strict requirements and selection criteria that must be met (Rahmatullah, 2022).

Nevertheless, it is hoped that through the wider implementation of the double track program, more opportunities will be created for students to become entrepreneurs after graduation. The hope is that this program will foster a spirit of entrepreneurship in students so that after graduation they will not become unemployed. These efforts do not seem to have been implemented properly. As is well known, entrepreneurship is not yet a major interest among students as a career choice (Ardiansyah et al., 2021). Many students still feel hesitant and lack confidence in starting their own business (Kusuma & Wulandari, 2022). Therefore, there needs to be a more intensive and sustainable approach to building motivation and readiness for entrepreneurship from school age (Ningsih & Astuti, 2023).

One approach that can be used is to develop Individual Entrepreneurial Orientation (IEO) in students. IEO includes proactivity, innovation, and risk-taking, all of which are characteristics that support individuals in facing entrepreneurial challenges (Covin & Slevin, 1991). By instilling IEO from an early age, it is hoped that students can develop the ability to innovate, take risks, and have a proactive attitude in starting their businesses, which are important elements in shaping successful entrepreneurship (Lafuente et al., 2017). The development of IEO serves to shape an entrepreneurial mindset that enables individuals to identify opportunities around them and utilize them to create something new (Kraus et al., 2012). Therefore, a strong understanding of this entrepreneurial orientation is very important, as it can shape the entrepreneurial characteristics needed by students to start and manage their businesses (Lévesque & Shepherd, 2004). Thus, strengthening IEO among high school students can increase their confidence and courage to innovate and encourage them not to be afraid of failure, which





is common in the world of entrepreneurship (Stam et al., 2014).

Entrepreneurial education plays a very important role in shaping the entrepreneurial attitudes and skills needed by individuals to start and manage a business. One of the main objectives of entrepreneurial education is to change students' mindsets so that they are more oriented towards creating opportunities and innovation rather than simply looking for jobs (Robinson & Sexton, 1994). Entrepreneurial education can provide the practical skills needed to face the challenges of the world of work and entrepreneurship, such as decision making, business planning, and problem solving (Solomon et al., 2002). In addition, this education also helps develop a strong, creative, and innovative entrepreneurial character, which is very much needed to survive and thrive in a competitive business world (Kuratko, 2005).

For example, in many countries, entrepreneurial education has been implemented at various levels of education, from elementary school to college, with the aim of equipping the younger generation with relevant skills and encouraging them to become entrepreneurs (Charney & Libecap, 2000). In Indonesia, the implementation of entrepreneurial education at the high school level is very important, given the importance of creating new jobs to overcome unemployment. Entrepreneurial education that is well integrated into schools can provide students with sufficient knowledge and skills to start their own businesses, as well as reduce dependence on the formal sector and limited job opportunities (Bae et al., 2014).

Effective entrepreneurial education focuses not only on developing practical skills but also on forming entrepreneurial intention (EI) in individuals. This entrepreneurial intention is the main motivation that drives a person to start and develop a business (Ajzen, 1991). As a highly influential factor, EI can determine whether an individual will take concrete steps towards the business world or not (Liñán & Fayolle, 2015). Among students, good entrepreneurial education can trigger high levels of EI, which ultimately influences their decision to become entrepreneurs in the future. Research shows that individuals with high EI levels tend to be more confident in facing entrepreneurial challenges, managing risks, and identifying business opportunities (Schlaegel & Koenig, 2014).

There is a gap between what is taught in school and the real needs of the world of work and business. This research is important as an effort to identify whether the entrepreneurial education that has been provided is truly effective in fostering EI through the strengthening of IEO. IEO, which includes innovation, proactivity, and risk-taking, is an important factor in shaping entrepreneurial behavior. Given the importance of this aspect, there needs to be a systematic approach to fostering it in the educational environment, especially for students in double track programs. However, the effectiveness of this program in shaping entrepreneurial intention (EI)



through the strengthening of IEO still needs to be studied in depth.

METHOD

This study uses a quantitative approach with a cross-sectional design. The research sample consists of Al-Hidayah High School and Tamansiswa High School in Mojokerto City with a total of 253 respondents. In this study, the instrument used was an adapted questionnaire with closed-ended questions that provided answer options. The entrepreneurial education variable was adapted from Walter & Block (2015). The variables of proactiveness, risk-taking, and innovativeness were adapted from Bernadus et al. (2023). The entrepreneurial intention variable was adapted from Liñán & Chen (2009) and Krueger et al. (2000). Data analysis techniques used descriptive analysis and Structural Equation Modeling Partial Least Squares (SEM-PLS).

