

Entrepreneurship Education and its Impact on Entrepreneurial Self-Efficacy and Entrepreneurial Intentions among University Students

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In accordance with the Indonesian government's efforts to encourage the growth of young entrepreneurs, several universities in Indonesia (one of them is Brawijaya University, a state University in Malang, East Java) has set an entrepreneurship course as one of the mandatory courses in the bachelor's degree. However, to date, little is known about the effectiveness of entrepreneurship education. Therefore, the aim of this study is to evaluate whether the entrepreneurship education provided to students of Brawijaya University can foster their entrepreneurial intentions. Specifically, this study analyses the effect of entrepreneurship education on entrepreneurial self-efficacy and entrepreneurial intentions. This research was conducted using a quantitative approach. The population of this research is all active students of Brawijaya University who have taken entrepreneurship courses across 15 faculties. The data collection method was carried out using a survey questionnaire. A total of 473 students completed the survey. Partial Least Square (PLS) was utilised to analyse the data. The results of this study indicate that entrepreneurship education has significant effects on the student's entrepreneurial self-efficacy and entrepreneurial intentions.

Key words: *Entrepreneurship Education, Entrepreneurial Self-Efficacy, Entrepreneurial Intentions, Indonesia.*

Introduction

There is an assumption that entrepreneurship is not something that can be taught so that people who are capable of entrepreneurship are only people who come from the entrepreneur's background (i.e., those who have family or relatives that are entrepreneurs) and people who

have talent in entrepreneurship. However, some scholars have strong views that entrepreneurs can be made and learning to become entrepreneurs can be done through programs and special education (Sanchez, 2013). To date, there is a growing interest in entrepreneurship education globally. As has been advanced by Boukamcha (2015), entrepreneurship education is very important and can affect students' cognitively and increase their desire to start a business. This facilitates the creation of start-ups by changing the students' mindset and developing their entrepreneurial orientation. Some studies also show that entrepreneurship education can increase the perception of feasibility for entrepreneurship and self-efficacy for entrepreneurial careers (Izquierdo & Buelens, 2008).

Entrepreneurship education specifically focuses on attitudes, intentions, and the firm-creation process. This education helps students to build entrepreneurial awareness and ideas (Suparno et al., 2020). Linan (2004) states that entrepreneurship education is the whole activity of education and training with or without an education system that tries to develop participants' intentions to engage in entrepreneurial behaviour. The desire or intention of an individual has a relationship to one's behaviour. The behaviour is the result of a psychological process that will influence individuals to make decisions in starting something, including starting a business. Ajzen (1991) states that the stronger the intention involved in the behaviour, the more likely the individual will succeed. Individuals who have the intention to be involved in entrepreneurship will have greater readiness compared to individuals who have no intention from the beginning (Prabhu, McGuire, Drost, & Kwong, 2012).

It is widely believed that entrepreneurship education can increase entrepreneurial intentions among students. However, the number of young entrepreneurs is still very small in Indonesia. Research conducted at five state universities in Indonesia showed that almost 75% of respondents (i.e., students) did not have a clear plan after graduating (Dharmawati, 2016). This is also in line with the data from the Global University Entrepreneurial Spirit Students' Survey (GUESSS) which shows that 80.3% of students prefer to work as employees of a company directly after graduating from college. Only 8.8% want to establish their own business after graduation (Sieger, Fueglistaller, & Zellweger, 2016). In addition to this data, the ratio of entrepreneurial growth in Indonesia is still relatively low when compared to the ratio of entrepreneurs in other Asian countries, and at 3.1% is ranked fifth after Malaysia, which has an entrepreneurial growth ratio of 5% (Nawangpalupi et al., 2016). Furthermore, based on a survey conducted by the Global Entrepreneurship Monitor (GEM), entrepreneurial intentions in Indonesia have tended to decline since 2013 despite a slight fluctuation (GEM, 2018).

The role of higher education is crucial in the development of young entrepreneurs in Indonesia. One of the universities in Indonesia that has a strong entrepreneurial orientation is Brawijaya University. This can be seen from one of its missions of to produce graduates who are qualified and have a strong entrepreneurial ability (Brawijaya University, 2019). For this reason, the

purpose of this study is to evaluate whether the entrepreneurship education provided to students of Brawijaya University is able to foster entrepreneurial intentions among the students.

