



# The Role of Self-Efficacy in Shaping Entrepreneurial Intentions among Vocational High School Students in Natuna Regency

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**Abstract.** Entrepreneurial intention among students has increasingly attracted scholarly attention, particularly in vocational education contexts where graduates face limited employment absorption. Rather than emerging solely from knowledge acquisition, entrepreneurial intention is influenced by psychological readiness and social reinforcement. This study examines how entrepreneurial knowledge, social valuation, and entrepreneurial attitudes in shaping the entrepreneurial intentions of vocational high school students, through self-efficacy. Using a quantitative approach with Partial Least Squares-Structural Equation Modeling (PLS-SEM), data were collected from 185 vocational high school students in Natuna Regency. The findings indicate that entrepreneurial knowledge strengthens self-efficacy, while social valuation contributes directly to entrepreneurial intention. Self-efficacy plays a mediating role in linking knowledge and social factors to intention formation. These results suggest that entrepreneurial commitment is not merely the outcome of curriculum exposure but is significantly shaped by confidence development and socio-environmental support. The findings highlight the importance of strengthening self-efficacy through entrepreneurship learning within vocational education by clarifying the psychological mechanism underlying intention formation within vocational settings.

**Keywords:** Entrepreneurial Knowledge, Social Valuation, Entrepreneurial Attitude, Self-Efficacy, Entrepreneurial Intention

## 1 Introduction

### 1.1 Background

Entrepreneurship is one of the key elements that can drive economic growth through reindustrialization efforts, infrastructure development, the strengthening of innovation, support for globally scaled businesses, and the implementation of free trade [1]. In Indonesia, the role of entrepreneurship has become increasingly strategic, as the unemployment rate remains relatively high, particularly among graduates of vocational high schools (SMK). This condition also happened in Natuna Regency. According to data from [2], as of August 2024, the labor force participation rate was recorded at 72.85%, while the open unemployment rate reached 3.89%. Although the unemployment rate in

Natuna is relatively lower than the national average, graduates of vocational high school (SMK) continue to face challenges in labor market absorption.

On the other hand, Natuna Regency possesses abundant natural resource potential, particularly in the marine, fisheries, and tourism sectors. These potentials should be leveraged as locally based entrepreneurial opportunities for the younger generation. Therefore, fostering entrepreneurial intention among SMK students in Natuna represents a strategic solution to address employment issues while simultaneously promoting regional economic development. This is in line with the findings of [3], which indicate that the service and fisheries sectors are the largest employment absorbers in Natuna, suggesting that the utilization of local resource potential plays a crucial role in supporting regional economic development and encouraging the emergence of an innovative and independent young generation.

According to [4] entrepreneurial intention reflects an individual's commitment to establishing a business and serves as the primary antecedent of entrepreneurial behaviour. There are numerous variables that affect this intention, including entrepreneurial knowledge, social valuation, attitude towards entrepreneurship, and self-efficacy ([5]; [6]; [7]; [8]; [9]). Entrepreneurial knowledge significantly influences students' entrepreneurial intention by equipping people with a comprehensive understanding of the procedures involved in starting and operating an organization effectively ([10]; [11]) as well as being the main basis for entrepreneurial activities [12]. [7] and [13] in their research, they affirmed that entrepreneurial knowledge has a favorable and substantial influence on students' entrepreneurial intention.

In addition to knowledge, social valuation is considered an important element that might affect entrepreneurial intention [8]. Social support from family, friends, and the surrounding environment can enhance individuals' confidence in engaging in a business [14]. However, in the context of Natuna Regency, a societal culture that tends to place greater value on formal employment, such as civil servants or salaried workers, remains a barrier to the development of entrepreneurial spirit. Therefore, positive social support is expected to shift this mindset and encourage vocational high school students to develop confidence in choosing entrepreneurship as a career path.

Another factor that influences entrepreneurial intention is the attitude towards entrepreneurship, which is the extent to which individuals assess the implementation of entrepreneurial behaviour positively or negatively [15]. Self-efficacy, defined as the belief in one's ability to perform specific actions successfully, has been widely acknowledged as a central predictor of entrepreneurial behavior [16]. Several studies show that self-efficacy functions as an intermediary mechanism through which entrepreneurial knowledge and social valuation influence entrepreneurial intention ([17]; [7]; [14]).

