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## The Role of Entrepreneurship Education in Shaping Students' Emotional and Cognitive Competencies for Entrepreneurship

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**Abstract.** This study investigates the role of moderation in entrepreneurship education at the vocational high school level in shaping students' emotional and cognitive competencies to enter the entrepreneurial field. The planned behavior is used to analyze the moderation role of education on the variables of students' emotional and cognitive competencies. The factor analysis research design was used to see the role of entrepreneurship education and each contribution of students' emotional competence and cognitive abilities to students' interest in entrepreneurship. Structural equation model analysis was used to analyze the contribution between variables. Research findings show that entrepreneurship education is able to make a significant contribution to students' emotional and cognitive competencies in increasing their interest in entrepreneurship. The contribution of students' emotional and cognitive competencies has a direct influence on entrepreneurial attitudes, interests and self-efficacy. So, students who have emotional competence will have a better interest in entrepreneurship, so that they are considered to be preparing them to be good entrepreneurs. The findings of this study implied that entrepreneurship education can shape students' entrepreneurial

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competence and cognitive skills, thus making entrepreneurship education a good alternative program in schools. The researcher recommends further research to further explore the influence and relationship between students' emotions and cognition in a business context. In addition, potential future research could include entrepreneurship teaching methods, problems and design of entrepreneurship teaching activities.

**Keywords:** entrepreneurship education; entrepreneurial interest; emotional competence; self-efficacy

## 1. Introduction

This research seeks to reveal the role of entrepreneurship education applied in vocational high schools in shaping the emotional and cognitive abilities that support students' entrepreneurial abilities. Through this research, practitioners can find out and optimize entrepreneurship education to prepare students to be ready for entrepreneurship. Vocational high schools provide knowledge and skills to students to make them ready to enter the workforce. Education at the secondary vocational level must be able to equip students so that they are capable of entrepreneurship besides being ready to work (Debarliev et al., 2022; Roslan et al., 2022). By equipping students for entrepreneurship, the potential for students to create jobs is increasing. Seeing the increasingly fierce job competition, entrepreneurship education is needed so that they are aware of the importance of entrepreneurial skills to survive when they enter society. Entrepreneurial interest is one of the most important measures of entrepreneurial behavior for students when they want to start entrepreneurship. In addition to interest, cognitive ability is also an aspect that is very necessary for students to increase interest in entrepreneurship (Mallett, 2019; Marniati & Witcjaksono, 2020). However, this cognitive ability is not enough because entrepreneurship, aside from requiring cognitive aspects, also requires good entrepreneurial interest. Emotional competence has been studied in the context of various businesses and entrepreneurship, it competence greatly influences interpersonal skills, decisions, and organizational abilities. In addition, It affects one's ability to evaluate and business behavior which plays a very important role in understanding business situations, making decisions and taking action when faced with certain situations in business (Balachandra, 2019; Belas et al., 2019). There are areas of the human brain that are capable of optimizing these cognitive abilities and emotional competencies. Cognitive abilities and emotional competencies play an important role in assisting individuals in determining decisions or actions (Lee, 2008; Pirhadi et al., 2021).

The process of emotion is a very important variable and influences several aspects of cognitive and individual behavior in entrepreneurship. Emotional competence in the world of entrepreneurship is very important because the environment in the business world is one which is uncertain or unpredictable. Mature emotional competence is needed so that entrepreneurs are calm in dealing with various situations and consider cognition appropriately. This emotional and rational process has a significant impact on an individual's cognitive abilities in processing the information he receives so that it will greatly

determine the individual's subsequent behavior. In this study, researchers used the theory of motivation and the theory of planned behavior to help understand the role of emotions in influencing entrepreneurial attitudes and interests (Kisubi et al., 2021; Kusumojanto et al., 2021). These emotional competencies and cognitive abilities play a role in overcoming uncertainty, discrepancies, and the feasibility of business ideas. Several previous studies have examined the relationship and role of personality and emotional intelligence in carrying out individual roles as entrepreneurs (Lee, 2008; Pirhadi et al., 2021; Rose et al., 2019). The results of the study show that a strong entrepreneurial interest will affect the behavior and ability of individuals to regulate their emotions. This encourages individual emotional competence that supports individual abilities in entrepreneurship. In this study, researchers focused on emotional competence because it is not the same as intelligence and skills (Fretschner & Lampe, 2019; Machali et al., 2021). Competence is an individual's potential in managing emotions to make business ideas a reality. Hence, emotional competence is a practical application of emotional intelligence. In addition, emotional competence was chosen because this competency and its cognitive aspects can be practically improved through education or training. Several previous studies have proven that education can improve emotional competence in various contexts such as literacy and others (Kisubi et al., 2021; Padi et al., 2022).

