

# DOES TEACHERS' CREATIVITY IMPACT ON VOCATIONAL STUDENTS' ENTREPRENEURIAL INTENTION?

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## ABSTRACT

*Teachers' creativity is an important aspect of entrepreneurship education, to foster entrepreneurial intention. This study aims to investigate the impact of teachers' creativity and entrepreneurship education on vocational student's entrepreneurial intention. In total, 743 students from Public Vocational Secondary School (SMKN) at DKI Jakarta involved. As a result, three hypotheses were accepted, and one was rejected. This study carried out the findings: first, the teachers' creativity a positive direct impact on entrepreneurship education. Second, the entrepreneurship education a positive direct impact on the entrepreneurial intention. Third, entrepreneurship education mediates the impact of teachers' creativity on entrepreneurial intention. Meanwhile, the teachers' creativity did not directly impact on entrepreneurial intention. Although the results of this study found that teachers' creativity has no direct positive effect on entrepreneurship intentions, but can be the first step of further development research, so that the impact of teacher creativity can be felt directly by students.*

**Keywords:** Teachers' Creativity, Entrepreneurial Education, Entrepreneurial Intention, Vocational Students.

## INTRODUCTION

Indonesia is the country with the fourth largest population in the world. According to data Coordinating Ministry for Human Development and Culture (2018), the number of people in the first place occupied by the Republic of China (1374 million), India (1267 million), United States (324 million) and Indonesia (258 million). Unfortunately, despite Indonesia's fourth largest population in the world, very few become entrepreneurs. Therefore the Indonesian government is targeting four percent of the total population to become entrepreneurs (Puspayoga, 2017). The target of four percent of the total population to become an entrepreneur is still far less than Malaysia (5 percent), Japan (10 percent) and the United States (10 percent). Increasing the number of entrepreneurs by four percent or more, indeed not an easy job. The Indonesian government must work hard and cooperate with many related institutions to achieve the target of four percent of entrepreneurs. The Indonesian government strategy is in line with McClellan's opinion (1961). McClellan argues that more and more entrepreneurs, the shorter the nation reaches prosperity

One of the Indonesian government policies to increase the number of entrepreneurs is by revitalizing Vocational Secondary Schools (SMK), especially in entrepreneurship education. According to Minister of Industry, Airlangga Hartarto (2017), SMK graduates are better prepared to become entrepreneurs, compared with other equivalent schools. SMK graduates are also more absorbed by the world of work three months after they graduate (Amin, 2015). The

step of optimizing entrepreneurial education in SMK, starting from 2013 in line with the 2013 Curriculum. With the implementation of the 2013 curriculum, it is expected that students after graduation, do not always have to find a job but they will have the opportunity to become an entrepreneur (Kurniawan, 2015).

This data is in contrast to the information provided by the Central Bureau of Statistics (Midayanti, 2017). According to Midayanti (2017), SMK graduates fill the first rank (11.41 percent) open unemployment rate, out of a total of 7.04 million people in August 2017. Second place was graduated from 8.29 percent Senior High School, 6.88 percent Diploma I / II / III, School Junior High School (SMP) 5.54 percent and University 5.18 percent.

Data on the increasing number of unemployed from SMK graduates, allegedly one of them is due to the ineffectiveness of entrepreneurship education (Husnaini, 2017). Primarily, the lack of creativity and innovation of teachers in the delivery of entrepreneurship education (Esmi et al., 2015). In fact, entrepreneurial education is done effectively, influences the intention of vocational students to become entrepreneurs. Some previous studies have suggested that entrepreneurial education has the potential to create a person's intention to entrepreneurship (Priyanto, 2012; Rauch, 2015; Block, 2016, and Ghina et al., 2017).

Furthermore, the study related factors that strengthen the intention of vocational students in addition to entrepreneurial education in Indonesia has been widely studied. The results of the study found gender, cultural, and learning environments (Ana, 2016; Buli, 2015), family environment, parenting, ethnic origin, emotional intelligence (Firmansyah et al., 2016), capital, big-five personality (Zhao et al., 2005; Zhao & Seibert, 2006), also, impact self-efficacy on the entrepreneurial of vocational students' intention (Murugesan & Jayavelu, 2017; Purwana & Suhud, 2017).

