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From teachers to students creativity? the mediating role of entrepreneurial education

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Abstract: Enhancing creativity is beneficial for students to be involved in entrepreneurial activities and entrepreneurship education to promote students' creative thinking abilities. This paper examines how teacher creativity drives students' ingenuity and investigates entrepreneurship education's pivotal role in explaining this relationship. A quantitative method was involved in obtaining a better understanding of the relationship between variables using variance-based Structural Equation Modeling Partial Least Square (SEM-PLS). Participants in this study were gathered from numerous vocational schools in Yogyakarta of Indonesia undergoing an online survey. The findings indicate that teacher creativity has a positive effect on entrepreneurship education and students' creativity. It also reveals a strong correlation between entrepreneurship education in the schools and their students' creativity. Finally, this study offers to the schools and government to emphasize these variables in enhancing students' creativity which can be used to improve students' entrepreneurial intentions.

Subjects: Education - Social Sciences; Entrepreneurship; Education Studies

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PUBLIC STATEMENT INTEREST

Measuring teachers' creativity and entrepreneurship education are important to enhance students' ingenuity which can be used in promoting the intention of being entrepreneurs in the future. In this study, we investigated teachers' role and entrepreneurial education model in vocational schools to understand students' creativity. The findings of this study pointed out the crucial role of teachers' creativity and entrepreneurship education model in the schools. This study implicates policymakers on the educational side to elaborate on two main components in driving students' creativity and intention of being entrepreneurs.

Keywords: Entrepreneurship education; students' creativity; teachers' creativity; vocational students

1. Introduction

Entrepreneurship has been widely acknowledged by scholars and policymakers as crucial for economic development in a nation (Beresford, 2020; Du & O'Connor, 2018). Some researchers believe that entrepreneurship takes a major portion for supporting the country's economy due to the pivotal role of entrepreneurship in providing new job opportunities and alleviating poverty (Bosma et al., 2018; Peprah & Adekoya, 2020; Shepherd et al., 2020). Additionally, prior studies also confirmed the direct correlation between entrepreneurship and economic growth (Akinwale et al., 2020; Stoica et al., 2020).

In Indonesia's perspective, it faces an insufficient number of entrepreneurs as well as a high unemployment rate. The data from Statistics Indonesia (BPS, 2020) documented Indonesia's unemployment rates have been dominated by vocational school graduates. This is contrary to the purpose of the vocational school in preparing students to be entrepreneurs (Saptono et al., 2020). Dealing with this issue, the Indonesian government has responded by focusing on the entrepreneurship education model and revised the existing curriculum for vocational schools that are expected to promote students of being entrepreneurs (Wardana et al., 2020).

Entrepreneurship education enables students to enhance their intentions, ideas, creativity, and benefit to be entrepreneurs (Anjum et al., 2019; Nabi et al., 2018). Entrepreneurship education provides scenarios in forming entrepreneurial intentions through inspiration, experience, and the learning process (Kautonen et al., 2015; Barba-Sánchez & Atienza-Sahuquillo, 2018). Some scholars also believe that education aims to develop several factors that influence this intention, such as knowledge, desires, and entrepreneurial skills (Li & Wu, 2019; Linton & Klinton, 2019). Entrepreneurship education that includes observations of an entrepreneur will intervene in students' cognitive factors (self-efficacy) and help them decide on their intentions and behavior (Nowinski et al., 2019).

Since the essential role of entrepreneurship in economy, the studies on the topic of entrepreneurship are also on the rise. The majority of studies have focused on improving students' entrepreneurial intention and its correlations with entrepreneurship education (Liguori & Winkler, 2020; Saptono et al., 2020; Wardana et al., 2020). Some studies have also concerned studies on the influence of gender, culture, learning environment (Ana et al., 2016; Matlay et al., 2015), family environment, ethnic origin, emotional intelligence (Firmansyah et al., 2016), capital, big-five personality (Zhao & Seibert, 2006), and self-efficacy on the entrepreneurial intentions of vocational students (Murugesan & Jayavelu, 2017; Purwana & Suhud, 2017).