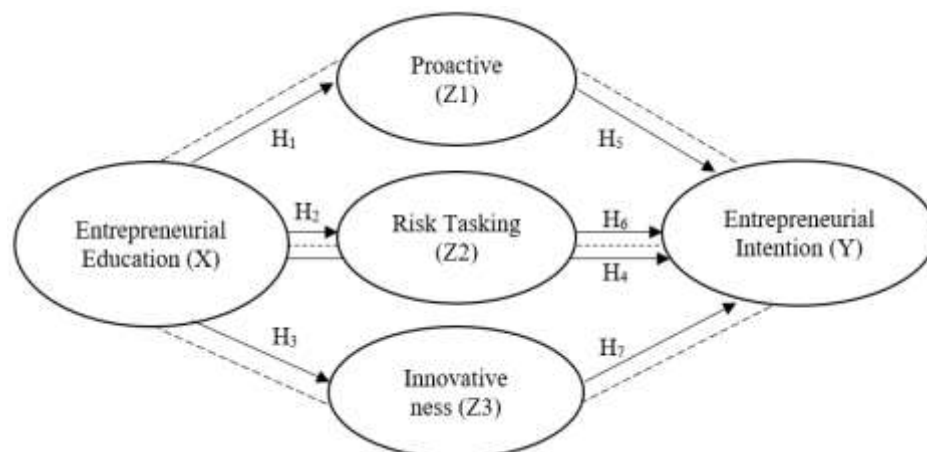


Figure 1. Conceptual Framework

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

Based on descriptive statistical analysis, there were 253 respondents. Most respondents came from Tamansiswa High School with a total of 239 people, and the largest class was 143 respondents in grade XII. The most popular double track program was culinary arts with 121 respondents.

The results of the average calculation of the entrepreneurial education variable were classified as good. Activity was classified as good. Risk-taking was classified as good. Innovation was classified as good. Entrepreneurial intention was classified as good.

Next, SEM-PLS testing was conducted with an outer model and an inner model. The

measurement model, also known as the outer model, aims to assess the validity and reliability of the model. The data analysis technique using SmartPLS to assess the outer model is through Convergent Validity, Discriminant Validity, and Composite Reliability.

Table 1. Outer Model Loading Factor Test Results

	EE (X)	EI (Y)	IN (Z3)	PA (Z1)	RT (Z2)
XP1	0,944				
XP2	0,964				
XP3	0,932				
XP4	0,959				
YP1		0,922			
YP2		0,951			
YP3		0,806			
YP4		0,919			
YP5		0,846			
YP6		0,925			
Z1P1				0,905	
Z1P2				0,912	
Z1P3				0,935	
Z1P4				0,929	
Z1P5				0,901	
Z2P1					0,872
Z2P2					0,779
Z2P3					0,932
Z2P4					0,912
Z3P1			0,906		
Z3P2			0,862		
Z3P3			0,927		
Z3P4			0,882		

Source: Processed by Researchers (2025)

Based on Table 1, it can be concluded that overall, the research variable indicators have an outer loading > 0.7. Therefore, all indicators are declared valid. The next evaluation step is to examine discriminant validity using cross loading, the square root of average variance extracted

(AVE) value, and composite reliability. Discriminant validity aims to ensure that latent constructs are more effective in predicting measures in their own variable blocks than measures in other blocks.

Table 2: Discriminant Validity Values (Cross Loading)