However, several previous research, no one has tested the teacher's creativity factor associated with entrepreneurial education and the entrepreneurial intention of vocational students. Lope Pihie's research (2014) tested teacher's creativity and innovation but not its influence on the intention of becoming a vocational student entrepreneur. Lope Pihie (2014) tested the influence of entrepreneurship leadership on teachers' creativity and innovation. Likewise, other research also tested the importance of teacher creativity but did not try to relate it to the vocational entrepreneurship intentions. Though the factor of creativity and innovation of teachers is very supportive in entrepreneurial education. Creativity and innovation of teachers will make entrepreneurial education effective and in turn will foster students' intentions into entrepreneurship (Altan, 2015; Heru Priyanto, 2012). This study aims to examine the impact of teacher creativity and entrepreneurial education on student intentions into entrepreneurs.

## TEACHERS' CREATIVITY

Teacher's creativity is an essential aspect of entrepreneurship education with outcome learning intense entrepreneurship. Beghetto & Kaufman (2014) argue that the creativity of this teacher should continue to be developed so that entrepreneurship education effectively affects the intentions of entrepreneurial students. Moreover, Beghetto & Kaufman (2014) concludes that creativity is urgently needed, for two important reasons: First, modern societies desperately need the creative character of improving their business (Beghetto & Kaufman, 2014; Wibowo & Saptono, 2018; Plucker et al., 2011). The characteristics contained in creativity such as flexibility, authenticity and adaptability and authenticity are not only crucial for the demands of life but also for the sustainability of the business (Alenizi, 2008). Secondly, the creativity of teachers that leads to the creativity of students dramatically supports the success of learning in

the classroom. The creativity of this teacher will encourage the emergence of talents and excess nonacademic students. These two skills are closely related to the world of entrepreneurs.

Torrance (1972) argues that creative teachers will make learning in the classroom less monotonous, but fun and students learn in a daze. Torrance concluded that creative teachers have many choices of strategies for solving classroom problems. In fact, creative teachers will inspire and become role models for students, who then they will be infected with the creative virus. Teacher's creativity, Torrance's node, can not be separated from the various education and coaches he has ever attended.

Cayirdag (2017) argues for the importance of teacher creativity in entrepreneurship education. The impact of teacher creativity, Cayirdag (2017) concluded, will inspire and motivate students to be creative as well. In line with Cayirdag (2017), Rasmi (2012) found that teacher creativity is crucial to the success of entrepreneurial learning in the classroom. Ayob et al. (2013) and Pishghadam et al. (2012) also found that teachers' creativity will make the climate and learning atmosphere in the classroom meaningful, fun and students learn in a daze. Ayob et al. (2013) and Pishghadam et al. (2012) recommend that teachers participate in entrepreneurship training or seminars, advanced study, diligent reading of relevant research, and continuously discuss with other teachers related to the improvement of entrepreneurship education.

Rasmi (2012) summarizes the creative forms of teachers in the classroom that include teaching creatively, teaching for innovative and creative teaching. These three components are interrelated, and much needed in entrepreneurship education. Operationally, it refers to how teachers speak creative teaching, teaching for creativity and creative learning in the classroom.

Jeffrey & Craft (2004) argues that cognitive teaching is related to how teachers use imaginative approaches so that learning is enjoyable, effective and efficient. Creative teachers, according to Jeffrey & Craft's (2004), can use different techniques, tools, and methods in classroom learning activities. For example, teachers are accustomed to using original materials or realia related to entrepreneurship education, so that students become more aware, and moved to practice what is obtained in the classroom. Creative teachers are also skilled in providing various examples, so students become more understanding, and experienced in using multiple tools or practice tools in the workshop (Ayob et al., 2013). The creative learning is a learning model that develops students so that students' learning outcomes have creative thinking and behavior (Dobbins, 2009; Jeffrey & Craft, 2004; Zhou & Luo, 2012).

