

PSYCHOLOGICAL CHARACTERISTICS OF ENTREPRENEURSHIP POTENTIAL AMONG VOCATIONAL HIGH SCHOOL STUDENTS

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ABSTRACT

This study investigates the psychological concept that affects the intention of vocational high school students to become entrepreneurs. This study aims to predict the most effective psychological step to demonstrate the psychological characteristics of entrepreneurs of vocational high school students. Participants in this study were vocational high school students in the Department of Mechanical and Building Engineering. 206 students were selected as the sample of the study with a random sampling technique. This study employed a set of questionnaires contains a measurement scale consisting of entrepreneurial capacity, entrepreneurial belief, entrepreneurial consciousness, entrepreneurial motivation, and entrepreneurial determination. Statistical analysis was performed with Confirmatory Factorial Analysis (CFA) to determine whether the fit model is unidimensional and to determine the significance value measurement model independently, assisted with statistical software Mplus. The results revealed that entrepreneurial belief and motivation are the highest factors. The results also reported that there is a significant difference in entrepreneurial belief in different gender. The entrepreneurial belief characteristics of male students were higher than female students. This implies that there is a need to emphasize psychological entrepreneurship education that leads to increased self-confidence in female students. In addition, it is necessary to do psycho-education to prepare students as entrepreneurs.

Keywords: entrepreneurship potential, psychological characteristics, vocational school student

INTRODUCTION

Entrepreneurship has long been viewed as a method of encouraging creativity and technical development, stimulating competitiveness, and generating opportunities that contribute to economic growth and national stability [1]. The Government of the Republic of Indonesia through the Ministry of National Education emphasizes the importance of Vocational Schools not only to create human resources who are ready to work, but also to prepare independent human resources who create employment opportunities to reduce individual dependence on employment. On the other hand, while compared with Malaysia and Singapore, Indonesia has not proved entrepreneurs as the priority choice of professional career among students. Only 1.65 percent of the total population of Indonesia choose a career as an entrepreneur [2].

Entrepreneurial activity among young people should be early implanted so that the

students can choose a career in the future as entrepreneurs [3]. The growth of entrepreneurial talent among youths is crucial to retaining a competitive edge. Several entrepreneurial psychological experts suggest that regardless of age, people can start a business [4]. However, the current trend of entrepreneurs shows that they started their businesses since young [5]. Furthermore, Zhang & Zhang [17] reported that the higher the level of education, the less effect entrepreneurship education has on the entrepreneurship path. Educators and stakeholders should be aware of the value of quality entrepreneurship education in enhancing entrepreneurial talent among students [6].

To respond to this issue, entrepreneurship has been regulated as a compulsory subject in the curriculum for all secondary schools in Indonesia. Although this idea faces many doubts in the process, entrepreneurship education is prioritized to be taught in high schools [7]. Students are challenged to explore new ideas and this system encourages students to choose their

careers as entrepreneurs [8]. Entrepreneurship education in the curriculum for Vocational High Schools in Indonesia was stated in Presidential Instruction of the Republic of Indonesia number 4, 1995 concerning the national movement to socialize and cultivate entrepreneurship. It is expected to produce better-quality human resources, equipped with not only skills and abilities, but also have personality qualities and psychological mentality of entrepreneurs. Public and private vocational education jointly organized this entrepreneurship-based curriculum so that students were able to be encouraged to pull out of dependence on the increasingly limited job. However, this action is not sufficient to encourage students and education providers to make entrepreneurs a career priority.

In addition to acquiring entrepreneurial knowledge and skill through entrepreneurship education, entrepreneurial learning is seen to also include psychological factors [9]–[13]. Previous organizational behavior researchers have found that psychological factors are the most motivating factor for individuals to choose a career as an entrepreneur [14]. Psychological characteristics according to Zhang & Zhang [15] play an important role in developing entrepreneurial interest among students. They are an important factor in entrepreneurship education [16]. Psychological characteristics can influence someone to take on the role of an entrepreneur. Entrepreneurial capacity factors including organization and management, interpersonal relationships, innovation, and the physical quality and soul of individuals are the capital for individuals to build entrepreneurial potential.

To understand the concept of psychological factors that affect the intention to become entrepreneurs, it should be viewed from different perspectives. Intrinsic characteristics such as self-efficacy beliefs of individuals or allegedly associated with thinking, emotions, and behavior of individuals push themselves to become entrepreneurs to reach their goals and success [14]. The researchers predict that

psychological characteristics are the main gauge of individual basis to transform into entrepreneurs. Entrepreneurial researchers have studied these problems from different points of view. The characteristics of entrepreneurial consciousness more likely to involve emotions, the need for achievement, motivation, and the application of values in choosing entrepreneurship as their career [17].