Literature Review and Hypothesis Development

Entrepreneurship Education

Entrepreneurship is a process carried out by individuals to look for opportunities without being limited by existing resources (Stevenson & Jarillo, 1990). Entrepreneurship can also be defined as the art of identifying opportunities and implementing these ideas into practice, and this requires creativity and courage to take risks (Ireland & Webb, 2007). Thus, entrepreneurship education can be defined as an overall education involving training activities with or without an education system that tries to develop participants' desires to engage in entrepreneurial behaviour or some elements that influence these desires (Linan, 2004). In other words, entrepreneurship education includes all activities aiming to foster entrepreneurial mindsets, attitudes and skills and covers a range of aspects such as idea generation and innovation (Fayolle, 2009).

Entrepreneurial Self-Efficacy

Entrepreneurial self-efficacy, which is abbreviated as ESE, is a term that refers to an individual's belief in his/her capability to perform tasks and roles aimed at entrepreneurial outcomes (Chen, Greene, & Crick, 1998). It is related to the strong individual belief that he/she is able to successfully carry out entrepreneurial roles and tasks (Boyd & Vozikis, 1994). ESE has emerged as a key psychological construct in entrepreneurship research (Miao, Qian, & Ma, 2017), and has been found to influence entrepreneurial motivation, intention, behaviour and performance, as well as being a critical target outcome of entrepreneurship training and education.

Entrepreneurial Intentions

As has been advanced by Conner and Armitage (1998), intentions represent an individual's motivation to put an effort to act upon a conscious plan or decision. In entrepreneurship literature, many scholars have focused on intentions since intentions have proved to be the best predictors of individual behaviours, particularly when the behaviour is rare, hard to observe or involves unpredictable time lags (Bird, 1988; Krueger & Brazeal, 1994; Krueger, Reilly, & Carsrud, 2000). The examples of entrepreneurial intentions outcomes are the establishment of new ventures and the creation of new value in existing ones (Bird, 1988). Thus, entrepreneurial intentions refer to intentions of setting up one's own business in the future.

The Linkage among Entrepreneurship Education, Entrepreneurial Self-Efficacy, and Entrepreneurial Intentions

In this research, the linkage among entrepreneurship education, entrepreneurial self-efficacy and entrepreneurial intentions can be explained from the perspective of the perception concept. Perception is essentially a cognitive process experienced by each individual in understanding information about their environment, both through vision, hearing, appreciation, and feeling. Psychological ability to hear and see will affect an individual's perception (Luthans, 2011). Perception includes the interpretation of objects, symbols and everything that is considered important by individuals. In other words, perception includes the activity of receiving stimuli, organizing stimuli, and translating or interpreting organized stimuli in such a way that can influence attitudes so that they can ultimately shape behaviour (Gibson, Ivancevich, Donnelly & Kanopaske, 2009; Truxillo, Bauer, Erdogan, 2016).

Perception is an interactive and a complex process. Perception has sub-processes that are related to each other. The first important sub-process is stimulus or situation. Perception starts when a person is faced with a stimulus (Luthans, 2011). In the process of perception, stimuli received by individuals will shape the attitudes and behaviour of these individuals. In this case, entrepreneurship education as an external stimulus stimulates students to form stereotypes, self-concepts, needs, and emotions that can lead to motivation that forms entrepreneurial self-efficacy (ESE), which will then shape student behaviour related to entrepreneurial activities. ESE refers to the strong individual belief that he is able to successfully carry out entrepreneurial roles and tasks (Boyd & Vozikis, 1994). In short, it can be explained that, individual understanding, beliefs, and intentions to carry out entrepreneurial activities can be developed through entrepreneurship education.

Based on the perception concept and several previous studies, the following are the hypotheses that are developed for this research:

Hypothesis 1 (H1): Entrepreneurship education has a significant effect on entrepreneurial self-efficacy.

