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Effect of Family Business Support, Academic Support, and Entrepreneurship Education on Student Entrepreneurial Intentions

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Abstract. The outbreak of the Covid-19 pandemic has significantly influenced the availability of job opportunities. Moreover, companies are downsizing their labor number to carry out their industrial sustainability. Therefore, there is an urgent situation for graduate students to create their entrepreneurship rather than expect formal employment. This study assesses three factors that will impact college students' spirit to build their entrepreneurship: family business support, entrepreneurship education, and academic support. Respondents were collected from 151 individuals of engineering graduate students. Research from literature studies related to the factors is considered in designing the questionnaire as the survey to the respondents. Analyzing the survey data with the Structural Equation Modeling technique in Smart PLS 3,0 resulted in information that the family business support and academic support had a significant influence on student's entrepreneurial intention. Thus, family business support becomes the most significant factor to encourages students to become entrepreneurs. In addition, the existence of financial and non-financial support from family can encourage students' motivation to create their entrepreneurship. On the other hand, entrepreneurship education does not significantly affect the students to develop an entrepreneurial interest.

INTRODUCTION

Based on Worldometer elaboration of the latest United Nations data, Indonesia is one of the countries with a significant number of people globally [1]. It ranks number 4 in the list of countries (and dependencies) by population. COVID-19 pandemic has disrupted normal society. Real sectors are heavily affected, leading to many businesses being permanently closed. In Indonesia, the unemployment rate increased to 7.07 percent in the second semester of 2020 and 6.26 percent in the first semester of 2021. In these two semesters, Indonesia's ten-year average unemployment rate is above 5.77 percent. If the unemployment rate is getting higher, it can disrupt the stability of the Indonesian economy [2]. Therefore, it is necessary to strive for the formation of new entrepreneur that can provide job opportunities for the community.

However, data from the Central Statistics Agency (BPS) states that entrepreneurship in Indonesia has a low level of entrepreneurship, only 3.1% of the total population [3]. In addition, the 2018 Global Entrepreneurship Index data states that Indonesia is ranked 94th out of 137 countries with good entrepreneurship. One of the factors that may impact the low entrepreneurship level is the education system that does not encourage students' enthusiasm to develop their entrepreneurship spirit. As in university graduates, students prefer to be employees than entrepreneurs [4]. The current education system in higher education tends to focus on preparing students who graduate quickly and get formal employment, not on creating the new sector [5]. However, many universities currently complement their learning curriculum with entrepreneurship programs to provide students with knowledge and experience in entrepreneurship. The entrepreneurship program aims to improve the quality of university graduates by implementing skills, abilities,

responsible behavior, building cooperation, developing independence, and increasing business through creative activities in the field of knowledge they are engaged in [6].

According to Fayolle, entrepreneurship education consists of all activities that aim to foster entrepreneurial mindsets, attitudes, and skills covering various fields such as forming, developing ideas, and innovation [7]. Therefore, entrepreneurship education includes learning to shape mindsets, attitudes, skills, support for growth, and innovation, such as educational programs such as Entrepreneurship courses, seminar activities, and business projects. Previous research conducted by Alfiyan et al. explains that entrepreneurship education has a positive and significant effect on intention in entrepreneurship [8]. Thus, entrepreneurship education is one of the essential things to educate and provide a rationale about entrepreneurship. Furthermore, Adesanya shows that entrepreneurship education has a significant and positive influence on intention in entrepreneurship [9]. Lemayon and Michael provide insights into the significant impact of action-oriented entrepreneurship training on transforming university students into entrepreneurs [10].

Meanwhile, according to Bandura, academic support includes all efforts through learning resources, student assistance in the learning process, and adequate infrastructure to increase student intention in entrepreneurship. Therefore, according to Autio et al., academic support indicators include introducing successful entrepreneurship people, introducing people rich in innovation in entrepreneurship, and facilitating a forum for students to express their ideas and business establishment practices on campus [11]. Furthermore, previous research conducted by Suharti & Sirine and Tognazzo et al. explains that academic support has a positive and significant effect on entrepreneurial interest [12, 13]. Thus, the academic support provided by the university can help students to develop an entrepreneurial spirit.