In this paper, teachers' creativity refers to several criteria. First, teachers use techniques, tools, creative materials, learning methods that develop student creativity. Second, teachers use ways that make students think actively and creatively. Third, teachers assign tasks to students that enable them to skillfully select multiple strategies to solve problems, such as brainstorming, reflection, analysis, and causality. Fourth, teachers always provide activities that train students to think creatively and imaginatively. Fifth, teachers always give students a situation where they can innovatively explore resources and ideas. Sixth, teachers provide assignments that require students to offer some alternatives, using new styles, materials, and props to provoke students to want to know more about entrepreneurial and imaginative education (Alenizi, 2008; Dobbins, 2009; Jeffrey & Craft, 2004; Lin, 2011; Rasmi, 2012).

Based on some research, the scope of teacher's creativity is extensive. Nevertheless, this paper summarizes the creativity of teachers in three crucial ways: First, the way the teacher conveys the lesson. Creativity in the delivery of meaning learning is the way the teacher in delivering the lesson, so it is more meaningful for students and allows for interaction during the learning process. Teacher creativity in this regard includes how they design games and methods

so that the learning process can take two ways. Second, flexibility, meaning that teachers always respond to all the needs, interests, ideas and ideas of students. Moreover, flexibility also concerns how teachers can perform their professional duties, both inside and outside the classroom. Third, the topic work.

Given this flexibility allows teachers to discuss critical topics of their work. This job topic is a creative way for teachers in developing an entrepreneurship education curriculum, which includes the preparation of objectives, methods, themes, strategies, and evaluation of learning. In this way, learning activities become more relevant and meaningful to students, in addition to teachers also more effectively respond to the interests, ideas, and needs of students (Dobbins, 2009; Wibowo & Saptono, 2018).

Hamidi et al. (2008) argue the goals of entrepreneurship education is to make students creative and innovative. For students to have creativity, then the role of teachers is very dominant. Complementing the opinions of Hamidi et al. (2008), Mason & Arshed (2013), concluded that entrepreneurship education not only equips knowledge of entrepreneurship but also produces graduates with the mindset, creativity, and skills to identify, create opportunities and develop business. Therefore, teachers are required to be more creative in designing entrepreneurship education, to achieve the expected goals (QAA Enterprise and Entrepreneurship Review, 2012). Thus, the teachers' creativity had the effect of entrepreneurship education (Lin, 2011; Oosterbeek et al., 2010; Hamidi et al., 2008). Several studies have found the effect of teacher creativity on entrepreneurship education, such as QAA Enterprise and Entrepreneurship Review (2012), Beghetto & Kaufman (2014), Lin (2011), Oosterbeek et al. (2010), and Hamidi et al. (2008).

## ENTREPRENEURSHIP EDUCATION

According to Wu & Wu (2008), education can improve students' managerial skills so that they can support business activities. In this case, entrepreneurship education, Wu & Wu summed up two main functions. First, the transfer of knowledge and information, and second, ability development. Furthermore, Wu & Wu argue that education can change an individual's perception of their ability to engage in the deliberate behavior. Different from general education, entrepreneurship education focuses on enhancing the capabilities of individual entrepreneurial skills. Entrepreneurship education can be delivered in two formats namely teaching theory and practice.

In line with Wu & Wu (2008), Soutaris et al. (2007) concluded that entrepreneurial education influences students' entrepreneurial intentions in three ways: learning, inspiration and resource utilization. Through learning means, individuals can gain much knowledge about how to start a new business of entrepreneurial education. In particular, they will get detailed answers:

1. What the values and motivations of the entrepreneur are?
2. What should the entrepreneur do?
3. What skills or abilities should the entrepreneur possess?
4. What kind of social network should the entrepreneur build?
5. What kind of experience or intuition should an entrepreneur have?

Inspiration means entrepreneurial education can change students' minds and promote it. Individuals who are still hesitant about entrepreneurship, usually do not become entrepreneurs, because the doubt caused the concerned did not immediately decide the choice to achieve it.

Inspiration is a crucial step to change the mind and the behavior of the individual (Soutaris et al., 2007; Purwana & Suhud, 2017).