	EE (X)	EI (Y)	IN (Z3)	PA (Z1)	RT (Z2)
XP1	0,944	0,751	0,474	0,789	0,571
XP2	0,964	0,779	0,464	0,773	0,559
XP3	0,932	0,773	0,451	0,737	0,543
XP4	0,959	0,813	0,528	0,804	0,614
YP1	0,718	0,922	0,531	0,725	0,594
YP2	0,760	0,951	0,588	0,796	0,638
YP3	0,947	0,806	0,523	0,796	0,606
YP4	0,677	0,919	0,653	0,770	0,674
YP5	0,563	0,846	0,486	0,602	0,514
YP6	0,665	0,925	0,582	0,716	0,603
Z1P1	0,727	0,737	0,511	0,905	0,619
Z1P2	0,690	0,733	0,564	0,912	0,672
Z1P3	0,806	0,794	0,600	0,935	0,694
Z1P4	0,795	0,789	0,641	0,929	0,713
Z1P5	0,721	0,741	0,626	0,901	0,692
Z2P1	0,635	0,706	0,733	0,765	0,872
Z2P2	0,341	0,348	0,721	0,415	0,779
Z2P3	0,523	0,605	0,853	0,635	0,932
Z2P4	0,538	0,627	0,800	0,686	0,912
Z3P1	0,494	0,577	0,906	0,607	0,794
Z3P2	0,371	0,505	0,862	0,525	0,753
Z3P3	0,477	0,592	0,927	0,597	0,817
Z3P4	0,455	0,568	0,882	0,567	0,793

Source: Processed by Researchers (2025)

Based on Table 2, it can be seen that the cross loading indicators of the latent variables have greater cross loading values than the other variables. Therefore, it can be concluded that the latent variables have good discriminant validity.

Table 3. Results of CR, Cronbach's Alpha, and AVE Measurements

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
EE (X)	0,964	0,965	0,974	0,902
EI (Y)	0,950	0,956	0,961	0,803
IN (X3)	0,917	0,922	0,941	0,800
PA (Z1)	0,953	0,954	0,963	0,840
RT (Z2)	0,900	0,933	0,929	0,767

Source: Processed by Researchers (2025)

The AVE values for the four constructs were greater than 0.5, so it can be concluded that the model measurement evaluation has good discriminant validity. In addition to the construct validity test, a construct reliability test was also conducted, measured using the criteria test, namely composite reliability and Cronbach's alpha from the indicator block measuring the construct. A construct is considered reliable if the composite reliability and Cronbach's alpha values are above 0.70. Therefore, it can be concluded that the constructs have good reliability.

After evaluating the measurement model or outer model, the next step is to evaluate the inner model, also known as the structural model evaluation. The structural model testing procedure includes: 1) testing collinearity; 2) testing the level of R-Square or R²; 4) testing the effect of the f² size; and 5) testing the relevant prediction of Q².

Table 4. VIF Measurement Results

	EE	EI	IN	PA	RT
EE		3,030	1,000	1,000	1,000
EI					
IN		4,561			
PA		4,248			
RT		5,900			

Source: Processed by Researchers (2025)

Based on the VIF measurement results in Table 5, it can be seen that all research variables have a VIF value < 5. This means that the structural model can be considered good or that there is no multicollinearity.

Table 5. R-Square

	R Square	R Square Adjusted
EI (Y)	0,767	0,763
IN (Z3)	0,255	0,252
PA (Z1)	0,668	0,667
RT (Z2)	0,363	0,360

Source: Processed by Researchers (2025)

Based on the data in Table 5, the R-Square value can be determined. It can be concluded that 76.7% of variable Y (Entrepreneurial Intention) is influenced by variables Entrepreneurial education (X), Proactiveness (Z1), Risk-taking (Z2), and Innovativeness (Z3). The remaining 23.3% is influenced by other factors outside this research model.

The R2 value obtained shows that the structural model has high predictive power, with a value above 0.767. Furthermore, the R-Square value for variable Z1 (Proactiveness) shows that 66.8% is influenced by the Entrepreneurial education (X) variable, while the remaining 33.2% is influenced by external factors not included in this study.

The R-Square value for variable Z2 (Risk-taking) shows that 36.3% is influenced by the Entrepreneurial education (X) variable, while the remaining 63.7% is influenced by external factors not included in this study. The R-Square value for variable Z3 (Innovativeness) shows that 25.5% is influenced by the Entrepreneurial education (X) variable, while the remaining 74.5% is influenced by external factors not included in this study.

Based on the results of the predictive relevance (Q2) calculation, the figures obtained are 0.588, 0.446, 0.132, and 0.065. These figures indicate that the endogenous latent variables in this research model have a predictive relevance greater than 0, which means that the exogenous latent variables can predict the endogenous variables, namely Y (Entrepreneurial intention), Z1 (Proactiveness), Z2 (Risk-taking), and Z3 (Innovativeness) well. Therefore, this model has adequate predictive quality.