McStay (2008 in Boukamcha, 2015) states that self-efficacy is a dynamic construction that can be improved by learning and through the gradual accumulation of knowledge and experience. Therefore, entrepreneurship education programs can effectively be a place to add knowledge and help in establishing new businesses. Entrepreneurship education plays an important role in developing self-efficacy in individuals. According to Bandura (1994), the source of self-efficacy consists of four main factors namely, experience, role models, social persuasion, and emotional change. Experience is influenced by the education and learning experienced by individuals over time (Wilson, Kickul, & Marlino, 2007). Malebana and Swanepoel (2014)

explain that self-efficacy is related to what a person can do with the abilities and expertise that he primarily obtains from training programs. Someone who participates in entrepreneurship training tends to have a high perception of self-efficacy in establishing a business (Boukamcha, 2015). Research conducted by Wilson, Kickull and Marlino (2007) found that there is a relationship between entrepreneurship education and entrepreneurial self-efficacy. Similarly, Shinnar, Hsu and Powell (2014) found that entrepreneurial self-efficacy increases in students after completing entrepreneurship education for one semester.

Hypothesis 2 (H2): Entrepreneurial self-efficacy has a significant effect on entrepreneurial intentions.

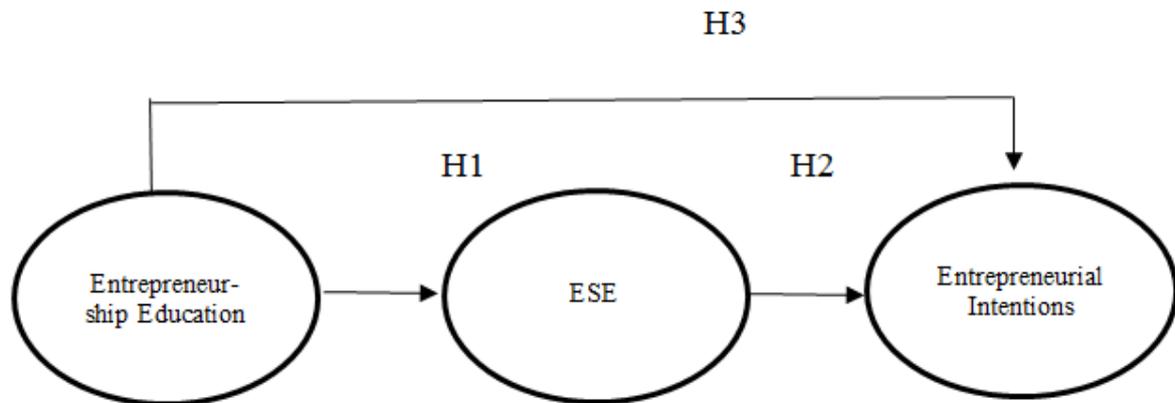
Self-efficacy reflects an individual's trust in his/her ability to take action to achieve a goal (Segal et al. 2005; Sugmawati & Afrianty, 2018). Therefore, it is not an objective assessment of abilities that drive behaviour, but subjective perceptions that are based on their beliefs. If self-efficacy is seen as the main key for entrepreneurs, then this refers to Entrepreneurial Self-Efficacy (ESE) (Boyd & Vozikis, 1994; Chen & He, 2011). The results of the research conducted by Prabhu et al. (2011) shows that entrepreneurial self-efficacy (ESE) is significantly related to entrepreneurial intentions. Boyd and Vozikis (1994) state that one's intention to establish a business will be stronger when that person has a high level of self-efficacy resulting from experience, observing people who are role models, social persuasion, and setting high goals.

Hypothesis 3 (H3): Entrepreneurship education has a significant effect on entrepreneurial intentions.

Empirical research shows that entrepreneurship programs have a positive influence on students' entrepreneurial intentions. Research conducted by Farashah (2013) on 601 Iranians who have an entrepreneurial education background found that someone who participates in an entrepreneurial program is more willing to start their own business. Other similar studies also show that entrepreneurship education influences the growth of students' intentions for entrepreneurship. These studies include the research conducted by Solesvik (2013), Gelaidan & Abdullateef (2017), and Hattab (2014).

Based on the hypotheses developed, the research model is shown in Figure 1.

Figure 1. Research Model



Research Method

Research Approach

This research is classified as explanatory research with a quantitative approach as this research provides an explanation of the causal relationship between variables through hypothesis testing.