Entrepreneurship education is very important, especially for middle and adult levels. Adults really need interpersonal skills in order to compete and be entrepreneurial in society. Entrepreneurship education provides alternative skills so that students are ready to enter the workforce. Based on the results of previous studies, entrepreneurship courses for students at the primary, secondary and higher levels are still lacking (Lee, 2008; Pirhadi et al., 2021; Rose et al., 2019). There is about 45% of the population in Indonesia who receive entrepreneurship training or education. This illustrates that the condition of the people in Indonesia has not received much entrepreneurship training (Hockerts, 2018; Kwong et al., 2022). Previous research has proven that entrepreneurship education can increase students' interest in entrepreneurship, such as becoming an entrepreneur (Rahman et al., 2022; Zhao et al., 2022). Unlike previous research, this research focuses on the role of entrepreneurship education and its relationship with emotional competence, cognitive abilities, and students' interest in entrepreneurship.

The researchers wanted to investigate the role of entrepreneurship education on emotional competence and cognitive abilities. Entrepreneurial interest is someone's desire to start a business. In this study, researchers used the emotional-cognitive theory reinforced by planned behavior theory to examine the relation between emotional, cognitive competence, entrepreneurial attitudes, and students' interest in entrepreneurship. In addition, this research also examines whether entrepreneurship education can make a significant contribution to these variables. Specifically, this study aimed to address the following research problems, namely to investigate the effect of entrepreneurship education on students' emotional and cognitive competence and students' entrepreneurial interest and to investigate the effect of entrepreneurship education on emotional competence, entrepreneurial attitudes,

self-efficacy, and entrepreneurial interest. Through this research, researchers hope to reveal the benefits of entrepreneurship education for vocational high school students from the emotional, cognitive, attitude, self-efficacy, and entrepreneurial interest aspects.

## **2. Literature Review**

### **2.1 Self-Efficacy and Attitudes Entrepreneurial Interests**

The theory of planned behavior is a theory that explains that individual behavior can be directed and modified by strengthening the guiding aspects. Based on the theory, entrepreneurial interest is a rational aspect that is influenced by subjective norms, attitudes, and self-efficacy as the main aspects in increasing students' entrepreneurial interest. These factors are the aspects that most strongly influence entrepreneurial interest and behavior and other fields (Hwee Nga & Shamuganathan, 2010; Mwasiaji et al., 2022). Subjective norms are the roles of the closest people such as family, relatives or friends who can influence decision-making whether to enter into entrepreneurial activities or not. Input and suggestions from those closest to them can change people's views of self-efficacy in the entrepreneurial world. In addition, the emotional aspect is also a key aspect in deciding whether to continue or stop. This case is often experienced by middle and high school students who are emotionally and economically still dependent on their families. Several previous studies have proven that subjective norms and entrepreneurial interest have a positive relationship (Lee, 2008; Pirhadi et al., 2021; Rose et al., 2019). In addition, previous studies have found that subjective norms are the weakest aspect of influencing interest in entrepreneurship. Subjective norms also have little influence on decision-making among people from Western countries because such people have a high degree of individualism in achieving individual goals. However, the effect of this subjective norm will naturally have different results on entrepreneurial attitudes and self-efficacy when examined in the context of Indonesian society.

Studies have proven that entrepreneurial attitude is a factor that can predict individual interest and behavior in entrepreneurship and contributes positively to both of these variables (Nájera-Sánchez et al., 2022; Ndofirepi, 2020). Entrepreneurial attitude was identified to be the strongest predictor aspect of entrepreneurial interest. It has been proven among the community that the majority of people who have a higher education are more confident in starting their business and are ready to take all the risks in running their business. Entrepreneurial attitude is shown by people who have better education in the field of entrepreneurship and will have a stronger desire to devote themselves to the field of entrepreneurship. Studies reveal that self-efficacy is the most powerful aspect in predicting entrepreneurial interest (Shirokova et al., 2018; Zaring et al., 2021). So, attitude and self-efficacy are the most important aspects of entrepreneurial interest. Entrepreneurial attitude and self-efficacy are factors that can predict the level of one's entrepreneurial interest even though the effect of efficacy is believed to be stronger.

## 2.2 Emotional competence and entrepreneurial interest of students

Entering the field of entrepreneurship requires competence. Emotional competence is a person's ability to use his knowledge and skills in a particular field. This competency consists of several components, including practical knowledge, method, participating, and self-knowledge. Competence is contextual depending on the field and expertise. Someone who masters this competency describes the success of a person in achieving the goals of the learning process (Wadhvani, 2012; Wijayati et al., 2021). These competencies have a strong correlation with performance outcomes and can be evaluated using grading standards. Competence can also be enhanced by training or education. Some literature shows that business competence is needed if someone wants to enter the business world. It is necessary to develop several competencies in supporting the business world, one of which is emotional competence.