Although various studies have examined the determinants of entrepreneurial intention among vocational high school students, most studies have been conducted in urban areas and have not specifically examined the role of psychological mechanisms that bridge cognitive and social factors, particularly in the context of vocational education in border areas such as Natuna Regency. In addition, previous studies have also shown differences in empirical findings, particularly regarding the influence of entrepreneurial knowledge and entrepreneurial attitudes on entrepreneurial intention ([18]; [19]; [20]; [21]; [22]; [13]; [9]). These inconsistencies highlight the need to further explore how

psychological mechanisms operate within specific educational environments by focusing on a regional vocational context in Natuna Regency.

## 1.2 Theoretical Studies

**Entrepreneurial Knowledge and Self-Efficacy.** Within the perspective of Social Cognitive Theory, knowledge is considered an essential cognitive resource that influences how individuals evaluate their capability to perform certain actions [6]. In the entrepreneurial context, knowledge provides individuals with a clearer understanding of business opportunities, potential risks, and the processes involved in starting and managing a venture [11]. This understanding helps individuals build stronger confidence in their ability to engage in entrepreneurial activities [23]. Empirical evidence supports this relationship. Research conducted by [18]; and [24] indicates that entrepreneurial knowledge significantly contributes to the development of entrepreneurial self-efficacy. Similarly, [7] demonstrate that individuals with greater exposure to entrepreneurial knowledge tend to exhibit higher levels of confidence when participating in entrepreneurial activities.

**Social Valuation and Self-Efficacy.** Social valuation describes how individuals interpret the encouragement, recognition, and expectations they receive from important social actors, including family, peers, and educational institutions, when pursuing entrepreneurial activities [14]. Such social influences play an important role in shaping individual's beliefs about desirable career option [5]. Previous research by [25] has shown that social support is a critical factor in increasing self-efficacy. Subjective norms as part of social valuation can strengthen an individual's sense of self-efficacy, resulting in an increases entrepreneurial intention. Social support creates a conducive psychological environment through moral encouragement and social legitimacy that reinforces individuals' beliefs in their ability to run a business ([26]; [18]).

**Entrepreneurial Knowledge and Entrepreneurial Intention.** Entrepreneurial knowledge developes entrepreneurial intention because it enables individuals to recognize opportunities and generate creative ideas in the business context [13]. This knowledge shapes individuals' mindsets, behaviors, and greater readiness to consider entrepreneurship as a potential career choice [27]. Empirical evidence also supports this relationship. Studies conducted by [7]; [8]; [28] indicate that entrepreneurial knowledge significantly contributes to strengthening individuals' intentions to engage in entrepreneurial activities.

**Social Valuation and Entrepreneurial Intention.** Social valuation contributes to shaping entrepreneurial intention through normative support and the social environment for entrepreneurial career choices. Results of the study are consistent with the findings of [29]; [30]; [31], which state that support from family, friends, and the social

environment plays a major role in shaping entrepreneurial intention. [8] found that social support enhances individuals' confidence in selecting entrepreneurship as a career. Nevertheless, [20] argue that the effect of social judgment on entrepreneurial intention is relatively weak compared to internal factors, particularly attitudes and self-efficacy.

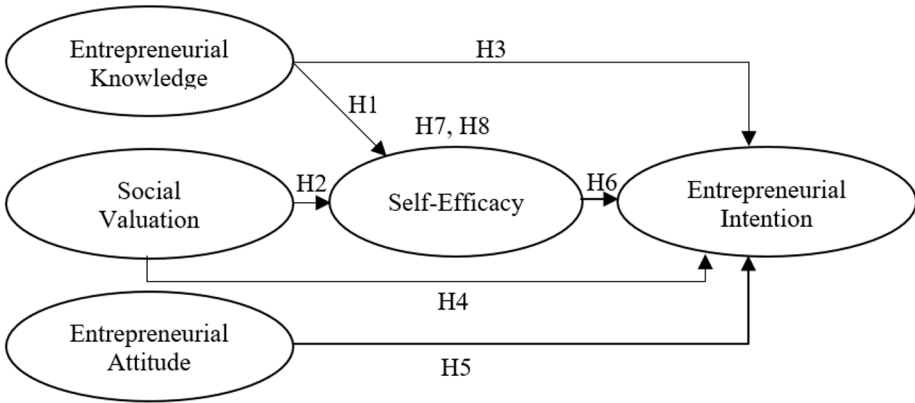
**Attitude towards Entrepreneurship and Entrepreneurial Intention.** Attitude can be described as an individual's evaluation, either favorable or unfavorable, toward performing a specific behavior [15]. As it pertains to entrepreneurship, attitude is influenced by experience, social, economic, and cultural factors, not solely by the individual [32]. Attitudes toward entrepreneurship play significant role in shaping an individual's entrepreneurial intention [19]. Entrepreneurial attitudes include both cognitive evaluations and affective responses toward entrepreneurial activities, which together influence an individual's willingness to pursue entrepreneurship as a career option [33]. A large body of empirical research consistently reports that favorable attitudes toward entrepreneurship are associated with stronger entrepreneurial intentions ([18]; [8]; [20]; [34]; [35]). Individuals who possess favorable perceptions of entrepreneurship tend to demonstrate a stronger inclination to initiate business activities. This argument aligns with the Theory of Planned Behavior, which identifies attitude as one of the key predictors of behavioral intention.