Sample and Data Collection Method

The population of this study is all active students of Brawijaya University who have undertaken entrepreneurship courses across 15 faculties. Since there is limited information about the population frame, convenience sampling was applied. A survey questionnaire was the data collection method applied. The research enumerators distributed the questionnaires to the students that meet the research criteria in the 15 faculties. A total of 473 students completed the survey, which was then analysed using Partial Least Square (PLS).

Measurements

All the measurements were adapted from previous empirical research. Entrepreneurship education in this study includes several theories and methods taught with the aim of giving the students better understanding on how to run entrepreneurship related activities. The dimensions used to measure entrepreneurship education in this study were adapted from Fayolle (2008), namely: goals, theories, and methods.

Entrepreneurial self-efficacy (ESE) determines how people feel, think, motivate themselves and behave to carry out entrepreneurial tasks. An individual who has high ESE will usually be more motivated in developing strong intentions towards behavioural desires. The scale of ESE

from Chen et.al (1998), which consists of innovation and risk taking, was adapted to measure ESE in this study.

Entrepreneurial intentions refer to an acknowledgment of self-belief that they intend to establish a new business venture and consciously plan to do so in the future. Intentions are assumed to capture motivational factors that influence behaviour, which are some indications of how much a person tries, and how much effort they put into doing the behaviour. The measurement of entrepreneurial intentions in this study was adapted from Chen et al., (1998). Two dimensions were used to measure entrepreneurial intentions, namely: behavioural intentions and self-prediction.

All items are assessed on a five-point Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree. Participants were asked to rate the extent to which they agreed or disagreed with each item.

Results and Discussion

Demographic Information

A total of 473 Brawijaya University' students from all faculties at Brawijaya University (i.e., 15 faculties) who have undertaken entrepreneurship courses completed the survey. The demographic information of the respondents is shown in Table 1.

Table 1: Demographic Information

Gender	f	%	Age (year)	f	%	Family Background	f	%
Male	202	42.71	17 - 19	81	17.12	Have family members/relatives who are entrepreneurs	327	69.13
Female	271	57.29	>19-21	271	57.29	Do not have family members/relatives who are entrepreneurs	146	30.87
			>21-23	116	24.52			
			>23-25	5	1.06			
Total	473	100		473	100		473	100

Measurement Model

To ensure the validity and reliability of these measurements using PLS, an assessment of the outer model was done. There are three criteria for assessing the outer model, namely Convergent Validity, Discriminant Validity and Composite Reliability. Convergent validity of the measurement model with reflective indicators is assessed based on the correlation between item scores / component scores. Reflective indicators are considered high if they correlate more than 0.70 with the construct measured. In this research, a loading factor minimum of 0.70 was used. The result of the convergent validity test is shown in Table 2. As can be seen in Table 2, all the indicators of each variable are valid with loading factors above 0.7.

Table 2: Outer Loadings

	Original Sample (O)	Standard Deviation (STDEV)	T-Statistics (O/STERR)	p-value
X.1 <- X	0.798	0.026	30.444	0.000
X.2 <- X	0.846	0.018	47.788	0.000
X.3 <- X	0.881	0.012	75.281	0.000
Y1.1 <- Y1	0.889	0.013	68.855	0.000
Y1.2 <- Y1	0.897	0.013	70.928	0.000
Y2.1 <- Y2	0.969	0.004	248.671	0.000
Y2.2 <- Y2	0.966	0.005	202.945	0.000

The second assessment for the outer model is discriminant validity. The discriminant validity assessment aims to ensure that a reflective construct has the strongest relationships with its own indicators. A model has good discriminant validity if each loading value of each indicator of a latent variable has the greatest loading compared to other loading values of other latent variables. Table 3 shows the loading factors of each indicator. As can be seen in Table 3, all the indicators of each variable have met the discriminant validity since it has the largest loading value for their own variable (the value in bold), not the other variables. In order to establish discriminant validity there is also a need for an appropriate AVE (Average Variance Extracted) analysis. In an AVE analysis, we test to see if the square root of every AVE value belonging to each latent construct is much larger than any correlation among any pair of latent

constructs. Moreover, the value of AVE that is larger than 0.5 is recommended. The result of AVE analysis can be seen in Table 4.