Entrepreneurship requires not only cognitive abilities but also emotional competence. Existing research has proven that background, character, attitude, motivation, personality, and individual skills greatly influence a person's behavior in the world of entrepreneurship (Hadianto et al., 2022; Kindel & Stevens, 2021; Rose et al., 2019). Emotional intelligence has been proven in employees. Employees who have better emotional intelligence will be more able to work independently and get support from others. Emotional intelligence in the field of entrepreneurship is the ability to understand using one's emotions to support one's performance effectively. Some experts use the term emotional competence because it refers to a person's ability to manage emotions to support their performance in the field of entrepreneurship. These competencies can be learned and improved. Emotional competence also refers to a person's ability to recognize, understand, manage emotions, and use the emotions of oneself and others (Mwasiaji et al., 2022; Oluase et al., 2020). In this study, emotional competence is defined as a component of individual behavior that plays an important role in carrying out activities or making decisions in running a business. So, emotional competence is an interaction between individuals and their environment and they are able to take advantage of this interaction as learning material and development of personal competence.

The concept of emotional competence has undergone many developments. The concept of that is spreading today is knowledge about the rules for showing expressions, managing emotions, and adjusting emotions to the situation and the person you are talking to. Emotional competence is also understood as a person's ability to manage emotions according to the culture and work situation. There are several things that must be understood regarding types of competence, namely emotional competence, social competence, and cognitive competence (Ndofirepi, 2020; Pirhadi et al., 2021). A person's emotional competence is understood as an individual's ability to understand and use self-emotions so that the individual becomes a superior and effective individual in doing work. In this study, researchers used the concept of emotional competence which is built by several components, namely the level of self-awareness, self-regulation abilities, motivation, social skills and empathy. Individual assessment indicators suggest that individuals who have emotional competence are able to

place these components in the right situation. Several previous studies have proven that emotional competence is a key factor in determining a person's decision whether to enter or not in entrepreneurship (Wadhvani, 2012; Zaring et al., 2021). In addition, emotional competence is also the most powerful component in predicting performance. So, entrepreneurial interest is the belief of someone who is mature in carrying out a business or business in a planned and conscious manner. Students who have higher entrepreneurial interest will also have high emotional competence. Emotional competence is also able to predict an individual's ability to manage, lead, and manage their business.

### **2.3 The Role of Emotional Competence on Attitudes and Self-Efficacy in Entrepreneurship**

Entrepreneurial attitude is the attitude of someone who shows enthusiasm or not toward entrepreneurial activity. Several studies have proven that emotional competence has an effect on increasing entrepreneurial interest and entrepreneurial attitudes even though the effect is not highly significant (Blunck et al., 2021; Boysen, 2022; Hadianto et al., 2021) Entrepreneurial attitude is the result of emotional competence and individual motivation. Emotional competence affects the cognitive processing of information which will result in subsequent individual behavior. In addition to emotional competence, emotional intelligence is also an aspect that can strengthen entrepreneurial attitudes and enable individuals to improve their careers in the field of entrepreneurship. So, students who have emotional competence will be more able to show a better entrepreneurial attitude. In addition, students with good emotional competence tend to be more creative and productive and adopt better entrepreneurial attitudes. Self-efficacy is a person's belief in motivation and being able to apply cognitive abilities to actions that should be taken in dealing with certain situations. Self-efficacy will be more optimal if the individual has superior emotional intelligence (García-González & Ramírez-Montoya, 2020; Mallett, 2019). The individual will be more confident in facing the environment and stronger in facing tests and challenges. People who never give up tend to have better self-confidence and have a superior entrepreneurial spirit. So, emotional competence is a trigger to activate other entrepreneurial competencies, such as courage in making entrepreneurial decisions, openness, creativity, and more maturity in planning something. An entrepreneur who has emotional competence will be more able to accept pressure, be confident, and be better able to manage a business, such as seeing opportunities and solving problems. Students who have good emotional competence will be mentally strong, confident, and more productive.

Entrepreneurship education has a positive contribution to the emotional competence and entrepreneurial interests of students. Entrepreneurship education can be carried out on students from an early age so that they have an entrepreneurial spirit. Several previous studies have proven that entrepreneurship education implemented in schools can increase students' interest in entrepreneurship. Students' interest in becoming entrepreneurs increases after getting entrepreneurship education. Emotional and rational competence of students can be enhanced by entrepreneurship education. Researchers have shown a positive correlation between entrepreneurship

courses and entrepreneurial attitudes and entrepreneurial interests (Balachandra, 2019; Muñoz et al., 2020; Sherkat & Chenari, 2022). In addition, entrepreneurship education accompanied by self-efficacy can increase interest in entrepreneurship. Entrepreneurship education can make students more attracted to the field of entrepreneurship. Therefore, education is closely related to students' emotions. This paradigm is accepted by researchers, so that entrepreneurship education can facilitate students in preparing them for success in the field. Entrepreneurship education can play a role in emotions and other aspects such as clarifying entrepreneurial identity, increasing ability, increasing tolerance, and insight into entrepreneurship. Good emotional competence resulting from entrepreneurship education can support superior entrepreneurial competence.