Psychological characteristics are important not only for entrepreneurship but also for professional development in the future. It is important to determine the entrepreneurial psychological characteristics that most influence vocational high school students to provide effective entrepreneurship education for the students. This study focuses on the most effective measures which could be the most appropriate to show the psychological characteristics of entrepreneurship of vocational high school students.

METHOD

This study involved 206 people from 960 vocational high school students in the Department of Mechanical and Building Engineering, Pekanbaru city, Indonesia selected with a random sampling technique. Psychological characteristics of entrepreneurship are described in five factors that decisive individual characteristics namely capacity, beliefs, consciousness, motivation, and entrepreneurial determination [15]. A set of questionnaires that contains a measurement scale consisting of capacity, belief, awareness, motivation, and entrepreneurial determination was used. In the implementation, the headmaster and academic staff assisted the researcher in distributing questionnaires. The questionnaire consisted of 31 items on a scale measuring the psychological characteristics of entrepreneurship. The Likert scale was used in the 5-point criteria (Strongly Agree scored as 5 to Strongly Disagree scored as 1) and was modified to adjust the language and culture in Indonesia.

Statistical analysis was performed with Confirmatory Factorial Analysis (CFA) to determine whether the fit model is unidimensional and to determine the significance value measurement model independently. The analysis was conducted with the M-plus [18], in which the program can perform linear and nonlinear data analysis to facilitate the model fit.

RESULTS AND DISCUSSION

The unidimensional test using MPlus was conducted to test the construct validity of each item of psychological characteristics of entrepreneurship [19]. The steps were conducted concerning the significant value of Chi-Square $p < 0.05$. It is performed to determine the measurement model independently of the measurement error correlation that can cause

multifactorial. This measurement error relief can form a correlation that aims to obtain a fit model. When a model fit is obtained, the item can be analyzed further to test the positive coefficient. When the factor loadings are higher than 1.9, then this item is significant in the measurement factors to be measured. Meanwhile, in terms of loading factor (> 0.5), it was used to show the correlation value between indicators and latent constructs once known as the model fit.

The five factors that were divided into 31 items indicated a unifactorial trait, thus the next step was performed by analyzing the CFA and modifying the model for measurement error relief. $Chi-Square = 491.672$ ($df = 418, p = 0.0075, RMSEA = 0.029$). Table 1 shows that the t-value for the loading factors coefficient for all 31 items, there is 1 item (Item 17) that is not valid with z value < 1.96 . The CFA path diagram model can be seen in Figure 1.