**Self-Efficacy and Entrepreneurial Intention.** Self-efficacy reflects an individual's belief in their ability to perform tasks and achieve desired outcomes, particularly when facing challenges related to entrepreneurial activities ([20]; [36]). Someone who has confidence in their job capabilities and their capacity to surmount challenges to get a certain performance outcome will enhance their entrepreneurial intention [37]. Empirical evidence further suggests that self-efficacy has a positive and significant influence on entrepreneurial intention. Consequently, self-efficacy is often considered a central psychological factor that encourages individuals to develop stronger entrepreneurial aspirations ([38]; [35]).

**The Mediation Role of Self-Efficacy.** Self-efficacy serves as a psychological process that connects cognitive and social elements to entrepreneurial intention ([7]; [17]). [39] further highlight that the impact of entrepreneurial knowledge on intention becomes stronger when individuals internalize that knowledge as confidence in their entrepreneurial abilities. In addition, self-efficacy also mediates the relationship between social valuation and entrepreneurial intention ([14]; [40]). Similar conclusions are reported by [18] and [20] who found that social valuation positively affects entrepreneurial intention through entrepreneurial self-efficacy.

### 1.3 Hypothesis

The proposed research model and hypotheses outline the variables' connection.



**Fig. 1.** Research Model

Based on the image presented in Fig. 1 of the research model, the hypothesis formulation in this research is as follows:

H1: Entrepreneurial knowledge positively affects self-efficacy.

H2: Social valuation positively affects self-efficacy.

H3: Entrepreneurial knowledge positively affects entrepreneurial intention.

H4: Social valuation positively affects entrepreneurial intention.

H5: Attitude toward entrepreneurship positively affects entrepreneurial intention.

H6: Self-efficacy positively affects entrepreneurial intention.

H7: Self-efficacy mediates the relationship between entrepreneurial knowledge and entrepreneurial intention.

H8: Self-efficacy mediates the relationship between social valuation and entrepreneurial intention.

## 2 Methodology

### 2.1 Research Method

This research employs a quantitative approach, thereby constituting a scientific research process that utilizes numerical data and statistical techniques for data analysis, processing, and interpreting the relationship between variables objectively and systematically [41]. The research design used is a conclusive descriptive design, as explained by [42] which states that the present research investigates the cause-and-effect of the variable studied, including mediating variables. Based on the time horizon, a cross-sectional research design is employed, where data is collected at a single point in time [43].

## 2.2 Population and Sample

The participants in this study were all vocational high school students from Natuna Regency. The choice of the study site was predicated on the recognition that Natuna Regency has great local economic potential but still faces challenges in absorbing vocational graduates into the workforce.

Respondents were deliberately selected using a non-probability, purposive approach, based on predefined criteria that aligned with the objective of the study. The research sample came from SMKN 1 Bunguran Timur Laut, SMKN 1 Bunguran Timur, and SMKN 1 Bunguran Barat.

The number of respondents followed the guidelines of [44], which used a ratio of 5 to 10 respondents for each indicator. In this study, there were 20 indicators, so the minimum recommended sample size was 100 respondents.

## 2.3 Data Collection Techniques

Data for this research were obtained through a structured questionnaire administered directly in physical form. All statement items were measured using a five-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5), as recommended by [45].