Utilization of resources means entrepreneurial education is beneficial for individuals to obtain funds through information transfer; For example, individuals can build relationships with peers while taking entrepreneurship courses. Relationships or networks can provide prospective entrepreneurs with various information related to necessary resources. Besides, individuals may also get comments or suggestions regarding their entrepreneurial activities while attending the course. Motivation from classmates and teachers is a resource for individuals getting help and support for their entrepreneurial activities.

Although there is a significant increase in the number of courses and programs on entrepreneurial education, it has not been sufficiently integrated into the curriculum from high school to college. In addition, entrepreneurial education is more often applied in business schools than in public schools (Altan, 2015). This is because innovative and viable business ideas are more likely to emerge from technical, scientific and creative studies. So the real challenge is building interdisciplinary approaches, making entrepreneurial education accessible to all students, creating teams for the development and exploitation of business ideas, and combining students in business schools with public schools.

Moreover, entrepreneurial education that provides much practice allows students to gain knowledge as well as skills. In other words, effective entrepreneurship education not only allows students to have experience but also put it into practice. Such an educational model not only arouses students' interest in entrepreneurship but also practices it. The more opportunities students have for transferring knowledge into the experience; they will gain better capabilities as well (Dimov, 2015; Sánchez, 2013; Shinnar et al., 2014; Karimi et al., 2014).

The results of Wu & Wu (2008) found that the level of entrepreneurial education is positively related to the ability of entrepreneurial Individuals. For example, US students have a high level of entrepreneurial education, because they not only learn entrepreneurship by taking courses but also get training on how to start a start-up when they go to college. In this way, their entrepreneurial skills increase due to a combination of the knowledge they learn in the course, with experience gained from the exercise.

The findings of Wu & Wu (2008) conclude that the better their entrepreneurial ability, the students more likely become entrepreneurs. Due to the capabilities gained from entrepreneurial education, US students have a higher entrepreneurial intention. In contrast, Chinese students do not take many entrepreneurial courses. They also do not have easy access to the various practical training of entrepreneurship. As a result, Chinese students lack entrepreneurship. Besides, their entrepreneurial intentions are too negative.

Several researchers managed to show significant impact on entrepreneurial education on the intentions of entrepreneurship. Such as Mahendra et al. (2017) who researched Malang, Indonesia against students. This research proves that there is a significant impact of entrepreneurial education on the intention of entrepreneurship. These results complement the previous findings made by Fayolle & Gailly (2015), Purwana & Suhud (2017), Piperopoulos & Dimov (2015), Sánchez (2013), Shinnar et al. (2014), Karimi et al. (2014), Karimi et al. (2016).

Some studies also show a significant impact of teacher creativity along with entrepreneurship education on the entrepreneurial intention of vocational students (Hussain, 2015; Opoku-Antwi et al., 2012; Susetyo and Lestari, 2014; Zhao et al., 2005; Purwana & Suhud, 2017).

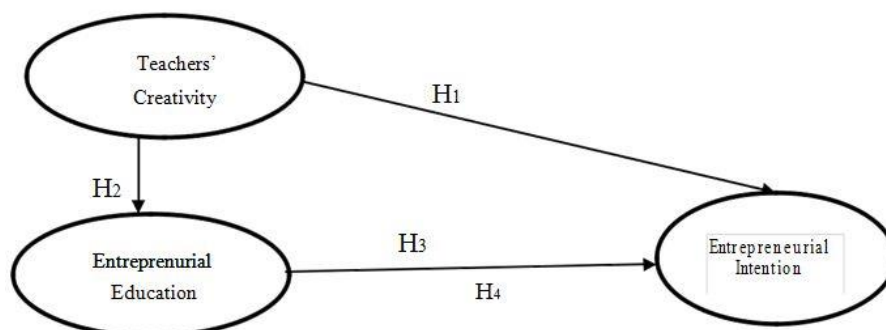
The authors posit the following hypotheses and develop the research model (Figure 1);

*H1: There is a direct positive impact of teachers' creativity towards on the entrepreneurial intention.*