Except for the entrepreneurship education and academic support factors, Shen et al. stated that support from family could influence individual perceptions of starting a new business in terms of emotional, intellectual, and economic support [14]. In addition, the existence of support such as being permitted to become an entrepreneur, capital, non-financial support, and the existence of advice from the family also affects a person's attitude to realize his desire for entrepreneurship. In the book *Entrepreneurship*, people who have entered the entrepreneurship field indicate that family support is the biggest supporter for someone to start entrepreneurship and provides encouragement to survive the difficulties and challenges of entrepreneurship. The indicators of the family business support may include permission and encouragement from the family, capital from the family (financial and non-financial support, in the form of facilities, materials and equipment, and others). Based on several studies above, this study aimed to determine the influence and relationship of the family business support, entrepreneurship education, and academic support on the entrepreneurial intention of engineering students.

RESEARCH METHODOLOGY

The method applied in this study is a Structural Equation Modeling (SEM) method with the Smart-PLS 3.0 application. Ghozali states that the SEM method continues path analysis and multiple regression that forms multivariate analysis [15]. There are two stages of model evaluation in the SEM method: evaluating the outer and inner models. The outer model evaluation aims to assess the validity and reliability of the model. A validity test is done by using convergent validity and discriminant validity testing. Meanwhile, the composite reliability value represents the reliability test, Cronbach's alpha, and average variance extracted (AVE). In addition, the evaluation of the inner model aims to predict the relationship of each latent variable measured with the value of R-Square, path coefficients, and *p-value*.

Hypothesis

The researchers started with a literature study to define the hypothesis that triggers the student's entrepreneurship intention. The literature review explained shows that three hypotheses are determined from family business support, entrepreneurship education, and academic support [7-14].

- Hypothesis 1 (H₁): Examining the influence of the family business support on the entrepreneurial intention of students.
- Hypothesis 2 (H₂): Examining the influence of entrepreneurship education on entrepreneurial intention of students.
- Hypothesis 3 (H₃): Examining the influence of academic support on the entrepreneurial intention of students.

Conceptual Model

After defining the hypotheses, we determine the endogenous and exogenous variables used to build the conceptual model. For the variables to be measured, each variable needs to have indicators summarized from several sources of books and journals. These indicators include indicators for entrepreneurial intention in students (endogenous variables) and indicators of family business support, entrepreneurship education, and academic support factors, which are exogenous variables in this study as shown in Table 1 to build the conceptual model as shown in Fig. 1.

TABLE 1. Indicators of endogenous and exogenous variables

Variable	Literature Resources	Indicators
Entrepreneurial Intentions	T. Serefina and S. Kurjono [16], F. Linan and Y. W. Chen [17], M. A. Sahban et al. [18]	<ol style="list-style-type: none"> 1. Plans to start a business 2. Career as an entrepreneur 3. Aspires to create jobs 4. Seriously thinking about starting a business
Family Business Support	Shen, Osorio, & Settles [14], Hisrich et al. [19]	<ol style="list-style-type: none"> 1. Family encouragement/ support 2. Parent's background 3. Financial support from the family 4. Non-financial support
Entrepreneurship Education	Fayolle [7], Tognazzo et al. [13], Bukirom et al. [20]	<ol style="list-style-type: none"> 1. Courses 2. Seminar activities 3. Practice of business project
Academic Support	Autio et al. [11]	<ol style="list-style-type: none"> 1. Introducing successful persons in the entrepreneurship field 2. Encouraging students to create their ideas 3. Introducing people on campus who innovate for starting a new business 4. Providing good facilities support for new business establishment practices on campus.