The research instrument consisted of five main constructs, namely, entrepreneurial knowledge measured by 4 indicators, social valuation by 4 indicators, attitude towards entrepreneurship by 3 indicators, self-efficacy by 4 indicators, and entrepreneurial intention by 5 indicators. The operationalization of the five study variables is summarized in Table 1.

## 2.4 Data Analysis Techniques

Partial Least Squares–Structural Equation Modeling (PLS-SEM) method was applied in this study with the support of SmartPLS version 4 due to its suitability for prediction-based analysis, which involves complex structural models, and tests the role of the mediating variable [46]. Additionally, PLS-SEM can be applied without assuming a normal data distribution and is suitable for use with medium sample size.

**Table 1.** Operational Variable

Variable	Number of Indicators	Source
Entrepreneurial Knowledge (EK)	4	[7] and [9]
Social Valuation (SV)	4	[8] and [14]
Attitudes toward Entrepreneurship (AE)	3	[18] and [8]
Self-Efficacy (SE)	4	[14] and [9]
Entrepreneurial Intention (EI)	5	[18]; [8]; [14]; [9]

### 3 Result and Discussion

#### 3.1 Results

This study covered 185 vocational high school students in Natuna Regency. Based on descriptive analysis, most of them were male, with 122 students (60.52%), and female, with 73 students (39.46%). Based on school origin, the majority came from SMK Negeri 1 Bunguran Timur (38,38%), followed by SMK Negeri 1 Bunguran Timur Laut (34.05%) and SMK Negeri 1 Bunguran Barat (27,57%). Most of the students were in grade XI (57.30%), and the most popular major was Visual Communication Design (23,24%), followed by Fishing Vessel Navigation (11,35%). Overall, these characteristic shows the representation of students from various schools, grade levels, and majors in Natuna Regency.

**Table 2.** Respondent Characteristics

Description	Total Respondents	Percentages (%)
<b>Gender</b>		
Female	73	39.46%
Male	112	60.54%
<b>School Name</b>		
SMKN 1 Bunguran Timur	71	38.38%
SMKN 1 Bunguran Timur Laut	63	34.05%
SMKN 1 Bunguran Barat	51	27.57%
<b>Grade</b>		
Grade X	20	10.81%
Grade XI	106	57.30%
Grade XII	59	31.89%
<b>Major</b>		
Fishery Vessel Engineering	21	11.35%
Brackish Water and Marine Fisheries Agribusiness	12	6.49%
Nautical Studies for Fishing Vessels	27	14.59%
Indonesia Fisheries Product Processing Agribusiness	18	9.73%
Visual Communication Design	43	23.24%
Accounting	11	5.95%
Computer Engineering and Networking	2	1.08%
Oil and Gas Production Engineering	4	2.16%
Office Management and Business Services	17	9.19%
Automotive Light Vehicle Engineering	9	4.86%
Motorcycle Engineering	13	7.03%
Automotive	8	4.32%

Based on table 3, it shows that indicators have outer loading values above 0.60. Therefore, they are declared valid. Indicators with a loading value of 0.60 can be retained because the Average Variance Extracted (AVE) value is  $\geq 0.50$  ([46]; [47]).

**Table 3.** Outer Loading

EK	SV	AE	SE	EI					
EK 1	0.733	SV 1	0.771	AE 1	0.774	SE 1	0.785	IE 1	0.775
EK 2	0.720	SV 2	0.794	AE 2	0.710	SE 2	0.777	IE 2	0.743
EK 3	0.801	SV 3	0.720	AE 3	0.813	SE 3	0.672	IE 3	0.764
EK 4	0.785	SV 4	0.682			SE 4	0.784	IE 4	0.785
IE 5	0.749								

Table 4 indicates that every variable has an AVE value over 0.50. This indicates that each variable satisfies the validity criterion, since it accounts for over fifty percent of the variations in its indicators [46] and composite reliability gas values above 0.70. Thus, all variables in the model are considered reliable, meeting the recommended reliability threshold [48] and [49].