*H2: There is a direct positive impact of teachers' creativity towards on the entrepreneurial education.*

*H3: There is a positive direct impact on the entrepreneurship education on the entrepreneurial intention.*

*H4: Entrepreneurial education mediates the influence of teachers' creativity on entrepreneurial intention.*



**FIGURE 1**  
**THE THEORETICAL FRAMEWORK**

## METHODOLOGY

This research used survey method. Data were collected using questionnaire. Research students participated were taken in the randomly selected Public Vocational Secondary Schools (SMKN) in Provinces of Jakarta, namely East Jakarta, Central Jakarta, South Jakarta, West Jakarta and North Jakarta. East Jakarta took 200 students, Central Jakarta was taken by 178 students, South Jakarta taken 156 students, West Jakarta taken 104 students, and North Jakarta taken 105 students each selected randomly. In total, 743 students participated in this quantitative study consisting of 300 males (40.38%) and 443 females (59.62%). Predominantly, the students' age was 17 (443 students) and 18 (300 students) years old. Areas of expertise comprised office administration 103 students (13.86%), mechanical engineering 138 students (18.57%), accounting 194 students (26.11%), marketing 178 students (23.96%), and information technology 130 students (17.50%).

To measure entrepreneurship education, seven indicators were adapted from Denanyoh et al. (2015), Opoku-Antwi et al. (2012) and Purwana & Suhud (2017). The author adapted six indicators from Liñán and Chen (2009) to measure entrepreneurial intention. Furthermore, eight indicators of teachers' creativity were adapted from Ayob et al. (2013), Dobbins (2009) and Rasmi (2012). To collect data, the authors used seven-point Likert's scale was applied for each variable from 1 for extremely disagree to 5 for extremely agree. The instrument was presented in *Bahasa Indonesia*.

## RESULTS AND DISCUSSION

In this paper, the authors do two stages of analyzing the data. The first stage, the author performs exploratory factor analysis test using SPSS version 18. This analysis is a way to validate the data as well as to explore dimensions and retain firmed indicators (Allen & Bennett, 2010), and followed by a reliability test. According to Hair Jr. et al. (2006), a construct should be reliable if it has a Cronbach's alpha ( $\alpha$ ) score of 0.6 and higher.

The second stage, the authors do confirmatory factor analysis using AMOS version 18. According to Schermelleh et al. (2003), the tested model should have some criteria and cut-off values, that is p (probability) of  $>0.5$  to achieve a fitted model. The value of CMIN/DF of  $<2$  (Tabachnick & Fidell, 2007), CFI of  $>0.95$  (Hu & Bentler, 1995), and RMSEA of  $\leq 0.05$  (Hu & Bentler, 1999).

### Exploratory Factor Analysis

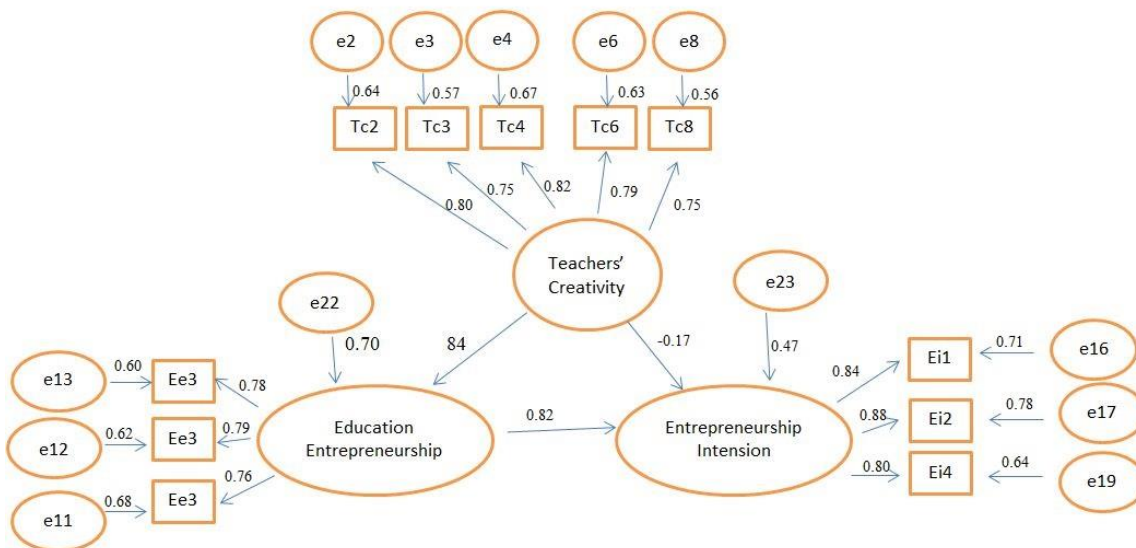
Based on the exploratory factor analysis result as seen in the table below, in total there are 21 factors including entrepreneurship education (7), entrepreneurial intention (6), and teachers' creativity (8). All factors have a Cronbach's alpha ranging from 0.689 to 0.922, and they are considered reliable to be included in further analysis (Table 1).