In addition to entrepreneurial education and entrepreneurial intention, scholars' role and their impacts on students' creativity have been overlooked by scholars. In fact, teachers play a primary role in students' capability. According to Hamidi et al. (2008), creativity is very influential in a student's later career when performing entrepreneurship. The fundamental rationale is that the business world is associated with uncertainty and competition. Entrepreneurs who are creative and innovative can overcome and come out as winners in business competition. On the other hand, entrepreneurs who lack creativity and innovation will be left behind and unable to compete (Zampetakis et al., 2011).

This study promotes some main contributions. First, it contributes to the literature of entrepreneurship education concerning students' creativity that is missing in prior studies. It also adds insights into teachers' creativity as the primary in supporting the educational success. Several previous studies have not examined teacher creativity about entrepreneurship education and student creativity. For example, Pihie (2014) teacher's creativity and innovation, but not on their

effect on becoming a vocational student entrepreneur, while Wibowo et al. (2018) has elaborated teacher creativity and entrepreneurship, but it was not elaborated with student creativity. Lastly, taking study in the Indonesian context is unique considering the highest percentage of vocational school graduates. This study offers to the policymakers in considering these variables in promoting the number of entrepreneurs from vocational school graduates.

2. Literature review

2.1. Teacher creativity

In the fourth industrial era, critical thinking and creative thinking abilities are the main focus of learning (Beghetto & Kaufman, 2014; Narmaditya et al., 2018). The underlying reason is that critical thinking enables students to be more skilled in composing an argument, checking the credibility of sources, or making decisions. Second, the development of creativity in an enjoyable learning process is considered more supportive of students' non-academic talents and strengths. As a primary figure in the classroom, teachers need to have creativity and innovation in their learning and delivering their materials. According to Gu (2017); Selkrig and Keamy (2017) noted that creative teachers have various solutions in dealing with classroom problems and promoting students' success in achieving educational goals.

Several studies have documented that teacher creativity and innovation are directly proportional to learning success in the classroom. For instance, Rasmi (2012) remarked that the success of the learning process in the classroom is primarily determined by teacher creativity. Indeed, Ayob et al. (2013); Pishghadam et al. (2012) confirmed that teacher creativity can promote a meaningful learning atmosphere and encourage students to be skilled in solving problems. This implies that teachers need to continue nurturing their creativity by frequently participating in professional training activities, continuing studies, diligently reading relevant research, and always having discussions with other teachers on improving learning quality (Arifani & Suryanti, 2019; Liu et al., 2020).

The next question is that what and how is the teacher's creativity?. According to Rasmi (2012), teacher creativity in the classroom consists of creative teaching, teaching for creativity, and creative learning. These three things are interrelated and support each other in teachers' success in teaching in the classroom. Creative teachers are also characterized by the use of techniques, tools, materials, and methods in the learning process, such as the use of original materials or other realities to improve student understanding; provide various examples so that students understand more, help students better use teaching aids, and means of meaningful learning (Ayob et al., 2013). Meanwhile, creative learning is defined as a learning model that develops students' creative thinking and behavior (Ayob et al., 2013; Jeffrey & Craft, 2004; C. Zhou & Luo, 2012).

In the entrepreneurial education subject, teacher creativity is crucial in promoting students' creativity, leading to students' intention and activities on entrepreneurship. Mason and Arshed (2013) concluded that entrepreneurship education in schools equips entrepreneurship knowledge for students and produces graduates with the mindset, creativity, and skills to identify and create opportunities and develop businesses in the future. Therefore, teachers should be more creative in designing entrepreneurship education to achieve the forecasted goals (Samuel & Rahman, 2018). Thus, teacher creativity affects entrepreneurship education (Hamidi et al., 2008; Lin, 2011; Oosterbeek et al., 2010).