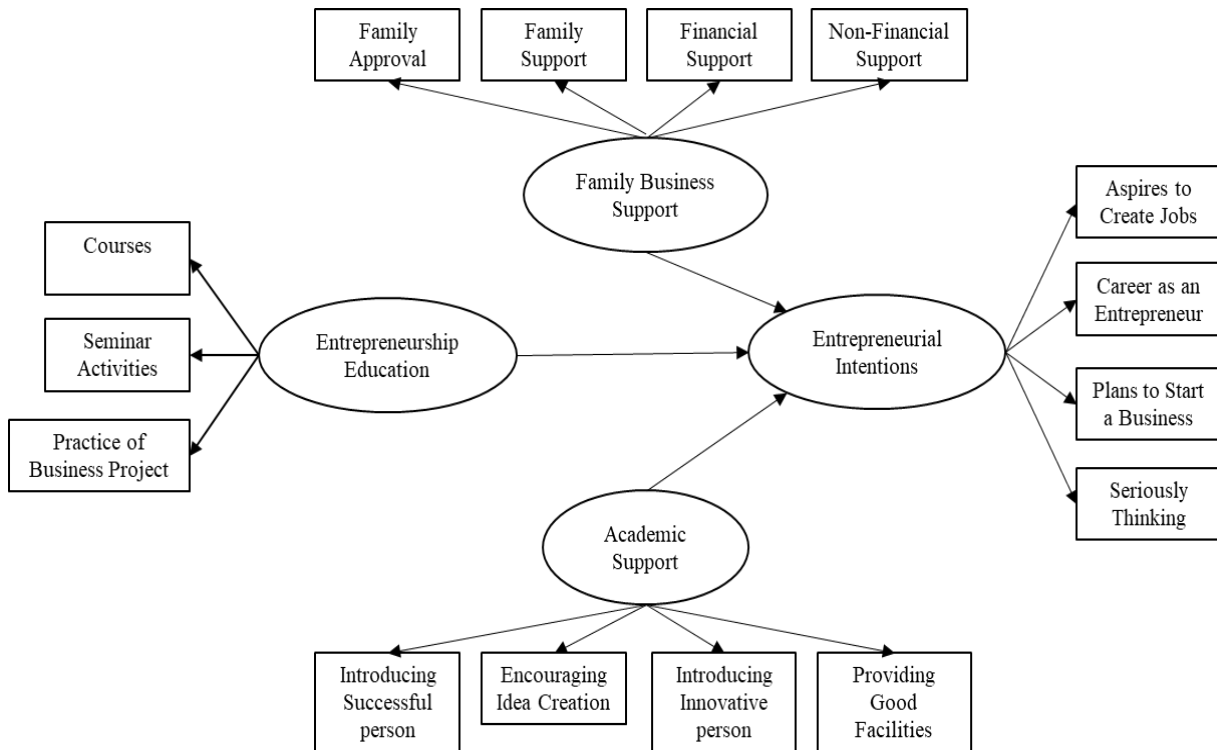


FIGURE 1. Conceptual model

DATA ANALYSIS

Data was collected by distributing questionnaires to all students with engineering backgrounds that have passed entrepreneurship courses. Of the 151 respondents, the percentage of male and female respondents was 68% and 32%, respectively. First, the validity test was carried out on 36 respondents to know whether the statements made in the questionnaire represented the indicators correctly. Each variable has a different number of question items, as shown in Table 2. Questionnaire statements are considered valid if the value of $r_{\text{count}} > r_{\text{table}}$. The r_{table} value is 0.329 with a significance level of 5%. While the reliability test is carried out for the level of consistency of the given measuring instrument, the variable is defined to be reliable if the value of Cronbach's alpha is 0.60. Table 2 is a table for the results of the validity and reliability test.

TABLE 2. Validity and reliability test for the advisability of the questionnaire

Variable	Validity Test				Reliability Test	
	Item	Rcount	Sig.	Desc.	Cronbach's Alpha	Desc.
Entrepreneurial Intentions (Y)	Y ₁	0.674	0.000	Valid	0.639	Reliable
	Y ₂	0.744	0.000	Valid		
	Y ₃	0.587	0.000	Valid		
	Y ₄	0.758	0.000	Valid		
Family business support (X ₁)	X _{1.1}	0.643	0.000	Valid	0.713	Reliable
	X _{1.2}	0.770	0.000	Valid		
	X _{1.3}	0.712	0.000	Valid		
	X _{1.4}	0.718	0.000	Valid		
	X _{1.5}	0.631	0.000	Valid		
Entrepreneurship education (X ₂)	X _{2.1}	0.681	0.000	Valid	0.872	Reliable
	X _{2.2}	0.878	0.000	Valid		
	X _{2.3}	0.702	0.000	Valid		
	X _{2.4}	0.627	0.000	Valid		
	X _{2.5}	0.702	0.000	Valid		
	X _{2.6}	0.878	0.000	Valid		
	X _{2.7}	0.854	0.000	Valid		
Academic support (X ₃)	X _{3.1}	0.584	0.000	Valid	0.833	Reliable
	X _{3.2}	0.686	0.000	Valid		
	X _{3.3}	0.617	0.000	Valid		
	X _{3.4}	0.798	0.000	Valid		
	X _{3.5}	0.762	0.000	Valid		
	X _{3.6}	0.601	0.000	Valid		
	X _{3.7}	0.731	0.000	Valid		
	X _{3.8}	0.664	0.000	Valid		

Table 2 shows that the statement items have met the requirements, namely the r_{count} value > 0.329 and the significance < 0.05 . The reliability test results on each variable indicate that the value of Cronbach's alpha is 0.60 so that each variable is consistent.