	<b>Dimension and indicators</b>	<b>Factor Loadings</b>
1	Entrepreneurial Education	$\alpha=0.904$
EE5	My school teaches students about entrepreneurship and starting a business	0.83
EE2	My school provides the necessary knowledge about entrepreneurship	0.813
EE3	My school develops my entrepreneurial skills and abilities	0.804
EE1	The education in school encourages me to develop creative ideas for being an entrepreneur	0.8
EE4	My Schools make me develop my skills	0.794
EE6	Entrepreneurship can be developed through education	0.79
EE7	I thought entrepreneurship education encourages me to be an entrepreneur	0.751
2	Teachers' Creativity	$\alpha=0.922$
TC6	Teachers give students a situation where they can explore resources and ideas innovatively	0.835
TC4	My teacher responds to all the needs, interests, ideas and ideas of his students.	0.833
TC2	My teacher often gives me various examples, so I understand more	0.823
TC1	My teacher uses methods that make students think actively and creatively	0.821
TC8	My teacher uses new styles, materials, and props to provoke students' curiosity to learn and become imaginative	0.79
TC3	Teachers give assignments to students who make them use various ways to solve problems	0.784
TC7	Teachers provide assignments that allow students to make alternatives	0.781
TC5	My teacher applies games and methods that make learning go both ways	0.775
3	Entrepreneurial Intention	$\alpha=0.689$
EI4	I am determined to create a business venture in the future	0.885
EI2	I will make every effort to start and run my own business	0.878
EI1	I am ready to do anything to be an entrepreneur	0.875
EI5	My professional goal is to be an entrepreneur	0.846
EI6	I have a very low intention of ever starting a business	0.854
EI3	I have serious doubts about ever starting my own business	0.85

### Hypotheses Testing

Based on the calculation of SEM for examining the theoretical framework, a fitted model was obtained with a probability score of 0.209, CMIN/DF score of 1.172, CFI score of 0.998, and RMSEA score of 0.15. As presented in the table below, *H2* and *H3* are significant with C.R. score of 17.938 and 8.470 respectively. These scores indicate a significance (Hair Jr. et al., 2006). *H4* is significant with  $b=0.687$  (Hair Jr. et al., 2006). In contrast, *H1* is insignificant with a C.R. score of -1.890 (Table 2 and Figure 2).

			<b>C.R.</b>	<b>P</b>	<b>Result</b>	
<i>H1</i>	Teachers' Creativity	→	Entrepreneurial Intention	-1.89	0.059	Insignificant
<i>H2</i>	Teachers' Creativity	→	Entrepreneurial Education	17.938	***	Significant
<i>H3</i>	Entrepreneurial Education	→	Entrepreneurial Intention	8.47	***	Significant
<i>H4</i>	Indirect effect Teachers' Creativity→ Entrepreneurial Intention=0.687				Significant	