2.2. Entrepreneurial education

Entrepreneurship education provides a theoretical basis for the concept of entrepreneurship and forms the attitudes, behavior, and mindset of an entrepreneur (Ahmed et al., 2020; Wardana et al., 2020). This is an investment in human capital to prepare students to start new businesses by integrating experience, skills, and knowledge essential to developing and expanding a business (Donald et al., 2019). Additionally, Wu and Wu (2008) summarized the two main functions of

entrepreneurship education. First is the transfer of knowledge and information, and second is capacity building. Furthermore, Ratten and Jones (2018) offered that entrepreneurship education can be delivered in two formats: theoretical teaching and practical training.

Soutaris et al. (2007) added that entrepreneurship education affects students' entrepreneurial intentions in three ways: learning, inspiration, and resource utilization. Through entrepreneurial education, students can gain knowledge about how to start a new entrepreneurial education business. It will particularly obtain answers related to what values and motivations entrepreneurs have, what should the entrepreneur do, what skills or abilities should entrepreneurs have, what types of social networks should entrepreneurs build, and what kind of experience or intuition should entrepreneurs have. Second, inspiration means that entrepreneurship education can change students' mindsets. Inspiration is an essential step in changing an individual's thoughts and behavior. Lastly, the utilization of resources implicates that entrepreneurship education helps individuals obtain resources through information transfer. For example, individuals can build relationships with peers while taking entrepreneurship courses. These good networks can provide potential entrepreneurs with various information regarding the required resources (Cheng et al., 2013). Individuals can also receive comments or suggestions regarding their entrepreneurial activities during the course. Motivation from classmates and teachers is a resource for individuals to support entrepreneurial activities.

Despite there has been a significant increase in the number of courses and programs on entrepreneurship education, it has not been adequately integrated into secondary school curricula to higher education. Saptono et al. (2020) realized that the real challenge is building an interdisciplinary approach, making entrepreneurship education accessible to all students, forming teams to develop and exploiting business ideas, and combining existing students in business schools with public schools. Moreover, entrepreneurship education provides practices that enable students to acquire knowledge and skills. The result from Wu and Wu (2008) supported the previous explanations that entrepreneurship education positively relates to individual entrepreneurial ability. However, several scholars have succeeded in documenting the significant effect of entrepreneurship education on the intention for entrepreneurship in the future (Fayolle and Gailly (2015), Purwana and Suhud (2017), and Piperopoulos and Dimov (2015); Karimi (2016).

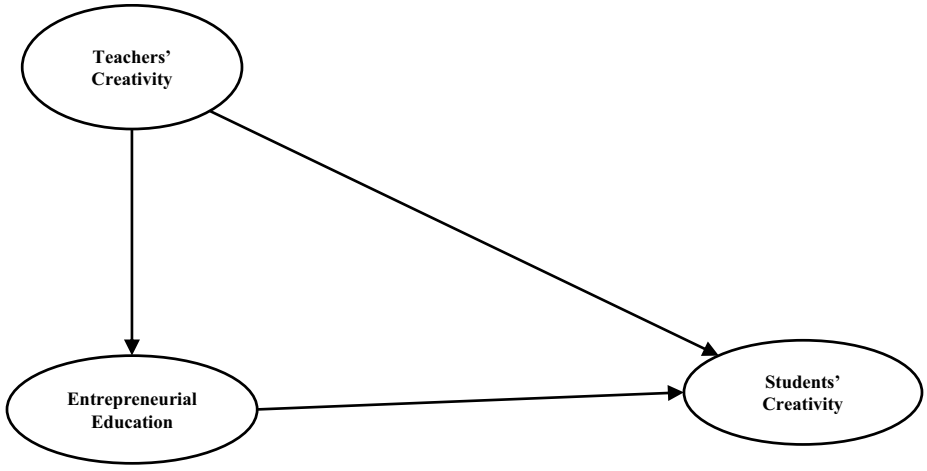
2.3. Students' creativity

Creative thinking ability is crucial for students in facing the more complex economic issue, especially in this fourth industrial era (Arbia et al., 2020; Astuti et al., 2020). Jooss et al. (2020) noted that flexibility, adaptability, and authenticity are considered essential to meet the demands of living and working in this rapidly changing world. Huang et al. (2020) mentioned that creativity is a multidimensional construct that can be viewed from the cognitive, affective, and psychomotor dimensions. Creativity can also be interpreted as a thought pattern or idea that arises spontaneously and imaginatively, which details new inventions and creations (Sudjarwo et al., 2019).