Entrepreneurship education at the secondary and higher education levels has a certain pattern that optimizes the emotional role of students during the educational process so that students' motivation toward entrepreneurship increases. Entrepreneurship education must be able to play positive and negative emotions during the learning process. Previous studies revealed that learning entrepreneurship with group strategies can optimize the emotional role of students in achieving entrepreneurship learning goals (Aadland & Aaboen, 2020; Roslan et al., 2022). In addition, entrepreneurial learning experiences can also increase emotional competence in managing negative and positive emotions to achieve the target of learning entrepreneurship in their schools (Azizi & Mahmoudi, 2019; Kumar & Bhattacharyya, 2020). Therefore, through this research, researchers seek to reveal whether entrepreneurship education can increase students' emotional competence and whether students with good emotional competence can increase entrepreneurial interest.

### **3. Methodology**

#### **3.1 Samples and procedures**

The participants of this research were 500 vocational students who were taken from three schools in Bandung, Indonesia. Participants were selected based on high, middle and low school clusters. In addition, it is carried out based on geographical location which represents rural, medium and urban areas. Vocational high schools were sampled in this study because these school levels educate their students to be ready to work or start their own business after graduating from high school. Participants in this study consisted of 60% women and 40% men. The educational level of parents of participating students is 80% with a bachelor's degree and 20% with less than a bachelor's degree. The research design used is a factorial analysis design to see the role of entrepreneurship education on the emotional competence and cognitive abilities of students in the field of entrepreneurship. In addition, this study also investigated the correlation between emotional competence, cognitive competence, entrepreneurial attitudes, and students' interest in entrepreneurship. Researchers also examined students who had not received entrepreneurship education classes to see differences in entrepreneurial interest when students had and had not received entrepreneurship education classes. Data was collected through a survey at the beginning and end of the semester. Data collection was carried out by giving questionnaires to students and

analyzing them using structural equation models for individuals and groups. To anticipate biased data in research, researchers used the Harman single factor test. In addition, factor analysis was used to analyze the five variables with a result of 70.24% of the total variance.

### 3.2 Instrument and Procedure

The instrument used in this study contains items that reveal their interests and plans to open a business in the next 5-10 years. Researchers adapted the scale from Chenari, (2022) by using a 7-point Likert scale with statements ranging from strongly disagree to strongly agree with a total of four items ( $\alpha = 0.959$ ) to measure interest in entrepreneurship because measuring interest in entrepreneurship with this scale is in accordance with the formulation of the proposed research problem. Furthermore, to measure students' entrepreneurial attitudes, researchers also used the same 7-point scale statements in the same range. The statements used in this instrument amount to five items with a value ( $\alpha = 0.914$ ).

Researchers used five items adopted from Muller (2011) to evaluate students' self-efficacy. The items in this instrument are used to reveal basic aspects of the sureness in their ability to open a business or business. The instrument for measuring self-efficacy uses a 7-point Likert scale with ranging from statements that strongly disagree to strongly agree with a value ( $\alpha = 0.909$ ). Furthermore, to measure students' subjective norms, researchers also used a 7-point Likert scale. The instrument was adopted from Mueller (2011) from statements that strongly disagree to strongly agree with a total of five items with a value of ( $\alpha = 0.724$ ). Items in this instrument are used to reveal students' relationships with other people who can support entrepreneurial careers and reveal student motivation in following or obeying rules. Based on the survey results, the students' emotional competency data were adequate for further data processing steps ( $\chi^2_{180} = 735.654$ ;  $p = 0.00$ ; GFI = 0.993; CFI = 0.912; NNFI (TLI) = 0.921; RMSEA = 0.072). In this study, researchers used five components of emotional competence, namely motivation, awareness, and regulation, social skills, empathy which were measured based on indicators and which can be seen in Table 1.

### 3.3 Data analysis

The structural equation model in this study was also used to check the misjudgment of variables to anticipate biased data and was also used to compare measurement results between groups. Data analysis using a structural equation model carried out by researchers consisted of several steps. First, the researcher conducted a factor confirmation analysis to test the validity and reliability of the data before conducting further tests. Furthermore, the structural equation model was also carried out to examine the relationship between variables. To draw conclusions from the data, emotional competency items were averaged in each emotional competency group so that the average of the five emotional competency components was obtained. Based on the calculation results, each component has internal consistency that meets the criteria, which can be seen in Table 1.

The research procedure was carried out as a whole, namely first, the researcher tested the validity and reliability of the instrument scale that was made. Next,

the researcher verified convergent validity by checking the factor weights and the overall variance. The amount of this variance was recorded with a more complex variable to find out the percentage of measurement error with a value (data variance > 0.45). Researchers limited the measurement of the correlation between variables to a value of 1.0 to establish discriminant validity between each pair of variables. Next, the researcher conducted the values obtained in the limited model and the unlimited model. Based on the results of the confirmation factorial analysis test, a significant chi-square difference was found in that the variables were not perfectly related. So, it can be concluded that discriminant validity meets the criteria with a statistical value ( $\chi^2_{171} = 512.42$ ;  $p = 0.00$ ; GFI = 0.957; CFI = 0.978; NNFI = 0.85; RMSEA = 0.0632). Internal consistency in the reliability of statistical data is shown by all data in almost all cases (> 0.92).