**Table 4.** Construct Validity and Reliability Results

Variable	Average Variance Extracted	Composite Reliability (Rho_c)
Entrepreneurial Knowledge	0.578	0.846
Social Valuation	0.552	0.831
Attitude toward Entrepreneurship	0.588	0.810
Self-Efficacy	0.571	0.841
Entrepreneurial Intention	0.583	0.875

Based on [46] an R2 value of 0.25-0.49 is weak, an R2 between 0.50-0.74 is moderate, and an R2 value above 0.75 is strong. Table 5 shows the obtained R2 value of self-efficacy is 0.380, which means that entrepreneurial knowledge and social valuation explain 38% of the variation in efficacy, with a weak to moderate. At the same time, the obtained R2 value of entrepreneurial intention is 0.569, showing that 56,9% of its variance is explained by the independent variable, indicating a moderate effect.

**Table 5.** R-Square Results

Variable	R-Square
Self-Efficacy	0.380
Entrepreneurial Intention	0.569

According to the  $f^2$  criteria, an effect size of 0.02 is categorized as a small effect, 0.15 as a moderate effect, and 0.35 as a strong effect, whereas values below 0.02 have no effect [48].

**Table 6.** Effect Size ( $F^2$ ) Results

Variable	Effect Size ( $F^2$ )	Description
Entrepreneurial knowledge (X1) $\rightarrow$ Self-Efficacy (Z)	0.247	Moderate Effect

Variable	Effect Size (F2)	Description
Social Valuation (X2) → Self-Efficacy (Z)	0.052	Small effect
Entrepreneurial Knowledge (X1) → Entrepreneurial Intention (Y)	0.007	No effect
Social Valuation (X2) → Entrepreneurial Intention (Y)	0.000	No effect
Attitudes towards Entrepreneurship (X3) → Entrepreneurial Intention (Y)	0.040	Small effect
Self-Efficacy (Z) → Entrepreneurial Intention (Y)	0.331	Moderate effect

Finally, hypothesis testing in Table 7 was conducted to determine the direction (and significance of the relationships between variables as proposed in the previous hypotheses.

**Table 7.** Hypothesis test results

Code	Hypothesis	Original sample (O)	t-statistics	p -value	Conclusion
H1	EK (X1) → SE (Z)	0.470	5.088	0.000	Supported
H2	SV(X2) → SE (Z)	0.215	2.390	0.017	Supported
H3	EK (X1) → EI (Y)	0.072	1.042	0.298	Not supported
H4	SV (X2) → EI (Y)	0.004	0.076	0.940	Not supported
H5	AE (X3) → EI (Y)	0.189	2.581	0.010	Supported
H6	SE (Z)→ EI(Y)	0.562	6.018	0.000	Supported
H7	EK (X1) → SE (Z) → EI (Y)	0.264	4.247	0.000	Supported
H8	SV (X2) → SE (Z) → EI (Y)	0.121	2.389	0.017	Supported

The hypothesis testing results from Table 7 show that entrepreneurial knowledge (EK) and social valuation (SV) have a positive and significant effect on self-efficacy (SE). However, EK and SV do not significantly influence entrepreneurial intention (EI) directly. In contrast, attitude toward entrepreneurship (AE) and self-efficacy significantly affect entrepreneurial intention. The analysis also reveals that self-efficacy mediates the relationship between entrepreneurial knowledge and entrepreneurial intention, as well as between social valuation and entrepreneurial intention. These findings indicate that entrepreneurial intention is more strongly influenced by psychological confidence and entrepreneurial attitudes than by knowledge and social valuation alone.

### 3.2 Discussion

The findings of this study provide several insights into the factors that shape entrepreneurial intention among students. The analysis indicates that entrepreneurial knowledge contributes to strengthening students’ confidence in their ability to engage in entrepreneurial activities. When individuals possess a deeper understanding of entrepreneurial processes, they tend to develop stronger beliefs in their capability to recognize opportunities and manage business-related challenges [34]. This supports the perspective of Social Cognitive Theory, which suggests that knowledge serves as an important cogni-

tive resource influencing self-efficacy [6]. Entrepreneurial knowledge enables individuals to assess business opportunities more rationally, understand risks, and enhance confidence in dealing with business uncertainty ([7]; [20]). Thus, entrepreneurial knowledge functions as cognitive capital for SMK students in Natuna Regency in fostering entrepreneurial self-efficacy.

These findings suggest that social support from family, friends, and the surrounding environment serves as psychological reinforcement in building students' self-confidence. The results are consistent with the studies of [26] and [14], which emphasize that a supportive social environment can enhance individual confidence. [18] highlight that social norms function as external cognitive resources that strengthen individuals' beliefs in engaging in entrepreneurial activities. In the context of Natuna Regency, social legitimacy towards entrepreneurship can foster students' self-efficacy within a society that still tends to prioritize formal employment.