Creativity differs from innovation, where creativity is an emphasized process of generating ideas, while innovation extends the idea process to implementation and execution (Perry-Smith & Mannucci, 2017). However, Robinson and Stubberud (2014) believed that creativity and innovation are essential for business development. Ward (2004) noted that novelty and usability are two significant aspects of creativity, which essential to entrepreneurship (Batchelor & Burch, 2012). Creativity has been associated with students' entrepreneurial intentions, where the higher the level of student creativity tends to drive students' entrepreneurial intention (Runco & Pritzker, 2020). Based on the literature review, this study's hypotheses can be provided in the following statement.

H1: Teachers' creativity can influence entrepreneurial education.

Figure 1. Theoretical Framework.



H2: Teachers' creativity can influence students' creativity.

H3: Entrepreneurial education can influence students' creativity.

H4: Teachers' creativity can influence students' creativity through entrepreneurial education.

3. Method and materials

This study adopted a quantitative approach using a cross-sectional survey. The benefit of this approach allows for large quantities of data from a subject. This study elaborated exogenous, intervening, and endogenous variables. The exogenous variable in this study was the teachers' creativity, the intervening variable was entrepreneurial education, and the endogenous variable was students' creativity (see Figure 1). This research was conducted from August—October 2020. Participants in this study were all State Vocational High School students in Yogyakarta of Indonesia who had taken entrepreneurship subjects and were involved in entrepreneurial programs/activities. The basic rationale conducted studies in Yogyakarta of Indonesia, considering it has a high education quality compared to other Indonesia regions. This study followed non-probability purposive sampling concerning the model developed by Hair et al. (2020). A total of 400 questionnaires were received, and after the validating data, approximately 375 questionnaires were completed and verified for further analysis (see Table 1). Equally important, the participants in this study were voluntary and responded for their anonymity. These research instruments have been validated and approved by the ethical committee of UIN Sunan Kalijaga Yogyakarta of Indonesia.

Appendix Table A1 informs the demographic characteristic of respondents. In general, this survey participants were students in the range between the age of 15 to 17 years old and were dominated by female students. What is striking in the table is that the respondents have different majors in studying from office administration, business program, accounting, and automotive. From the parents' job, the highest portion was an entrepreneur that touched almost a half of respondent, while the lowest percentage was employee.

3.1. Instrument development and data analysis

The questionnaires were developed based on literature review and adapted from prior relevant papers. The questionnaires were translated from English into Bahasa Indonesia and adjusted with the Indonesian context. In detail, we adapted seven indicators from Ayob et al. (2013) and Dobbins (2009) to measure the teachers' creativity, while the six indicators from Denanyoh et al. (2015) and Opoku-Antwi et al. (2012) was intended to measure entrepreneurial education. As

Table 1. Respondent Demographic Information

S/No.	Characteristic	Frequency	Percentage
1.	Age		
	15 years old	140	37.33
	16 years old	235	62.67
2.	Gender		
	Female	230	61.33
	Male	145	38.67
3.	Subject		
	Accounting	100	26.67
	Business	135	36.00
	Office Administration	50	13.33
	Automotive	90	24.00
4.	Parents' occupation		
	Employee	90	24.00
	Teacher/Lecturer	105	28.00
	Entrepreneur	180	48.00