**Table 1. Result of analysis of internal consistency and emotional competency scale indicators**

Key Variables	Items (IT)	R2	Cronbach's alpha	Composite reliability	Shared variant*
Self-Awareness level	IT01	0.460	0.630	0.7534	0.5851
	IT02	0.430			
	IT03	0.712			
Self-regulation level	IT05	0.524	0.670	0.8241	0.5340
	IT06	0.512			
	IT07	0.490			
	IT08	0.660			
Student motivation	IT09	0.589	0.750	0.8471	0.5712
	IT10	0.651			
	IT11	0.660			
	IT12	0.661			
Empathy	IT13	0.520	0.811	0.8942	0.6431
	IT14	0.778			
	IT15	0.640			
	IT16	0.610			
	IT17	0.612			
Social and leadership skills	IT18	0.520	0.830	0.9124	0.6570
	IT19	0.520			
	IT20	0.671			
	IT21	0.830			
	IT22	0.920			
<b>Fit suitability index</b>					
Absolute conformity index	( $\chi^2$ )	680.850			
		(p = 0.000)			
	Level Degrees of freedom	180			
	NCP	487.850			
	Goodness index	0.991			
	SRMR	0.170			
	Root mean squared error of approximation	0.072			

	ECVI	1.05
Additional suitability index	AGFI	0.960
	Non-norm conformity index	0.890
	Comparative Index	0.912
Adjustment measurement	( $\chi^2$ )	3.80
	PNFI	0.751
	PGFI	0.761
	AIC	780.850

#### 4. Result

The results of the analysis were divided into two parts, namely analysis based on individuals and analysis based on multigroup differences. Both of these analyses were carried out so that researchers could obtain comprehensive analysis results, so that they would not be biased in drawing conclusions. Both analyses at the individual level and group level aimed to determine the relationship between the variables of entrepreneurial attitudes, subjective norms, emotional competence, efficacy and students' entrepreneurial interest.

##### 4.1 Analysis at the individual level

Researchers use a structural equation model using the LISREL 9.1 application. Based on the results of the analysis, the resulting conformity index met the criteria ( $\chi^2 = 631.85$ ;  $p = 0.00$ ; GFI = 0.95; CFI = 0.97; NNFI = 0.94; RMSEA = 0.06). From the analysis results, the percentage of variance in the following components is obtained, namely 62% entrepreneurial interest, 58% entrepreneurial attitude, and 74% self-efficacy. Researchers involve several indices to assess the suitability of the overall structural model. These suitability indexes include absolute suitability, comparative suitability, and residual suitability. If the results of the analysis produce a probability value greater than the chi-square index, it can be concluded that the fit index between the model and the data is getting better. The conformity index used in this study is the non-norm conformity index (NNFI), goodness (GFI), and comparative (CFI). If the suitability value is greater than 0.90, the suitability of the model used is very good. In addition, the root mean squared error of approximation (RMSEA) is less than 0.08, so the conformity index is acceptable. Furthermore, based on standard parameters, subjective norms have a significant effect on entrepreneurial attitudes with values ( $\gamma_{11} = 0.61$ ,  $p < 0.001$ ) and self-efficacy ( $\gamma_{22} = 0.40$ ,  $p < 0.001$ ), but are not greatly significant, on entrepreneurial interest with a value ( $\gamma_{31} = -0.07$ , ns). It can be concluded that students who receive input and suggestions from others when making decisions for entrepreneurship will have better entrepreneurial attitudes and tend to be more confident in running their businesses. These findings answer the formulation of the problem that emotional competence has a significant effect on entrepreneurial attitudes with scores ( $\gamma_{13} = 0.41$ ,  $p < 0.001$ ) and students' self-efficacy with scores ( $\gamma_{23} = 0.71$ ,  $p < 0.001$ ).

However, the students' emotional competence did not have a significant impact on entrepreneurial interest with a value ( $\gamma_{32} = -0.02$ , ns). So, students who have

better emotional competence will also have a better entrepreneurial attitude and they will be more confident when carrying out their role as entrepreneurs. These findings answer the formulation of the problem that entrepreneurial attitudes have a significant influence on entrepreneurial interest with a value ( $\beta_{32} = 0.80$ ,  $p < 0.001$ ). In addition, self-efficacy also has a significant effect on students' interest in entrepreneurship with SE scores ( $\beta_{33} = 0.20$ ,  $p < 0.001$ ). To test whether there is a direct effect or not, the researcher conducted a series of tests to find out more about the causal relationship between the variables. The direct and indirect effects between variables were analyzed with the researcher looking for the results of direct influence in the path with total influence. The results of testing the direct and indirect effects are shown in Table 2.