Descriptive Statistical Analysis

Descriptive analysis was carried out to provide an overview of the characteristics of each variable viewed based on the average value (mean) and standard deviation. The following are the results of the tests carried out for endogenous variable Y (Entrepreneurial Intentions) and exogenous variable X. Each indicator has been described in each statement and aims to measure the variables. Table 3 shows descriptive analysis of entrepreneurial intention of students. The results show that the distribution of respondents' assessments is rated 4 (agree) and 5 (strongly agree). The statement item Y₁ has the highest mean value of 4.20, which shows the students are interested in entrepreneurship. On the other hand, the most extensive distribution and the lowest mean value on item Y₂ indicate that 15% of students have not developed the steps for entrepreneurship.

TABLE 3. Descriptive analysis of entrepreneurial intention of students

Variable	No	Item	Statement	Mean	St. Dev	Desc.
Entrepreneurial Intentions	1	Y ₁	I have a plan for entrepreneurship.	4.199	0.798	Agree
	2	Y ₂	I have compiled the steps for an entrepreneurial career.	3.397	0.957	Neutral
	3	Y ₃	I want to create job opportunities for other people.	3.987	0.806	Agree
	4	Y ₄	I often think about starting a new business.	4.020	0.895	Agree

Table 4 provides a descriptive analysis of family business support, entrepreneurship education, academic support factors. Based on the family business support variable, the questionnaire results show that the distribution of respondents' assessments is rated 4 (agree) and 5 (strongly agree). The statement item X_{1.1} has the highest mean value of 4.06 that depicts that most students have obtained permission from their families to be entrepreneurs. The most extensive distribution in item X_{1.3} shows that 25% of students interested in entrepreneurs have parents' backgrounds who are not entrepreneurs. In comparison, 22.52% feel neutral for the family member who works as an entrepreneur does not significantly affect student intention in entrepreneurship. The lowest mean value on item X_{1.5} shows that not all students get non-financial support such as place, equipment, and materials to start entrepreneurship.

From the perspective of entrepreneurship courses variable, the results show that the distribution of respondents' ratings is rated 3 (neutral) and 4 (agree). The statement item X_{2.7} has the highest mean value of 3.81. that depicts the business projects given so far can improve students' abilities in entrepreneurship. On the other hand, the most extensive distribution on item X_{2.1} and the lowest mean value on item X_{2.1} show that the entrepreneurship courses did not significantly trigger entrepreneurial spirit in students.

While, from the perspective of entrepreneurship courses variable, the results show that the distribution of respondents' ratings is rated 3 (neutral) and 4 (agree). The statement item X_{3.6} has the highest mean value of 4.01 that depicts the activity of meeting with friends who become entrepreneurs can encourage students to start new businesses. The most extensive distribution in item X_{3.3} shows that not all students feel that committee activities to seek funds can trigger the students to create ideas for entrepreneurship. The lowest mean value on item X_{3.8} indicates that students do not feel that the library provides a good source of entrepreneurial knowledge to run a business.

Structural Model Analysis

At the structural model analysis stage, the evaluation of the outer model and inner model were considered. The evaluation of the outer model consists of evaluating convergent validity, discriminant validity, and composite reliability. Convergent validity is a value that measures the magnitude of the correlation between the item score and the construct score calculated by PLS, as shown in Fig. 2. For example, a minimum loading factor value allowed is > 0.6 with the measured construct variable. The first simulation shows that several statement items have a loading factor value of <0.6, so it is necessary to reduce and test them in the next round. Several variable indicators reduced after three rounds are the endogenous variable Entrepreneurial Intention (Y), the value of the loading factor on items Y₃ and X_{3.4}. Finally, the entrepreneurial intention variable (Y) is measured by 3 items, the family business support variable (X₁) is measured by 5 items, and 7 items measure for the entrepreneurship education variable (X₂) and the academic support variable (X₃).