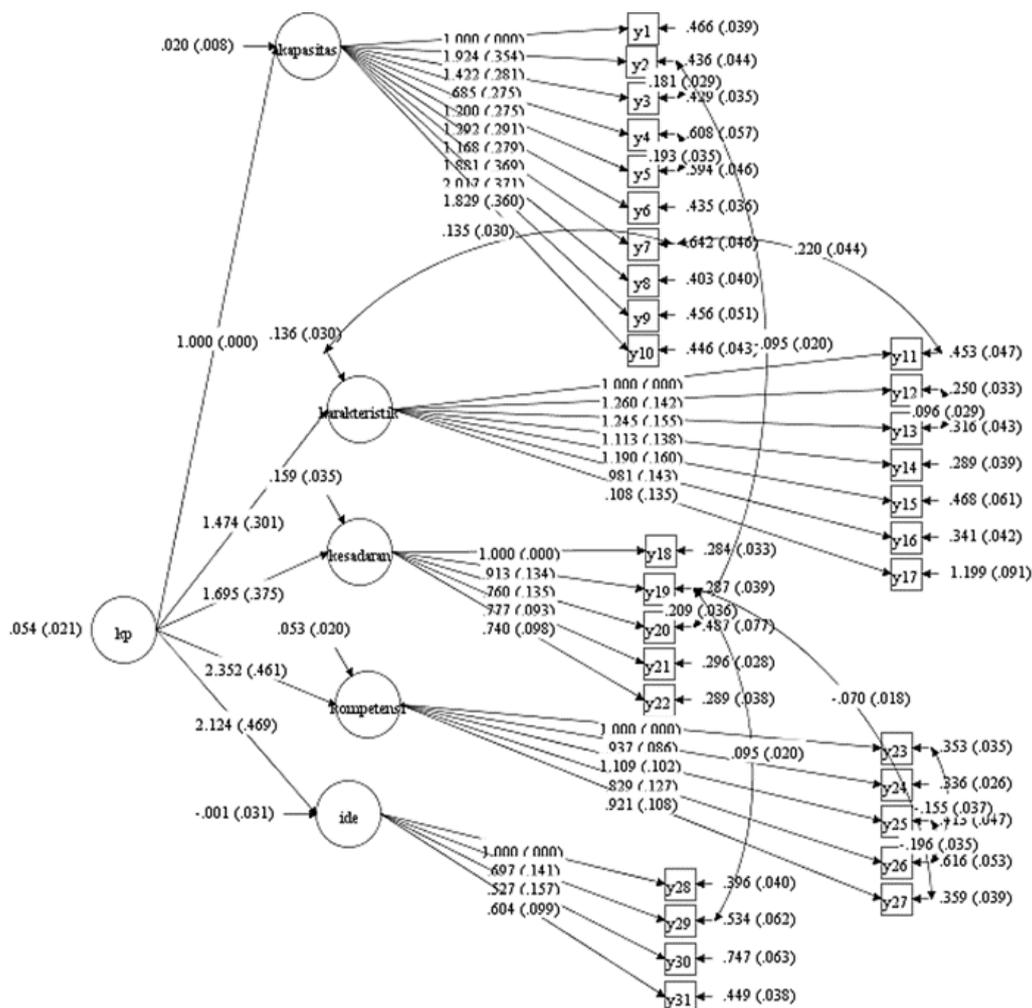


Figure 1. Model Diagram of Psychological Characteristics of Entrepreneurship

Table 1. Value of Loading Factor Psychological Characteristics of Entrepreneurship

No	Statement	Estimate	Std Error	t-value	
The Dimension of Entrepreneurial Capacity					
1	I always make a plan before doing a job	1.000	0.000	999.000	Ref. Item
2	I am active in various activities related to entrepreneurship	1.924	0.354	5.439	Valid
3	I am good at learning related to entrepreneurship	1.422	0.281	5.063	Valid
4	I can cooperate with others	0.685	0.275	2.490	Valid
5	Everything that I planned, I had to do	1.200	0.275	4.364	Valid
6	I accept other people's opinions and suggestions related to entrepreneurship	1.292	0.291	4.444	Valid
7	I am personally resilient	1.168	0.279	4.191	Valid
8	I like to participate in entrepreneurial-related activities	1.881	0.369	5.093	Valid
9	I have a high curiosity related to entrepreneurship	2.017	0.371	5.439	Valid
10	I train my management skills	1.829	0.360	5.086	Valid
The Dimensions of Entrepreneurial belief					
11	I believe having a strong mental	1.000	0.000	999.000	Ref. Item
12	I do not give up easily to difficulties	1.260	0.142	8.881	Valid
13	I am not easily discouraged	1.245	0.155	8.017	Valid
14	If I fail, I still face it bravely	1.113	0.138	8.052	Valid
15	I like challenges	1.190	0.160	7.415	Valid
16	I am optimistic about life	0.981	0.143	6.860	Valid
17	I don't like to be ordered by others	0.108	0.135	0.801	Not Valid
The Dimension of Entrepreneurial consciousness					
18	I think being an entrepreneur requires courage	1.000	0.000	999.000	Ref. Item
19	I think, to be entrepreneurs willing to take risks	0.913	0.134	6.803	Valid
20	I think, being an entrepreneur must have a spirit of competition	0.760	0.135	5.622	Valid
21	I think innovation is essential to business success	0.777	0.093	8.369	Valid
22	I'm trying to build the credibility	0.740	0.098	7.583	Valid
The Dimensions of Entrepreneurial Motivation					
23	I am enthusiastic about matters related to entrepreneurship	1.000	0.000	999.000	Ref. Item
24	As an entrepreneur, I can show my abilities	0.937	0.086	10.910	Valid
25	Being an entrepreneur is my dream	1.109	0.102	10.828	Valid
26	I have never been bored with my life	0.829	0.127	6.546	Valid
27	Being an entrepreneur makes me valuable	0.921	0.108	8.549	Valid
The Determining Dimensions of Entrepreneurship					
28	I am actively studying to achieve success to become an entrepreneur	1.000	0.000	999.000	Ref. Item
29	I think, being an entrepreneur must have various solutions	0.697	0.141	4.935	Valid
30	The thing I decided, always attested	0.527	0.157	3.363	Valid
31	In various opportunities, I always consider the advantages and disadvantages.	0.604	0.099	6.104	Valid

This study also describes the analysis of the difference by measuring the t-test using an empirical score of 206 vocational school students consisting of male students (N = 130)

and female students (N = 76). Based on the analysis performed descriptively, it was identified the differences are not significant. This result can be seen in Table 2.

The provisions of the entrepreneurial factor in male students occupy a score greater than five factors of psychological characteristics of entrepreneurship that exist for $M = 50.15$, $SD = 7.10$. In addition, female students showed an entrepreneurial belief factor of $M = 51.26$, $SD = 9.93$. Differences based on the psychological characteristics of entrepreneurship in terms of gender are not significant. The significant differences in psychological characteristics of entrepreneurship in terms of gender in vocational high school students are presented in Table 3.