**Table 2. Results of the structural equation model test (direct, indirect and total effects of all variables)**

The influence	to	Immediate effect	t	Non-immediate effect	t	Total effect	t
Subjective norm (SN)	Entrepreneurial interest	-0.052***	-1.110	0.524**	5.27	0.436***	8.30
SN	Entrepreneurial attitude	0.634***	16.452			0.657***	10.10
SN	Student self-efficacy	0.380***	12.343			0.381***	6.89
Emotional competence (EC)	Entrepreneurial interest	-0,015	-0.260	0.436***	6.20	0.458***	6.31
EC	Entrepreneurial attitude	0.320***	8.391			0.320***	4.32
EC	Student self-efficacy	0.634***	16.562			0.721***	14.30
Entrepreneurial attitude of students	Entrepreneurial interest	0.750***	19.140			0.750***	11.51
Student self-efficacy	Entrepreneurial interest	0.187***	3.230			0.189***	3.72

Based on the results of this test, it was found that there was an indirect effect in the relationships between variables, including subjective norms affecting entrepreneurial interest (0.524,  $p < 0.001$ ), but through entrepreneurial attitudes ( $0.634 \times 0.657$ ) and self-efficacy ( $0.380 \times 0.187$ ). The direct effect analysis found emotional competence on entrepreneurial interest with a value of (0.436,  $p < 0.001$ ). In addition, emotional competence also has an indirect effect on entrepreneurial attitudes ( $0.320 \times 0.651$ ) and self-efficacy ( $0.750 \times 0.187$ ). So, the overall effect of subjective norms on entrepreneurial interest is 0.524 ( $p < 0.001$ ) and the total effect of emotional competence on entrepreneurial interest is 0.458 ( $p < 0.001$ ). Based on this total effect, it was found that emotional competence greatly influenced self-efficacy and subjective norms had a significant effect on entrepreneurial attitudes. From these findings, it can be concluded that students who have better competence will be better able to increase entrepreneurial interest and have a more positive entrepreneurial attitude. In addition, students

with good emotional competence can have self-confidence in their own abilities in setting up a business or business.

#### 4.2 Analysis at the multi-group level

To answer the formulation of the problem how does entrepreneurship education influence emotional competence in entrepreneurial attitudes, self-efficacy, and entrepreneurial interest, researchers used group comparisons because the variable of entrepreneurial interest was the same both in students before getting an entrepreneurship education class and those who had already gotten a class. Researchers compared the path efficiency of each sample analyzed using the model separately to check the effect of moderating entrepreneurship education. The variance in the control group was analyzed by carrying out several steps. First, the researchers determined in advance the level of equivalence in the measurement model to test whether the students' responses before and after class were related to the statements proposed. Next, the paths between variables in the structural models of both classes were analyzed. This method was carried out based on the variance test to compare fixed and independent parameters in the structural model and the chi-square difference test. Furthermore, the researchers used the minimum requirements on the invariants of the two indicators to analyze the measurement invariants and structural differences. Therefore, the partial model was used to determine the comparison of significant variables. Analysis of differences and suitability index of students before and after getting the entrepreneurship class using multiple samples can be seen in Table 3. Based on the analysis model on both groups, a fairly good agreement was found with the data, especially in the data on students who had received an entrepreneurship class. By carrying out this procedure, the suitability of the measurement model and structural parameters can be ascertained and the researcher then compares the structural loads.

**Table 3. The results of the analysis of differences in before and after getting the entrepreneurship class and the suitability index in the multi-sample model**

	$\chi^2$	g.l.	p	$\chi^2/g.l.$	RMSEA	NNFI	CFI	$\Delta\chi^2$	$\Delta g.l.$	p	
1) Confirmation factor analysis (CFA)											
Pre-class n = 500	181.62	465	0	1.110	0.0420	0.989	0.989				
Post class n = 500	170.70	480	0	1.050	0.0212	0.985	0.988				
2) Assessment invariant aspect											
CFA (configuration)	1	485.20	431	0	1.080	0.0370	0.988	0.989			
CFA 2 (metric)	380.89	343	0	1.120	0.0425	0.986	0.985	30.80	20	0.03	
CFA 3 (metric)	372.70	346	0	1.088	0.0286	0.985	0.989	19.60	16	0.20	
CFA 4 (error)	380.30	361	0	1.062	0.0223	0.978	0.988	6.60	25	1.00	
3) Structural differences Aspect											
CFA (variation)	5	391.20	360	0	1.070	0.0352	0.988	0.988	9.94	8	0.09

CFA (covariance)	6	512.90	370	0	1.089	0.0389	0.985	0.988	25.81	15	0.02
CFA (covariance) partial	6	557.30	371	0	1.072	0.0351	0.988	0.988	4.24	6	0.40
4) Differences in structural paths											
Base 8 models		520.90	378	0	1.271	0.0491	0.986	0.986			
Model 9 Path invariant		541.06	368	0	1.292	0.0542	0.987	0.987	19.231	10	0.05