Then, the cross-loading value meets the requirements of discriminant validity, in which the correlation value between indicators and constructs is higher than the correlation values between indicators and other construct variables. The reliability test was carried out by looking at the value of Cronbach's alpha, composite reliability, and AVE. Since the value of Cronbach's Alpha 0.60; composite reliability > 0.7, and average variance extracted > 0.5, it can be reliable. Table 5 results from Cronbach's alpha, composite reliability, and AVE values for each variable. However, one variable is the academic support variable (X₃), with a value less than 0.5. No further reduction is carried out because the Cronbach's alpha and composite reliability values on X₃ have met the requirements.

The evaluation of the inner model is based on the R-Square value, path coefficient value, and *p*-value. The R-Square evaluation aims to measure how much influence the exogenous variables have on endogenous variables. For example, the R-Square value in this study is 0.32 indicates that the family business support, entrepreneurship education, and academic support variables 32% can influence entrepreneurial interest. Other variables outside the study influence the remaining 68%. Table 6 shows path coefficient value and *p*-value, that H₁, the family business support has a significant effect on triggering entrepreneurial intention in students. The path coefficient value is 0.384, which shows that when the family business support increases by one unit, the intention in entrepreneurship will increase by 38.4%. As well as for H₃, the academic support shows a significant effect. The path coefficient value of 0.257 shows that when

academic support increases by one unit, it will increase student's intention in entrepreneurship by 25.7%. However, for H₂, entrepreneurship education has no significant effect on intention in entrepreneurship since the *p*-value is 0.389.

TABLE 4. Descriptive analysis of family business support, entrepreneurship education, academic support factors

Variable	No	Item	Statement	Mean	St. Dev	Desc.
Family Business support	1	X1.1	I get approval from my family to be an entrepreneur.	4.066	0.882	Agree
	2	X1.2	I get encouragement and advice from family for entrepreneurship.	3.854	0.924	Agree
	3	X1.3	I want to be an entrepreneur because parents are also entrepreneurs.	3.457	1.341	Agree
	4	X1.4	My family is willing to lend me the capital needed to start a business.	3.523	1.022	Agree
	5	X1.5	I get non-financial support such as a place, equipment, and materials to start my business.	3.371	1.125	Neutral
Entrepreneurship Education	1	X2.1	I am motivated to become an entrepreneur after taking courses related to entrepreneurship in the department.	3.377	1.008	Neutral
	2	X2.2	Entrepreneurship courses change mindsets and attitudes in the entrepreneurial field.	3.781	0.837	Agree
	3	X2.3	I am motivated to become an entrepreneur after attending an entrepreneurship seminar held by the University & Department.	3.404	0.936	Neutral
	4	X2.4	I was inspired by the speaker at an entrepreneurship seminar held by Universities & Departments.	3.497	0.905	Agree
	5	X2.5	Seminar activities with successful people motivate me to be an entrepreneur.	3.669	0.975	Agree
	6	X2.6	The existence of a business project triggers my creativity and innovation.	3.722	0.893	Agree
	7	X2.7	Having a business project improve my ability to be an entrepreneur.	3.808	0.933	Agree
Academic Support	1	X3.1	Alumni successes in entrepreneurship motivate me to start entrepreneurship.	3.848	1.034	Agree
	2	X3.2	Lecturers on campus encourage me to come up with ideas to start entrepreneurship.	3.377	1.002	Neutral
	3	X3.3	The existence of committee activities to seek funds allows me to issue ideas for entrepreneurship.	3.510	1.054	Agree
	4	X3.4	The existence of the Student Creativity Program (PKM) has encouraged me to come up with ideas so that they can be developed in the future.	3.556	0.953	Agree
	5	X3.5	Meeting many people on campus allowed me to collaborate in realizing business ideas.	3.894	0.915	Agree
	6	X3.6	Meeting friends who become entrepreneurs encourages me to start a new business.	4.013	0.846	Agree
	7	X3.7	The existence of the Innovation and Entrepreneurship Centre motivates me to start a new business.	3.364	0.938	Neutral
	8	X3.8	University libraries provide adequate sources of entrepreneurial knowledge to start/run a business.	3.371	0.960	Neutral