for measuring students' creativity, we engaged eight indicators from J. Zhou and George (2001) (See Table 2 for detailed indicators). Each construct of the variables was calculated using the five-point Likert Scale, arranging from "strongly disagree" (1) to "strongly agree" (5) in order to understand how relationship among variables, a series of Structural Equation Modeling Partial Least Squares (PLS-SEM) with SmartPLS (version 3.0) were performed. The analysis and interpretation of the PLS-SEM model in this study were provided in two stages: First, assess the model's validity and reliability to determine the goodness of measures. The criteria to achieve the convergent validity when the loading factor is greater than 0.70. The construct to reach the reliability when the composite reliability (CR) and the Cronbach's Alpha (α) is higher than 0.70 (Hair et al., 2020). The discriminant validity was determined by comparing the average variance extracted (AVE) with others in the model. Second, we involved structural equation modeling to estimate the hypotheses with the significant level at 5%.

4. Results and discussion

4.1. Assessment of outer model

The outer model aims to assess the validity and reliability of the model. This study followed convergent validity, discriminant validity, and composite reliability tests. What stands out in Table 2 is the summary of the validity and reliability of the model. From the table, it can be seen that teachers' creativity has eight indicators, which are the result of developing a conceptual description with was coded (TC), entrepreneurship education (EE), and students' creativity (C). The convergent validity shows that all indicators of TC, EE, and C have a loading factor in the range of 0.621 to 0.860. However, the students' creativity variable with indicator C3 (0.67) should be dropped due to the loading factor is below 0.70 (Hair et al., 2020). Table 2 also illustrates that the AVE value of the variables ranges from 0.569 to 0.672 (> 0.50), implicating to achive the discriminant validity (Hair et al., 2020). Furthermore, the C.R. and Cronbach's Alpha (α) values for variable of TC were 0.942 and 0.930 > 0.70, EE were 0.905 and 0.901, C were 0.902 and 0.872, respectively. These results implicate that the variables achieved the composite reliability.

For the discriminant validity, this study followed the model from Chin and Marcoulides (1998; 2010) and Hair et al. (2020). The detailed discriminant validity test was provided in Table 3.

Table 2. Results of Measurement (Outer) Model

Variable	Indicator	Loading	C.R.	α	AVE
(1) Teachers' Creativity	TC1	0.778	0.942	0.930	0.672
	TC2	0.860			
	TC3	0.854			
	TC4	0.834			
	TC5	0.794			
	TC6	0.766			
	TC7	0.830			
	TC8	0.836			
(1) Entrepreneurial Education	EE1	0.776	0.905	0.901	0.671
	EE2	0.867			
	EE3	0.862			
	EE4	0.858			
	EE5	0.755			
	EE6	0.788			
(1) Students' Creativity	C1	0.731	0.902	0.874	0.569
	C2	0.729			
	C4	0.768			
	C5	0.768			
	C6	0.786			
	C7	0.765			
	C8	0.731			

Table 3. Discriminant Validity

	TC	EE	C
Teachers' Creativity (TC)	0.820		
Entrepreneurial Education (EE)	0.707	0.819	
Students' Creativity (C)	0.775	0.725	0.754

According to the table, it can be informed that TC, EE, and C accomplished the discriminant validity criteria considering the score of each variable is higher than 0.70.

4.2. Structural model evaluation

After evaluating the outer model, the next step is to evaluate the inner model, also known as structural model evaluation. As Hair et al. (2020) recommended, this study followed a five-stage procedure in the structural model test, which includes: (1) Collinearity testing; 2) Test the path coefficient, 3) Testing the level of R-Square (R^2); (4) test the effect size (f^2), and (5) test the relevant predictions (Q^2).