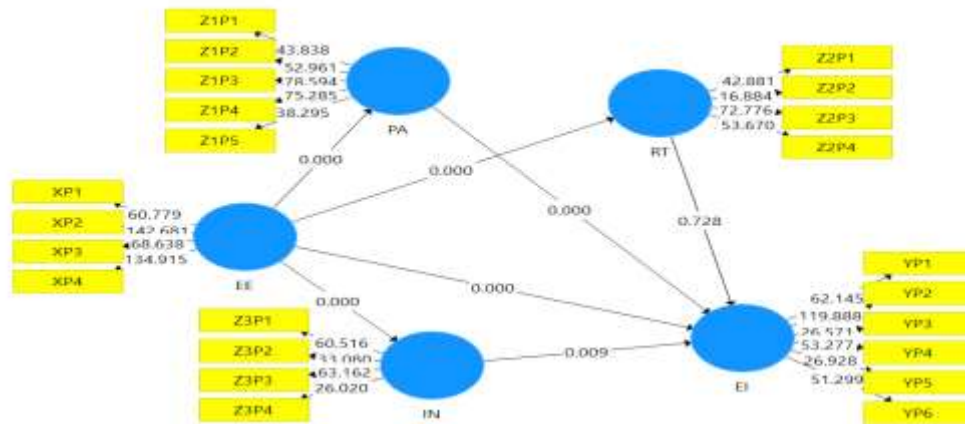


Figure 2 Bootstrapping Results

Source: Processed primary data, 2025

Direct effect analysis is useful for testing hypotheses related to the direct effect between exogenous latent variables and endogenous latent variables. The results of the direct effect in this study can be seen as follows:

Table 6. Direct Effects

Hypothesis	Variable	β	<i>t-value</i>	<i>P-values</i>	Explanation
H4	EE > EI	0,443	5,618	0,000	Supported
H3	EE > IN	0,505	8,638	0,000	Supported
H1	EE > PA	0,818	23,934	0,000	Supported
H2	EE > RT	0,603	11,428	0,000	Supported
H7	IN > EI	0,198	2,626	0,009	Supported
H5	PA > EI	0,360	3,702	0,000	Supported
H6	RT > EI	-0,027	0,349	0,728	Not Supported

Source: Processed primary data, 2025

Based on the results of the direct effect test, it can be seen that H1, H2, H3, H4, H5, and H7 have a direct effect. This is proven by a *p-value* < 0.05. However, H6 does not have a direct effect with a *p-value* of 0.728 > 0.05.

Indirect effect analysis is useful for testing hypotheses related to indirect effects between exogenous variables and endogenous variables. The results of the indirect effect in this study can be seen as follows:

Table 7. Indirect Effects

Hypothesis	Variable	β	<i>t-value</i>	<i>P-values</i>	Explanation
H8	EE > PA > EI	0,294	3,825	0,000	Supported
H9	EE > RT > EI	-0,016	0,340	0,734	Not Supported
H10	EE > IN > EI	0,100	2,373	0,018	Supported

Source: Processed primary data, 2025

Based on the results of indirect effect testing, it can be seen that H8 and H10 have a mediating effect with $p\text{-values} < 0.05$. Meanwhile, H9 does not have a mediating effect because the $p\text{-value}$ is $0.734 > 0.05$.

DISCUSSION

Entrepreneurship Education and Proactivity

The results of the study indicate that entrepreneurship education has an influence on proactivity. This suggests that the process of learning entrepreneurship not only provides technical knowledge and skills, but also fosters a mindset and behavior that encourages individuals to be more responsive to opportunities, dare to take initiative, and be oriented towards continuous action.

Theoretically, these findings are supported by the concept of Individual Entrepreneurial Orientation (IEO), which emphasizes that proactivity is one of the main dimensions of individual entrepreneurial orientation (Lumpkin & Dess, 1996). Entrepreneurship education serves as a means of shaping these attitudes and orientations, where through practice, business simulations, and exposure to real-world problems, individuals are encouraged to respond to challenges more proactively. In addition, according to the Theory of Planned Behavior (Ajzen, 1991), attitudes and behavioral control learned through education will strengthen the confidence to act, making proactive behavior more likely to emerge.

The findings of this study are also in line with previous research. First, Efrata et al. (2021) proved that entrepreneurship education influences individual entrepreneurial orientation, even though proactivity in their model does not directly increase entrepreneurial intention. Second, Hassan et al. (2021) found that entrepreneurship education plays a role in increasing individual entrepreneurial orientation and entrepreneurial motivation, both of which are closely related to proactive behavior in students. Third, Kaouache et al. (2024) emphasized that proactivity, together with risk-taking, has a direct and positive effect on students' entrepreneurial



intentions, thus demonstrating the importance of proactive behavior as an outcome that can be shaped through entrepreneurship education.