TABLE 5. Cronbach's alpha, composite reliability, and AVE for each variable

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Y – Intention in entrepreneurship	0.676	0.821	0.604
X ₁ – Family business support	0.764	0.835	0.505
X ₂ – Entrepreneurship education	0.887	0.911	0.593
X ₃ – Academic support	0.826	0.866	0.480

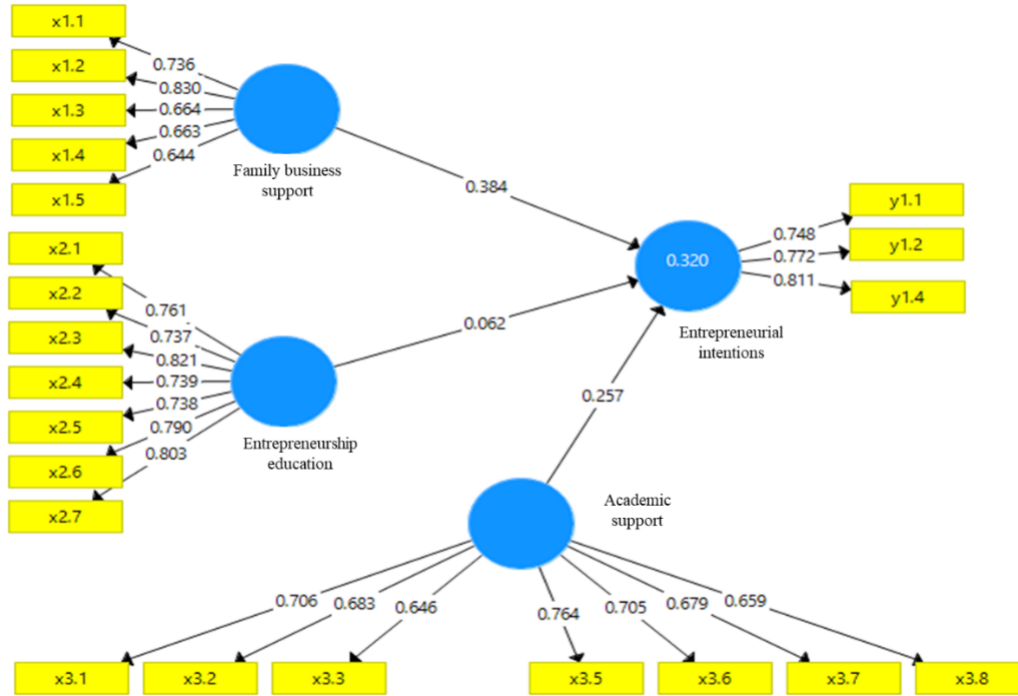


FIGURE 2. Schematic model showing item score with construct score with PLS

TABLE 6. *P*-value and path coefficients value for each variable

Hypothesis	Relationship	<i>P</i> -Value	Path Coefficients	Desc.
H ₁	Family business support > Intention in entrepreneurship	0.000	0.384	Significant
H ₂	Entrepreneurship education > Intention in entrepreneurship	0.389	0.062	Not significant
H ₃	Academic support > Intention in entrepreneurship	0.001	0.257	Significant

CONCLUSION

The family business support is the biggest supporter in starting a business. The family becomes an external factor where it becomes a place to grow and learn about many things, including raising the people's interest. Encouragement from the family tends to higher intention in entrepreneurship. The encouragement and permission given by parents financially and non-financially will undoubtedly be significant in developing entrepreneurship.

Educational factors provided by the university are practiced in the form of entrepreneurship education and academic support. Previous research has shown that entrepreneurship education is one of Indonesia's most essential and valuable things to educate for entrepreneurship. However, no significant effect was found in this study on the emergence of entrepreneurship education for engineering students. Entrepreneurship education activities cannot fully motivate entrepreneurial intention in students. The influence of entrepreneurship education is generally passive, where the business support only provides opportunities for individuals but not coercion.

The academic support provided by faculties and universities can raise student intention in entrepreneurship, such as allowing students to participate in the Student Creativity Program organized by the Government to develop new ideas. In addition, two-way communication between lecturers and students also plays a role in issuing their ideas. Organizing a new forum, especially to create the new start-ups, will encourage students to pursue a career as an entrepreneur.

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