4.2.1. Collinearity test

A collinearity test was conducted to determine whether the collinearity occurred between variables or not. This was performed from the Variance Inflation Factor (VIF) coefficient, where the VIF value must be lower than 5.00 (Hair et al., 2020). From the calculation of the VIF coefficient value,

Table 4. Path Coefficients and Results of Hypotheses Testing

Hypotheses	Relationship	Beta	T-value	P-values	Decision
H_1	T.C. -> EE	0.707	29.352	0.000	Accepted
H_2	T.C. -> C	0.362	5.730	0.000	Accepted
H_3	E.E. -> C	0.218	2.714	0.007	Accepted
H_4	T.C. ->E.E. -> C		2.702	0.006	Accepted

it can be known that the value is under 5.00, meaning that there is no collinearity and all indicators of the constructs tested are valid.

4.2.2. R-square (R^2) test

The R-square (R^2) test aims to comprehend whether each endogenous latent variable has predictive power on the model or not. This study followed these three categories: 0.75, 0.50, and 0.25 for substantial, moderate, and weak, respectively (Hair et al., 2020). From the test results of R^2, EE variables posit 0.50, which means that the TC variable can explain 50.0% of EE variant with a moderate predictive level. Furthermore, the R^2 value of the C is 0.291, implicating that 29.1% of SC variants can be explained by their C and EE with a weak predictive level.

4.2.3. F^2 size effect

The effect size test (f^2) aims to determine how wide the influence size of the latent predictor variable (exogenous latent variable) on the structural model (Hair et al., 2020). In the size effect test (f^2), the rule of the thumb used refers to Hair et al. (2020), where the values of 0.02, 0.15, and 0.35 indicate the influence of small, medium, and large sizes. Our test results show that the f^2 value of the TC variable on entrepreneurial education is 1.01, which indicates a considerable effect size. Furthermore, C and EE on students' creativity are 0.093, meaning has a small effect size.

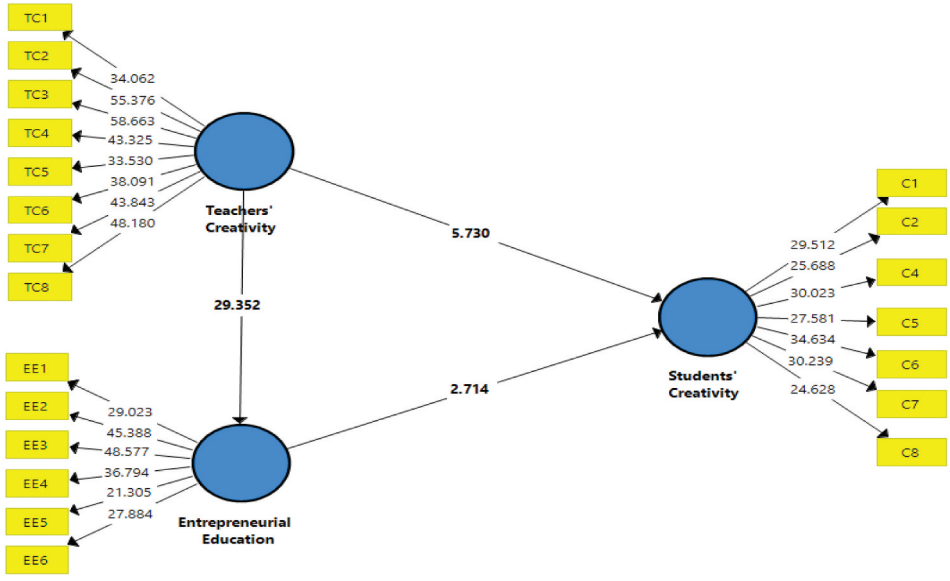


Figure 2. Measurement and structural model estimation.

4.2.4. Q^2 relevant prediction test

The Q^2 relevant prediction test purposes to observe value and its parameter estimation. The value of $Q^2 > 0$ (zero) illustrates that the model has a predictive relevance value. The value of $Q^2 < 0$ implicates that the model lacks predictive relevance. The formula used is as follows: $Q^2 = 1 - (1-R^2)$. Based on our model testing results, it can be performed that the Q^2 value of each variable is greater than 0, meaning the model has a predictive relevance value.