However, the findings of this research reveal that entrepreneurial knowledge does not have a direct effect on entrepreneurial intention. The findings indicate that entrepreneurial knowledge does not necessarily and automatically foster entrepreneurial intention, particularly when such knowledge is not internalized into personal beliefs ([50]; [34]). This condition is also evident among vocational high school students in Natuna Regency, where the learning process tends to focus more on theoretical content and technical skills. Consequently, the knowledge acquired by students is more informative than transformative. As a result, entrepreneurial knowledge functions primarily as a means of raising awareness but is not sufficiently strong to directly motivate entrepreneurial intention.

The result also indicates that social valuation does not have a direct impact on entrepreneurial intention. Social valuation is not always a significant predictor of entrepreneurial intention [51]. In vocational education, particularly in regions such as Natuna Regency, the social support received by students tends to be verbal and normative in nature and is not accompanied by the presence of entrepreneurial role models or real entrepreneurial experiences.

Furthermore, the results indicate that attitudes towards entrepreneurship can strengthen an individual's willingness to pursue entrepreneurial opportunities. These findings are consistent with the assumptions of the Theory of Planned Behavior, which identifies attitude as one of the main predictors of behavioral intention ([8]; [9]; [35]). In relation to vocational high school (SMK) students in Natuna Regency, positive attitudes towards entrepreneurship reflect interest, mental readiness, and optimistic perception of entrepreneurship as a career choice.

Another important finding of this study is the mediating role of self-efficacy. The results indicate that self-efficacy acts as a psychological mechanism that connects entrepreneurial knowledge and social valuation with entrepreneurial intention. Entrepreneurial knowledge becomes more influential in shaping intention when individuals internalize that knowledge as confidence in their own capabilities. Similarly, social encouragement from the surrounding environment can strengthen entrepreneurial intention when it enhances individuals' belief in their ability to succeed in entrepreneurial activities. This mediating role has also been highlighted in previous studies, which em-

phasize that self-efficacy serves as an important link between cognitive resources, social influences, and entrepreneurial intention linking entrepreneurial knowledge to entrepreneurial intention ([52]; [18]; [20]; [14]).

## **4 Conclusion and Suggestion**

### **4.1 Conclusion**

This study shows that entrepreneurial knowledge and social valuation contribute to strengthening the self-efficacy of vocational high school students in Natuna Regency. Students who possess better entrepreneurial understanding and perceive stronger social support tend to have greater confidence in their ability to engage in entrepreneurial activities. However, these factors do not directly influence entrepreneurial intention, indicating that knowledge and social encouragement alone are insufficient to stimulate entrepreneurial career choices.

In contrast, attitudes towards entrepreneurship and self-efficacy have a positive and significant effect on students' entrepreneurial intention. Furthermore, self-efficacy acts as a full mediator in the relationship between entrepreneurial knowledge and social valuation toward entrepreneurial intention. These findings emphasize that self-efficacy is a key mechanism bridging the influence of cognitive and social factors on the formation of entrepreneurial intention. The enhancement of students' entrepreneurial intention is therefore determined not only by knowledge transfer and social support, but primarily by students' ability to internalize learning experiences into confidence in their own capabilities.

### **4.2 Suggestion**

Based on the research findings, vocational high schools and teachers are encouraged to enhance the quality of entrepreneurship education by emphasizing the strengthening of students' self-efficacy through practical, applicable, and contextual learning approaches. Schools are expected to provide direct entrepreneurial experiences, while teachers play an active role in creating a learning environment that supports the development of entrepreneurial attitudes and students' self-efficacy, not only through verbal motivation but also through activities such as business simulation and relevant case studies.

In addition, students are expected to be more proactive in developing their potential by participating in various activities that foster independence, leadership, problem-solving skill, and self-efficacy. These experiences are expected to strengthen students' self-efficacy in facing real entrepreneurial challenges.

Subsequent studies may consider expanding the research scope through the inclusion of vocational high schools in other comparable regions and incorporating additional variables that may influence entrepreneurial intention, such as internship, experience, institutional support, and family environment, as well as using a longitudinal approach mixed methods to get a more profound comprehension of the processes involved in the establishment of entrepreneurial intention.

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