Table 3: Cross Loading Values

	X	Y2	Y1
X.1	0.798	0.549	0.517
X.2	0.846	0.488	0.547
X.3	0.881	0.514	0.604
Y2.1	0.579	0.969	0.686
Y2.2	0.609	0.966	0.635
Y1.1	0.564	0.616	0.890
Y1.2	0.616	0.605	0.897

Table 4: AVE, Composite Reliability and Cronbach's Alpha

Variable	AVE	Composite Reliability	Cronbach's Alpha
X	0.709	0.880	0.794
Y1	0.799	0.888	0.748
Y2	0.936	0.967	0.932

To ensure that all the measurements are reliable, a reliability test was conducted to the data by assessing their composite reliability. Composite reliability (sometimes called construct reliability) is a measure of internal consistency in scale items, much like Cronbach's alpha. The minimum composite reliability value in the PLS-SEM analysis should exceed 0.7 (Chin, 1998). It can be seen in Table 4 that the composite reliability for each variable exceeds 0.7. Thus, all the measurements are reliable.

Hypothesis Testing

The hypothesis testing results can be seen in Table 5. As can be seen on Table 5, the results of hypothesis testing show that entrepreneurship education has a positive significant effect on entrepreneurial self-efficacy (path coefficient = 0.661; p value = 0.000). Thus, hypothesis 1 was supported. This means that entrepreneurship education given to students of Brawijaya University has an important role in developing the entrepreneurial self-efficacy of Brawijaya University students. This result supports previous research conducted by Wilson, Kickull and Marlino (2007) and Shinnar, Hsu and Powell (2014) who found a positive and significant relationship between entrepreneurship education and entrepreneurial self-efficacy.

Table 5: Hypothesis Testing Results

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STERR)	p-Value
X Y1 ->	0.661	0.040	16.666	0.000
X Y2 ->	0.288	0.043	6.666	0.000
Y1 Y2 ->	0.493	0.047	10.580	0.000

Related to hypothesis 2, the results of hypothesis testing on Table 3 show that entrepreneurship education has a positive significant effect on entrepreneurial intentions (path coefficient = 0.288; p value= 0.000). Thus, hypothesis 2 was supported. This means that entrepreneurship education given to students of Brawijaya University was found to have an effective effect on building up the entrepreneurial intentions among the students. This finding is in line with the findings from previous research, for example, Solesvik (2012), who conducted research on 321 students in Ukraine and found that an individual who participates in entrepreneurship programs in business education tends to be an entrepreneur. Hattab (2014) also confirmed that entrepreneurship education had an influence on students' entrepreneurial intentions at the university which was conducted on 376 British University students in Egypt. In addition, Gelaidan and Abdullateef (2017) also conducted research on students in Malaysia and found that education has a positive relationship with entrepreneurial intentions.

In terms of hypothesis 3, as can be seen on table 3, entrepreneurial self-efficacy has a positive significant effect on entrepreneurial intention (path coefficient = 0.493; p value= 0.000). Thus, hypothesis 3 was supported. The results of this study support previous research conducted by McGee et.al (2009), which involved 303 respondents from various races and ethnicities and showed that ESE has a positive relationship with entrepreneurial intentions. Other research conducted by Kristiansen & Indarti (2004) on a number of Indonesian and Norwegian students shows that self-efficacy has a significant effect on student entrepreneurial intentions.

Conclusion

The findings of this research contribute to the body of knowledge by examining the role of entrepreneurship education in enhancing entrepreneurial self-efficacy and the relationship between entrepreneurial self-efficacy and entrepreneurial intentions from the perspective of perception. This study validated the applicability of the measure of entrepreneurial self-efficacy developed by Chen et al. (1998) in the Indonesian context. Additionally, this study provides an evaluation on the effectiveness of entrepreneurship courses offered at Brawijaya University, Indonesia. The results indicated that entrepreneurship education that equips



students with skills to perform entrepreneurial tasks is vital to stimulating and improving entrepreneurial activity. In addition, the findings of this research support the view that “entrepreneurs can be made”. This means that entrepreneurship educators should use educational methods that can enhance students’ entrepreneurial self-efficacy such as a student-centred methods that build confidence among students while developing skills that are essential for entrepreneurial related activities. In addition, the government could contribute to increasing the number of young entrepreneurs by making entrepreneurship a compulsory subject in all bachelor’s degree.



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