Thus, the results of this study reinforce empirical evidence that entrepreneurship education has a strategic role in shaping student proactivity. Proactivity that is built early on will be an important asset for individuals to adapt to environmental changes, take advantage of opportunities, and develop business sustainability in the future.

Entrepreneurship education and decision making

The results of this study indicate that entrepreneurship education influences decision making. This finding is in line with Fayolle's (2013) theory, which emphasizes that entrepreneurship education helps build a strong entrepreneurial character, including the ability to make the right business decisions. The entrepreneurial learning process not only enriches knowledge about the business world but also shapes practical skills in assessing opportunities and managing risks, as explained by Matlay (2008) and Kuratko (2005). This means that entrepreneurial education is not only cognitive but also transformative in shaping a bold and focused entrepreneurial mindset in determining strategic choices.

In addition, the aspect of risk-taking is also an important part of the entrepreneurial decision-making process. As stated by Jaramillo et al. (2015), Lumpkin & Dess (2001), and Chell (2008), the courage to take risks is at the core of entrepreneurial activities because it is closely related to the creation of new opportunities. The findings of this study are further reinforced by Hattab (2014), Nabi et al. (2017), and Salim (2019), who emphasize that entrepreneurship education increases individuals' confidence in facing uncertainty, while also providing them with the skills to manage risk wisely. Thus, entrepreneurship education serves a dual purpose: it fosters mental preparedness and provides practical strategies for risk-based decision making.

These findings are also supported by previous research. First, a study by Soomro & Shah (2021) proves that entrepreneurship education has a significant effect on entrepreneurial self-efficacy, achievement needs, and entrepreneurial intention. This self-efficacy is closely related to the courage to make decisions amid uncertainty. Second, research by Lv et al. (2021) found that entrepreneurship education through teaching, competition, and real-world practice has a positive effect on entrepreneurial competence, which in turn mediates the decision to become an entrepreneur. Third, research by Yahya et al. (2023) shows that both directly and indirectly, entrepreneurship education together with innovation has a significant effect on the motivation and entrepreneurial intention of vocational high school students. This proves that





entrepreneurship education plays a strategic role in shaping the courage to make decisions to act in the context of entrepreneurship.

Thus, the results of this study reinforce the view that entrepreneurship education not only broadens knowledge but also hones effective decision-making skills. Students who receive entrepreneurship education are better prepared to face business challenges because they have a risk-oriented mindset, the courage to take action, and the right strategies for managing uncertainty.

Entrepreneurship education and innovation

The results show that entrepreneurship education has an impact on innovation. This reinforces the view that entrepreneurship education not only serves as a means of transferring business knowledge but also as a catalyst for fostering creative and innovative attitudes in students.

Fayolle (2013) emphasizes that entrepreneurship education helps empower individuals to think more creatively and generate new, applicable ideas. In line with this, Matlay (2008) asserts that the entrepreneurship learning process emphasizes not only theoretical aspects but also practical skills that encourage innovation in facing market dynamics.

Furthermore, Lumpkin & Dess (2001) emphasize that innovation is a key component of an entrepreneurial orientation that is closely related to the creation of new value to gain competitive advantage. Chell (2008) also states that innovative entrepreneurship not only produces new products but also new methods of managing businesses to be more efficient and adaptive to change. This support is reinforced by the findings of Nabi et al. (2017), Hattab (2014), and Salim (2019), who all affirm that entrepreneurship education enhances creativity, confidence, and practical skills in creating innovative solutions. Thus, entrepreneurship education plays an important role in shaping an open mindset towards change and the ability to innovate.

The findings of this study are in line with previous studies. First, the study by Lv et al. (2021) shows that entrepreneurship education, business plan competitions, and practical experiences in higher education have a positive effect on entrepreneurial competence, which then encourages innovation in building entrepreneurial intent. Second, research by Jiatong Wang et al. (2021) found that entrepreneurship education, together with an entrepreneurial mindset and creativity, strengthens students' intention to become entrepreneurs, especially when supported by self-efficacy, which is closely related to the courage to innovate. Third, research by Yahya et al. (2023) conducted on vocational high school students also proves that





entrepreneurship and innovation education directly and indirectly have a significant effect on motivation and entrepreneurial intent.