**FIGURE 2  
THE RESULT OF STRUCTURAL EQUATION MODEL**

The results of this study answered four hypotheses. The first hypothesis (*H1*), there is a direct positive impact on teachers' creativity towards entrepreneurial intention. The results of the study found that *H1* is insignificant with a C.R. score of -1.890. This means that the teachers' creativity does not directly impact on students' entrepreneurial intention. Vocational students who participated in this study saw teachers' creativity not enough to improve their intention to start a business. They see the creativity of teachers as part of entrepreneurial education and not stand alone. Moreover, many aspects of intercorrelation in building a good ecosystem to support student entrepreneurial intentions. Possible aspects include curriculum, teaching objectives, teaching methods, teachers as facilitators, infrastructure, duration, learning strategies, students,



and program design (Garavan & O 'Cinneide, 1994; Purwana & Suhud, 2017). However, we can not blame the teacher or school for what happened.

The second hypothesis, there is a direct positive impact on teachers' creativity towards on the entrepreneurial education. The results of this research indicate that teachers' creativity has a direct positive impact on entrepreneurial education (C.R.=17.938). This means that entrepreneurial education can explain teachers' creativity. Thus the second hypothesis is accepted. The results of this study are in line with the findings QAA Enterprise and Entrepreneurship Review (2012), Beghetto & Kaufman (2014), Lin (2011), Oosterbeek et al. (2010), and Hamidi et al. (2008). Furthermore, Mason & Arshed (2013) argue that teachers are required to be more creative in designing entrepreneurship education, to achieve the expected goals.

The third hypothesis, there is a positive direct impact on the entrepreneurial education on the entrepreneurial intention. The results of the study found that there is a positive direct impact on entrepreneurial education on entrepreneurial intention (C.R.=8.470). Thus, the third hypothesis is accepted. The results of this study support the findings of Fayolle & Gailly (2015), Purwana & Suhud (2017), Piperopoulos & Dimov (2015), Sánchez (2013), Shinnar et al. (2014), Karimi et al. (2014), Karimi et al. (2016), and Wibowo (2017), that there is a significant impact of entrepreneurial education on the entrepreneurial intention. This study also reinforces the findings of Liñán and Chen (2009) that the entrepreneurial education has a positive direct impact on increasing entrepreneurial intention.

The fourth hypothesis, entrepreneurial education mediates the impact of teachers' creativity on entrepreneurial intention. The results of the study found that the value of  $b=0.687$  which means entrepreneurial education mediates the impact of teachers' creativity on entrepreneurial intention (Hair Jr. et al., 2006). Thus the fourth hypothesis is accepted. The results of this study support the findings of Hussain (2015); Opoku-Antwi et al. (2012); Susetyo and Lestari (2014); Zhao et al. (2005), and Purwana & Suhud (2017), that entrepreneurial education mediates the impact of teachers' creativity on entrepreneurial intention of vocational students.

## CONCLUSION

This study aims to investigate the impact of teachers' creativity and entrepreneurial education on vocational student's entrepreneurial intention. In total 743 students from Public Vocational Secondary School (SMKN) at DKI Jakarta involved. As a result, three hypotheses were accepted, and one was rejected. This study carried out the findings: first, the teachers' creativity a positive direct impact on entrepreneurial education. Second, the entrepreneurial education a positive direct impact on the entrepreneurial intention. Third, entrepreneurial education mediates the impact of teachers' creativity on entrepreneurial intention. Meanwhile, the teachers' creativity did not the direct impact on entrepreneurial intention.

Although the results of this study found that teachers' creativity has no direct positive effect on entrepreneurship intentions, but can be the first step of further development research, so that the impact of teacher creativity can be felt directly by students.

Based on the conclusions suggested: First, teachers must to improve their competence in the field of entrepreneurship education through advanced studies, professional training, and entrepreneurship seminars. Principal, to support and provide opportunities for teachers to pursue higher education and attend training and lessons to be more competent in their fields. Second, facilitating and developing business incubation in schools. Third, facilitating the implementation

of the workshop on entrepreneurship in schools. Moreover, the principal must add facilities in schools such as business incubation as laboratories, internet networks, books and other literature to support improving the creativity and quality of entrepreneurship learning in schools, the development of entrepreneurship curriculum that can form entrepreneurship competencies and foster entrepreneurship intentions in students.

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