Two characteristic factors are showing significant t-test values, namely the factor of entrepreneurial belief and motivation. A similar conclusion was reached by Zhang & Zhang [15] who claimed that an individual's belief in the ability itself is an aspect that influenced the development of adolescent personality as an entrepreneur. Furthermore, learning from the past and prioritize economic, social, and cultural rights are cornerstones of decision-making as an entrepreneur [20], [21]. A resilient personality is a key to the success of an individual being able to withdraw himself from a difficult situation [22].

The entrepreneurial belief in male vocational students shows higher than female students. In line with the characteristic factors of entrepreneurial motivation, it also shows that male students are significantly higher than female students.

Based on the analysis of the psychological characteristics of entrepreneurship, it has been found that the entrepreneurial belief factor is the one that most shows the difference in characteristics between male and female students. Psychological factors of

entrepreneurship show that male vocational high school students show higher entrepreneurial confidence than female students. While other entrepreneurial psychological characteristics factors almost found the same score. Entrepreneurial beliefs play an important role in both male and female students in entrepreneurship.

Individuals with high entrepreneurial beliefs are predicted to show better work skills excited by ideas and innovation for their business development and can choose between having effort and perseverance to achieve goals [15]. Sadriwala & Khan [23] also reported that individuals with self-confidence can receive and manage the challenges and take risks with patients in resolving issues related to business. An entrepreneur shows courage in taking risks, respond with its opportunities, and take advantage of the best possible [24]. It is a cognitive process in the form of an activity carried out deliberately, which is in the perspective of psychology considered as planned behavior [25]. This is also consistent with what has been found that certain personality characteristics influence entrepreneurial decisions, and it was discovered that success motivation and risk-taking courage were contrasted in two groups: managers and employees. Another research contrasted the personalities of entrepreneurs and ordinary people, finding that employers had higher levels of accountability and the consistency of hard workers [26]. Meanwhile, achievement motivation, risk-taking tendencies, creativity, self-control, self-efficacy, and openness to experience are common psychological characteristics of entrepreneurs [5][27].

Table 2. Descriptive Results of the Psychological characteristics of Entrepreneurship between Male and Female Students

Dimension	Male		Female	
	Mean	SD	Mean	SD
Entrepreneurial Capacity	50.08	8.75	49.86	9.60
Entrepreneurial Belief	49.27	9.04	51.26	9.93
Entrepreneurial Consciousness	50.07	8.72	49.87	10.51
Entrepreneurial Motivation	49.74	8.79	50.44	9.24
Entrepreneurial Determine	50.15	7.10	49.74	7.38

Table 3. The Significant Differences in Psychological Characteristics of Entrepreneurship

Dimensions	Gender	N	Mean and SD	T
Entrepreneurial Capacity	Male	130	49.86 ± 9.6	t = -0.173
	Female	76	50.08 ± 8.75	t = -0.169
Entrepreneurial belief	Male	130	51.26 ± 9.93	t = 1.469
	Female	76	49.27 ± 9.04	t = 1.434
Entrepreneurial consciousness	Male	130	49.87 ± 10.51	t = -0.148
	Female	76	50.07 ± 8.72	t = -0.141
Entrepreneurial Motivation	Male	130	50.44 ± 9.24	t = 0.541
	Female	76	49.74 ± 8.79	t = 0.534
Entrepreneurial Motivation	Male	130	49.74 ± 7.38	t = -0.399
	Female	76	50.15 ± 7.1	t = -0.395

Meanwhile, this study also indicated that the entrepreneurial motivation factor of male students tended to be higher than female students. This was in line with research by Sullivan & Meek [28] who found that men were able to show better results of examining entrepreneurial motivation than women. Israr & Saleem [29] also concluded that female entrepreneurial intentions have a slightly negative trend as compared to male students' entrepreneurial intentions, indicating that female students are less interested in entrepreneurship. Even so, women did not rule out the possibility of taking the same role, but according to the researchers, most women in business often experience loss compared to men.

CONCLUSION

This study investigates the psychological concept that affects the intention of vocational high school students to be entrepreneurs. This study demonstrates the psychological characteristics of entrepreneurs of vocational high school students. The results showed that two characteristic factors with significant values, namely entrepreneurial belief and motivation. The results also reported that the entrepreneurial belief characteristics of male students were higher than female students. The results of this study imply that there is a need to emphasize psychological entrepreneurship education that leads to increased self-confidence in female students. In addition, it is necessary to do psycho-education to prepare students as entrepreneurs. This study confirms the findings which have been found. Further studies need to

be developed from this study to emphasize entrepreneurship education that leads to self-confidence and self-motivation for female students. It is known that women entrepreneurs have started to play a role in the business sector today.

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