Thus, the results of this study reinforce the argument that entrepreneurship education is a strategic factor in shaping innovative attitudes. Individuals who receive entrepreneurship education are not only better prepared to face change, but also more courageous in creating new ideas that can add value to the business world.

Proactive towards entrepreneurial intent

The results show that proactivity has an influence on entrepreneurial intent. This finding reinforces the view that a proactive attitude is an important characteristic in entrepreneurship, as it encourages individuals to not only respond to change but also actively create new opportunities. Lumpkin & Dess (2001) explain that proactivity is an individual's tendency to act early in seizing opportunities, even before external pressures arise. This is in line with Chell's (2008) view that a proactive attitude not only reflects initiative but also the ability to manage uncertainty in the context of entrepreneurship.

Furthermore, entrepreneurial intention, as described by Ajzen (1991) in the Theory of Planned Behavior, is the main predictor of actual actions to start a business. This intention can be influenced by individual factors, including proactivity. Krueger et al. (2000) add that psychological factors such as motivation, initiative, and self-confidence contribute greatly to the formation of entrepreneurial intention. Therefore, proactive individuals tend to have more courage and drive to realize their entrepreneurial intentions.

These findings are in line with previous studies. Hattab (2014) revealed that proactiveness plays an important role in triggering entrepreneurial intention, because proactive individuals have a strong drive to start and develop a business. Nabi et al. (2017) also found that proactivity is positively correlated with entrepreneurial intention, because proactive individuals are better prepared to face challenges and risks in business. Similarly, Salim (2019) states that proactive individuals have a higher tendency to seek opportunities and act on them, which ultimately strengthens entrepreneurial intention.

Thus, the results of this study confirm that proactivity is a key factor that drives entrepreneurial intention. Proactive individuals not only have the mental readiness to face uncertainty, but are also able to take concrete action to take advantage of existing opportunities. This shows that proactivity is not just a complementary character trait, but an important foundation in forming strong entrepreneurial intention.





Risk-taking and entrepreneurial intention

The results show that risk-taking has no effect on entrepreneurial intention. This finding is interesting because, theoretically, risk-taking is seen as one of the main characteristics of entrepreneurship. Chell (2008) emphasizes that risk-taking is not only about the courage to face uncertainty but also includes the ability to manage risk wisely.

Jaramillo et al. (2015) even assert that successful entrepreneurs must be accustomed to making high-risk decisions, but based on careful planning. Lumpkin and Dess (2001) also state that entrepreneurship is always associated with financial, time, and resource risks, so the ability to manage them is considered fundamental.

However, the results of this study show that a tendency to take risks does not necessarily encourage entrepreneurial intent. This can be explained in several ways. First, individuals may have a high level of knowledge and awareness of risk, but this understanding makes them more cautious, thereby reducing their drive to become entrepreneurs. In other words, excessive awareness of risk can reduce interest in taking entrepreneurial steps. Second, other factors such as proactivity and innovation may be more dominant in influencing entrepreneurial intent than simply a tendency to take risks. In line with the Theory of Planned Behavior (Ajzen, 1991), intent is influenced by attitudes, subjective norms, and perceptions of behavioral control; thus, risk-taking may not be strong enough if it is not supported by other psychological and environmental factors.

These differences in findings can also be attributed to cultural and social contexts. In some societies, including Indonesia, norms and values that emphasize job security and income certainty can reduce the influence of risk-taking on entrepreneurial intentions. Thus, although previous theories and studies (Hattab, 2014; Nabi et al., 2017; Salim, 2019) show a positive relationship between risk-taking and entrepreneurial intention, the results of this study show that in certain contexts, risk-taking is not a determining factor for the emergence of such intention.

Overall, these results provide a new understanding that entrepreneurial intention is not only determined by risk-taking courage, but also by proactive ability, innovative attitude, and external factors such as environmental support and available opportunities. This opens up opportunities for further research to explore mediating or moderating factors that can explain why risk-taking does not affect entrepreneurial intention in certain contexts.