4.3. Path coefficient test

Path coefficients were performed to estimate the structural models. The calculation of the bootstrapping shows the stability of the PLS-SEM test. In this study, data were processed using 500 bootstrapped samples. Table 4 presents the path coefficient (p-value) of the four relationships between variables is in the range 0.000–0.007 < 0.05, which implies these are significant. Additionally, Figure 2 depicts the structural model test in our study, which can be used to understand whether the made hypothesis is significant or not.

5. Discussion

This study set out with the aim of assessing the importance of teachers' creativity and entrepreneurship education. Based on the statistical calculation, it can be known that the t-value is 29.352 > 1.96, implicating that the first hypothesis is accepted. The result of this study is relevant to several previous studies, such as those conducted by Hamidi et al. (2008); Pishghadam et al. (2012), which found that teacher creativity influences entrepreneurship education. A possible explanation for this might be that the teachers play a pivotal role in the classroom in providing students' creativity. Teachers who have creativity make learning in the classroom interesting, fun, give students space to think creatively, and are in accordance with learning and educational goals. This will be different from teachers who are not creative. Such a model teacher will make the class unattractive, boring and there is no joy in learning. Creative teachers will carry out learning with methods, strategies, and models that are varied, varied, and adapted to the material presented. Likewise, in the context of entrepreneurship education, teacher creativity is influential on the success concerned in teaching the internalization of entrepreneurship education to students in the classroom.

With respect to the first research question, it was found that teachers' creativity has successfully driven students' ingenuity. The hypothesis testing results (Table 4) show that the t-value of H2 is 5.730 < 1.96, which is significant. This finding is in accordance with the preliminary study conducted by Vasudevan (2010), Morais and Azevedo (2011), Wibowo et al. (2018), and Bereczki and Kárpáti (2018), who found that teacher creativity influenced student creativity. The results of this study are logical because creative teachers have various ways of doing learning in class. Creative teachers use techniques, tools, materials, and learning methods that develop student creativity. Moreover, creative teachers will use methods that make students think actively and creatively; give students assignments that make them use a variety of ways to solve problems, such as brainstorming, reflection, analysis, and causal relationships; provide activities that train students' creative and imaginative thinking; provide students with situations in which they can innovatively explore resources and ideas; provide assignments that allow students to create alternatives, use new styles, materials, and teaching aids to provoke student learning curiosity and be imaginative.

The third hypothesis of this study is that entrepreneurship education influences student creativity. From the estimation, it can be seen that the t-value of H3 is 2.714 > 1.96, meaning that it is significant. This result further supports the idea of Laguía et al. (2018); Peña-Ayala and Villegas-Berumen (2020) that education influences student creativity. This result may be explained by the fact that entrepreneurship education and education generally shape students' mindsets, creativity, attitudes, and behavior. Entrepreneurship education also improves student managerial abilities to have the ability and creativity to support business activities. For student creativity to increase,

entrepreneurship education centers on cognitive theory and aspects and increases entrepreneurial practice. Therefore, it involves students' affective and psychomotor aspects.

The last hypothesis was designed to the mediating role of entrepreneurship education in explaining teachers' creativity and students' ingenuity. The findings of this study seem to be consistent with other research by Runco and Pritzker (2020); and Phuong and Hieu (2015) that entrepreneurship education influences student creativity, either directly or indirectly. This study's results indicate that respondents view entrepreneurship education as an effect significant in inspiring and building their creativity. In summary, the respondents of this study view that entrepreneurship education and teacher creativity are integral parts that build, inspire, and become the spirit of their creative growth and development. Another possible explanation for this is that entrepreneurship education requires creative teachers considering entrepreneurship education is a unique subject, which elaborates both theory and a variety of creativity from the teacher so that learning in the classroom becomes interesting, fun and increases students' intention to be entrepreneurial in the future.