Based on the results of the analysis, the effect of subjective norms on student self-efficacy was lower in students who had already received an entrepreneurship class (0.31/0.24), but the effect of subjective norms on entrepreneurial attitudes in pre- and post-entrepreneurship students had almost the same value (0.45 /0.44), and on entrepreneurial interest (-0.07/-0.00). Based on these results, it can be concluded that students who receive entrepreneurship education classes and receive input from others in considering becoming entrepreneurs will have a better entrepreneurial attitude. The results of the analysis showed the value of the influence of emotional competence on entrepreneurial attitudes, (0.45/0.60) and the value of the effect of emotional competence on self-efficacy (0.70/0.80) in the sample after getting an entrepreneurship class. However, the effect of emotional competence on entrepreneurial interest is not significant (-0.06 ns/-0.14 ns). These findings indicate that students who have better emotional competence and receive entrepreneurship education have better entrepreneurial attitudes. Students in this sample considered that they were more confident to become entrepreneurs than students who had not received entrepreneurship education classes. In addition, it was also found that students' entrepreneurial interest was significantly influenced by entrepreneurial attitudes, but the effect on the sample of students who had not received a more intensive entrepreneurship class was slightly significant (0.80/0.78). However, students' self-efficacy has a higher influence on entrepreneurial interest with a value (0.35/0.45).

## 5. Discussion

In this study, researchers tried to reveal the role of entrepreneurship education on entrepreneurial interest and other cognitive aspects among students, which might greatly determine students' future careers in the field of entrepreneurship. The findings show that students' emotional competence is a cognitive component that has a significant influence on students' entrepreneurial interest. Thus, stakeholders should make entrepreneurship education one of the subjects that must be followed by students at SMK so that entrepreneurship education can be more effective in facilitating students to develop careers in entrepreneurship. Entrepreneurship education can equip students' emotional competence in shaping their self-efficacy either directly or through intermediaries of other cognitive components. (García-González & Ramírez-Montoya, 2020; Mallett, 2019). Through this study, researchers conducted an analysis of the influence of entrepreneurship education on other variables. Configuration theory models of interest in entrepreneurship and theory of

planned behavior are used to understand interest in entrepreneurship and draw the conclusion that emotional competence influences interest in entrepreneurship and other cognitive abilities. In this study, researchers used a framework to understand students' interest in entrepreneurship and the effectiveness of entrepreneurship education in increasing interest in entrepreneurship and other cognitive abilities. (Azizi & Mahmoudi, 2019; Zaring et al., 2021). This study confirms cognitive aspects, emotional competence and their relationship with other variables (Self-Awareness, Self-regulation, Student Motivation, Empathy, Social and leadership), and considers other variables to investigate emotional and rational relationships in students' decision-making to enter the field of entrepreneurship.

This planned behavior model shows that students with good emotional competence can increase their entrepreneurial interest. In addition, the theory of planned behavior proves that there is an indirect effect of emotional competence on entrepreneurial interest through entrepreneurial attitudes and student self-efficacy (Kindel & Stevens, 2021; Nájera-Sánchez et al., 2022). However, based on research findings, there is no direct relationship between emotional skills and entrepreneurial interest. Emotional competencies possessed by students are not absolutely able to conclude student considerations in determining a business. Based on these findings, it can be concluded that the stronger the emotional competence of students, the stronger students will achieve their goals in the field of entrepreneurship because the components of students' cognitive abilities that increase will be able to directly contribute to entrepreneurship interest. This finding reinforces the findings of several previous studies (Tarhan et al., 2021; Zaring et al., 2021) and is consistent with the theory that emotional competence makes a significant contribution to other cognitive aspects, such as cognitive flexibility, helping students recognize opportunities, increasing self-confidence, and individual control over situations (Fretschner & Lampe, 2019; Padi et al., 2022). So, emotional competence will facilitate students in increasing entrepreneurial interest and attitude. Students' emotional interest in entrepreneurship can affect their cognitive abilities.

Researchers focused on the process of students in making decisions and looking for interesting paths regarding the role of variables between variables. The findings of this study indicate that emotional competence has an influence on cognitive behavior, confirming the effect on entrepreneurial interest according to existing literature. The theory of planned behavior is based on good predictors for increasing entrepreneurial interest, although in previous studies this model of entrepreneurial interest was integrated with other predictors (Nájera-Sánchez et al., 2022; Ndofirepi, 2020; Shirokova et al., 2018). Based on research findings at the individual level, it was found that individuals who receive entrepreneurship education classes will change their entrepreneurial attitudes and interests, but the changes will remain positive. Entrepreneurship education focuses on increasing the variables of entrepreneurial interest and entrepreneurial attitude. So, entrepreneurship education must be improved and focused on students' entrepreneurial interest, especially in vocational high schools, which must be required to be ready to work on entrepreneurship after finishing school (Balachandra, 2019; Blunck et al., 2021).