Innovation on entrepreneurial intention

The results of this study indicate that innovation has a positive effect on entrepreneurial intention. This finding is in line with the theoretical view that innovation is one of the main





dimensions of entrepreneurship that enables individuals and organizations to create competitive advantage (Lumpkin & Dess, 2001). Miller (1983) emphasizes that innovation is not only related to creativity but also practical application in the form of new products, services, or processes that can provide added value and differentiate oneself from competitors. Thus, individuals who have innovative tendencies are better prepared to face challenges and are more motivated to start a business.

In the context of entrepreneurship, innovation is not only seen as a process of discovering new things, but also as a strategy to find solutions to unmet market needs (Covin & Slevin, 1989). Individual innovation can increase confidence and motivation to create new businesses that are oriented towards competitive advantage. This explains why individuals with an innovative orientation have a greater intention to become entrepreneurs than individuals who are less innovative.

These findings are consistent with previous research. Hattab (2014) shows that individuals with an innovative orientation will be motivated to start a business because they realize the importance of innovation as a competitive resource. Nabi et al. (2017) also found that innovation contributes to increased self-confidence and motivation for individuals to become entrepreneurs, because innovation is seen as a key tool in facing market dynamics. Furthermore, Salim (2019) emphasized that innovation strengthens entrepreneurial intentions because it opens up new opportunities and provides strategies to overcome challenges in business.

Thus, the results of this study reinforce previous theories and research that innovation is a key factor in driving entrepreneurial intention. Individuals who are capable of innovating not only have creative ideas, but also see practical opportunities to implement these ideas into valuable businesses. Therefore, innovation acts as an important link between entrepreneurial knowledge and the real drive to enter the business world.

Entrepreneurship education on entrepreneurial intention through proactivity

The results of this study indicate that proactivity acts as a mediating variable in the relationship between entrepreneurship education and entrepreneurial intention. These findings confirm that entrepreneurship education not only provides business knowledge and skills but also shapes entrepreneurial character in the form of a proactive attitude, which ultimately encourages the emergence of entrepreneurial intention.

Theoretically, Lumpkin and Dess (2001) state that proactivity is an important dimension in entrepreneurial orientation, where individuals are required to take initiative, seek opportunities, and act early before external pressures arise. Chell (2008) adds that proactivity is





closely related to the ability to manage uncertainty and take advantage of environmental changes for business interests. With systematic entrepreneurial education (Fayolle, 2013; Matlay, 2008; Kuratko, 2005), individuals not only understand business concepts but are also better prepared to be proactive in facing opportunities and risks that arise in the business world.

In the context of entrepreneurial intention, Ajzen (1991) explains that intention is the main predictor of actual behavior. Proactivity becomes a bridge that strengthens the relationship between entrepreneurship education and intention, because proactive individuals tend to have stronger motivation to act and implement the business knowledge they have acquired. Research by Krueger et al. (2000) also shows that psychological factors such as proactivity play an important role in shaping entrepreneurial intention.

These findings are consistent with Hattab's (2014) study, which confirms that proactivity encourages entrepreneurial intention because proactive individuals are more driven to seek opportunities and take immediate action. Nabi et al. (2017) also found that proactiveness strengthens the relationship between external factors (e.g., entrepreneurship education) and intention, as this attitude makes individuals more prepared to face business challenges. Furthermore, Salim (2019) shows that proactiveness contributes to higher entrepreneurial intention, as individuals who actively seek and utilize opportunities are more courageous in taking steps to start a business.

Thus, these findings reinforce the view that entrepreneurship education plays a role in shaping proactivity, and it is proactivity that ultimately mediates and strengthens the influence of entrepreneurship education on entrepreneurial intention. This means that proactivity becomes a psychological mechanism that explains how the knowledge and skills acquired from education can be transformed into a real drive to become an entrepreneur.

Entrepreneurship education on entrepreneurial intention through risk-taking

The results of this study indicate that risk-taking does not play a mediating role in the relationship between entrepreneurship education and entrepreneurial intention. This means that even though entrepreneurship education can improve entrepreneurial understanding, skills, and attitudes, this influence is not passed on through risk-taking behavior.

In other words, the courage to take risks is not the main mechanism that bridges the relationship between education and entrepreneurial intent. Theoretically, risk-taking is seen as one of the main dimensions of entrepreneurial orientation (Lumpkin & Dess, 2001) that can encourage individuals to be more courageous in their actions.





However, this study indicates that entrepreneurial intention is more influenced by other dimensions such as proactivity or innovation, rather than by the courage to take risks. This is in line with Chell's (2008) view that not all individuals with entrepreneurial education automatically become risk takers, as most still tend to be cautious in facing uncertainty.