6. Conclusion

This study was intended to examine the correlation between teachers' creativity and students' ingenuity, which is mediated by entrepreneurship education. This study concluded that teachers play an essential role in driving students' creativity and supporting entrepreneurship education. This research also confirmed the mediating role of entrepreneurship education in promoting the relationship between variables studied. This study provides several implications for both teachers' sides and entrepreneurship education model in the schools. From teachers' perspectives, it needs to increase their creativity along with the incentives given by the Government. This creativity skills aim to inspire, motivate, and encourage students to be more creative, which are required in this era. Also, creativity is essential for students' entrepreneurial intentions and provision when choosing a career as entrepreneur. Additionally, entrepreneurship educators should not only focus on knowledge aspects but also affective and psychomotor aspects. In addition to the teachers, the entrepreneurship education model or curriculum should always be updated to enhance students' self-confidence further and provide skills so that they are ready to enter as entrepreneurs after graduating from school. Schools and stakeholders need to collaborate with the business world to have a rich experience or more hours practicing entrepreneurship and know what entrepreneurship is in a nutshell. With more hours spent in entrepreneurial practice, students will be better prepared to jump into the career world after graduating.

7. Implications and limitations

As the study of Hamidi et al. (2008); Laguía et al. (2018); and Peña-Ayala and Villegas-Berumen (2020), this study provides insight into how to develop the creativity of vocational school students through increasing teacher creativity and entrepreneurship education. Student creativity will increase when the teacher offers various alternatives to classroom learning activities. This can be realized when the teacher himself or herself has improved and becomes a creative figure. The teachers' creativity result will inspire and become a role model for students to be creative as well. Furthermore, vocational schools in Indonesia must support teachers' creative efforts by providing a conducive atmosphere, supporting facilities, and funding. The school principal and stakeholders provide support in the form of strategic policies and various training to increase teacher creativity. However, this research is solely involved in state vocational schools in Yogyakarta of Indonesia. Therefore, future scholars should also involve Private Vocational High Schools in Yogyakarta so that the results can be generalized. This research also only tested four variables. Therefore, future research needs to add more variables relevant to entrepreneurial intentions, such as the entrepreneurial mindset, entrepreneurial readiness, knowledge of entrepreneurship, entrepreneurial orientation.

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Appendix

Table A1: Indicator of Each Variable

Code	Variable/Indicator	Source
1.	Teachers' Creativity (TC)	Ayob et al. (2013); Dobbins (2009)
TC1	My teacher uses a method that makes students think actively and creatively	
TC2	My teacher often gives various examples so that I understand more	
TC3	The teacher assigns assignments to students that make them use various methods to solve problems	
TC4	My teacher responds to all the needs, interests, ideas and ideas of his students	
TC5	My teacher applies games and methods that make learning go both ways	
TC6	The teacher provides students with situations in which they can explore resources and ideas in an innovative way	
TC7	The teacher assigns assignments that allow students to make alternatives	
TC8	The teacher uses new styles, materials, and teaching aids to provoke the curiosity of students to learn and to be imaginative	
2.	Entrepreneurial Education (EE)	Denanyoh et al. (2015); Opoku-Antwi et al. (2012)
EE1	The education in my school encourages me to develop creative ideas for being an entrepreneur	
EE2	My school provides the necessary knowledge about entrepreneurship	
EE3	My school develops my entrepreneurial skills and abilities	
EE4	My school teaches students about entrepreneurship and starting a business	
EE5	Entrepreneurship can be developed through education	
EE6	I thought entrepreneurship education encourages me to be an entrepreneur	

(*Continued*)

Code	Variable/Indicator	Source
3.	Students' Creativity (SC)	J. Zhou and George (2001).
C1	I exhibit creativity on my assignments when given the opportunity to	
C2	I develop adequate plans and schedules for the implementation of new ideas."	
C4	I come up with creative solutions to problems	
C5	I am a good source of creative ideas	
C6	I suggest new ways to achieve goals or objectives	
C7	I came up with new and practical ideas to improve performance	
C8	I suggest new ways to increase the quality of project assignments	

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