Based on the research results, the researcher examines in detail the direct and indirect relationships between the variables of emotional competence, cognitive aspects, and entrepreneurial interest when students receive entrepreneurship education classes to gain a comprehensive picture of the influence of emotional competence on other variables and their influence on individual decision-making in entrepreneurship (García-González & Ramírez-Montoya, 2020; Roslan et al., 2022). The research findings show that emotional competence has a positive influence on entrepreneurial attitudes and self-efficacy of students who receive entrepreneurship education classes. Changes in self-efficacy were not greatly significant before and after getting entrepreneurship education. This is in accordance with previous research that self-efficacy is the weakest variable in influencing students' entrepreneurial interest (Azizi & Mahmoudi, 2019; Debarliev et al., 2022; Roslan et al., 2022). Self-efficacy can be increased by proper design of entrepreneurship education and can be strengthened through direct experience and modeling, for example, students being given the opportunity to build small businesses with their groups and evaluated at the end of the semester from the profits they earn. Self-efficacy can also be strengthened by developing emotional competence and intensive entrepreneurship education. Teachers in teaching entrepreneurship must pay attention to the right method in order to increase students' emotional competence so that emotional competence can increase self-efficacy.

Based on the research findings, entrepreneurship education carried out in schools must have a positive effect on students' entrepreneurial interest through increasing students' self-efficacy and entrepreneurial attitudes even though emotional competence is not a major part of the entrepreneurship education curriculum. Students' emotional competence can be increased and optimized through entrepreneurship education if implemented properly (Aadland & Aaboen, 2020; García-González & Ramírez-Montoya, 2020). So, entrepreneurship education must not only encourage increased skills and knowledge about entrepreneurship but also must be able to increase students' emotional competence so that they can support becoming strong and successful individuals in the field of entrepreneurship. The implementation of entrepreneurship education provides a challenge for teachers, namely teachers must be able to provide students with skills in taking risks that have to be considered when implementing a business. Previous research has investigated that emotions have an effect on entrepreneurship, but was limited in investigating the influence of emotional competence (Fretschner & Lampe, 2019; Padi et al., 2022; Rauf et al., 2021). Emotional competence is the ability to understand and manage one's own emotions and be able to use them functionally in various contexts. Emotional competence can also be trained and improved; this concept can be an opportunity for stakeholders and practitioners to optimize it in implementing entrepreneurship.

## **6. Conclusion and Implication**

Based on the research findings, it can be concluded that entrepreneurship education is able to make a significant contribution to students' emotional and cognitive competencies in increasing their interest in entrepreneurship. The contribution of students' emotional and cognitive competencies has a direct

influence on entrepreneurial attitudes and interests and students' self-efficacy. So, students who have emotional competence will have a better interest in entrepreneurship, so that they are considered to be more prepared to become entrepreneurs. The implication of this research informs stakeholders in schools that entrepreneurship moderation education can shape students' competence and cognitive skills in the field of entrepreneurship. Entrepreneurship education can be used as an alternative education program in schools to increase students' interest in entrepreneurship.

### **7. Limitation**

This research has several limitations, including anonymous research participants which may cause bias in research. This research focuses on students' interests and cognitive abilities, which may change. It was conducted in a relatively short time span of only one semester of entrepreneurship class, which allowed data to be collected less comprehensively, so that a longitudinal study was needed. In addition, future research may be able to examine individual aspects that can increase emotional competence, such as the level of knowledge, motivation, self-management, empathy, social awareness, social abilities, and other variables which may increase students' interest in entrepreneurship and other cognitive factors. This research provides information for stakeholders in designing and implementing educational or training programs to increase students' interest in entrepreneurship.

### **8. Recommendation**

Some school curricula today focus more on management skills related to execution than on entrepreneurship itself. However, this study pays attention to the importance of all competencies that can shape entrepreneurial attitudes and self-efficacy. In addition, this research also does not only focus on the knowledge and resources needed to open a business but also highlights the interrelated variables that prepare students to enter the field of entrepreneurship. Inspiration in entrepreneurship education can increase students' attitudes and interest in entering entrepreneurship. The researcher suggests that teachers must receive training not only in conveying entrepreneurship, but also must be trained in developing the emotional aspects of students. In addition, teaching must also be able to increase students' enthusiasm for entrepreneurship and encourage their emotional competence in the field of entrepreneurship. Subsequent research opens up opportunities in the development of cooperation frameworks between schools and the business world to equip students with real strategies and achieve educational goals effectively. The researcher recommends further research to further explore the influence and relationship between students' emotions and cognition in a business context. New perspectives on cognitive and emotional processes can contribute to future entrepreneurship research. Future research potential includes research on entrepreneurship teaching methods, problems and design of entrepreneurship teaching activities.

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