This finding is in line with the research by Efrata et al. (2021), which shows that although entrepreneurship education increases an individual's entrepreneurial orientation, only certain aspects of innovation and risk-taking influence entrepreneurial intention, while proactivity is more dominant. In that study, risk-taking was not even proven to be significant for entrepreneurial intention. Similarly, Kaouache et al. (2024) found that not all dimensions of entrepreneurial orientation have the same power to influence intention; proactivity and risk-taking are influential, but with variations depending on the individual and environmental context. Furthermore, Martins & Perez (2020) emphasized that environmental factors and social perceptions often determine entrepreneurial intention more than risk-taking attitudes.

Thus, the results of this study indicate that entrepreneurship education can directly increase entrepreneurial intention without the need for risk-taking to mediate. This may occur because such education emphasizes knowledge, practical skills, and motivational encouragement, which directly shape students' intentions to become entrepreneurs. Risk-taking may play an important role in the next stage, when individuals are already running a business, but not as a significant mediator at the intention stage.

Entrepreneurship education on entrepreneurial intention through innovation

The results show that innovation acts as a mediating variable in the relationship between entrepreneurship education and entrepreneurial intention. This finding indicates that entrepreneurship education not only provides technical knowledge and skills but also fosters creative thinking and the creation of new ideas, which ultimately encourages entrepreneurial intention.

In other words, the higher the quality of entrepreneurship education an individual receives, the stronger their innovative abilities, and this increases their intention to start a business. Theoretically, innovation is one of the main dimensions of entrepreneurial orientation (Lumpkin & Dess, 2001) which is an important driver in creating new business opportunities.

Entrepreneurship education can foster an innovative mindset by training students to identify problems, develop creative solutions, and turn ideas into valuable business opportunities. This is in line with Drucker's (1985) view that entrepreneurship is essentially the





“practice of innovation,” making innovation a vital bridge between education and entrepreneurial intent.

These results are in line with the research by Efrata et al. (2021), which found that innovation is a dominant factor linking entrepreneurial education experiences with the emergence of entrepreneurial intent among students. Research by Kaouache et al. (2024) also supports this, where innovation has been proven to increase entrepreneurial intent more strongly than the dimension of risk-taking. Meanwhile, Martins & Perez (2020) emphasize that individuals with innovative abilities are more likely to form entrepreneurial intentions because they see opportunities that others do not.

Thus, the findings of this study reinforce that innovation is an important mechanism that bridges entrepreneurship education with entrepreneurial intent. Effective entrepreneurship education is not enough to provide business knowledge alone, but must also encourage students to think creatively, test ideas, and create new value through innovation. It is this process that ultimately increases students' desire and readiness to enter the business world.

CONCLUSION

Based on the results of the study, it can be concluded that entrepreneurship education has a positive influence on entrepreneurial intention, both directly and through innovation as a mediating variable. This shows that entrepreneurship education not only functions as a means of transferring business knowledge, but also fosters creative thinking skills and the ability to create new solutions that are relevant to market needs. Innovation plays an important role as a bridge connecting entrepreneurship education with entrepreneurial intent, because individuals who are trained in innovative thinking are more likely to have the confidence and motivation to start a business. These findings reinforce the Resource-Based View (RBV) and Entrepreneurial Orientation (EO) perspectives, which emphasize that innovation is one of the key internal capabilities in shaping entrepreneurial intent.

The implementation of these research results can be carried out at several levels. At the educational level, the entrepreneurship curriculum needs to be designed to emphasize project-based learning, case studies, and innovation practices that enable students to apply creative ideas into real solutions. Educators can use experience-based learning methods, such as design thinking or business simulations, to train students' innovative abilities. At the policy level, the government needs to support entrepreneurship programs with funding, innovation competitions, and mentoring from business practitioners to create a conducive entrepreneurial ecosystem. Meanwhile, for students, the results of this study serve as an encouragement to not



only master the managerial aspects of business but also to develop innovative skills that can increase their readiness to face entrepreneurial challenges. For the business world, collaboration with educational institutions can provide real opportunities for students to test innovative ideas while strengthening the synergy between theory and practice. Thus, innovation-based entrepreneurship education is expected to produce young entrepreneurs who are creative, adaptive, and competitive in this era of disruption.

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