Entrepreneurship Education and Entrepreneurial Role Models: How do they affect Entrepreneurial Intentions? (Studies at Management and Business Students in Indonesia Universities)

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ARTICLE INFO
Article history:
Received 12 January 2016
Accepted 5 April 2016
Available online 14 April 2016

Keywords:
entrepreneurship education, role model, entrepreneurial intention, perceived feasibility, perceived desirability, GSCA

ABSTRACT
This study aim is to describe the effect of entrepreneurship education and entrepreneurial role models toward entrepreneurial intention of university students, both directly and through mediation of perceived desirability and perceived feasibility. The population is business and management students at four public universities in Indonesia who have followed entrepreneurship education. Sampling was conducted through stratified proportional random sampling method; numbers of respondents are 209 students. Data is analyzed by structural equation modeling using a generalized structural component analysis (GSCA) software to measure the relationship and accuracy (fitness) of the models and Sobel test to detect the mediation variables. The study results proved that entrepreneurship education affect to increase the entrepreneurial intention through student’s self-perception to entrepreneurial capabilities (perceived feasibility). On other hand, a direct effect of entrepreneurship education on entrepreneurial intention is negative. The type of entrepreneurship education at public universities is awareness education. It potentially could become the cause of negative effect between them. Entrepreneurial role models improve student’s entrepreneurial intention through the mediation of perceived desirability and perceived feasibility. Entrepreneurial role models do not have direct effect on entrepreneurial intention. Entrepreneurial characteristics difference between role models and students could potentially become the cause the low effect between them. The study results show inconsistency with the previous studies that examine the relationship between entrepreneurship education and entrepreneurial intention. Furthermore, this study results also indicate the mediation function of perceived desirability and perceived feasibility on relationship between entrepreneurial role models and entrepreneurial intention which received less attention in previous research. The research results are beneficial for managers and stakeholders of entrepreneurship education in universities to make graduates choose an entrepreneurial career.

INTRODUCTION

Entrepreneurship is seen as the answer to solve various economy problems, particularly to stimulate economic growth and technological development (Wong et al., 2005). One indicator of entrepreneurship activity progress can be seen from the percentage of people to choose a career as an entrepreneur (Kelley et al., 2012). Indonesia entrepreneurs are still far from ideal than other countries. Within ASEAN scope, Indonesia rank is
lowest in terms of percentage of entrepreneur’s number, about 1.65 percent of total population. It needs a planned and structured program to achieve economic growth in accordance with target to encourage the growth of entrepreneurs in Indonesia. Entrepreneurship education is expected to encourage the creation of more entrepreneurs that able to promote economic growth and also absorb more labor. One government effort is to put entrepreneurship competence as one of graduate profile in public universities. Facilitating the students to establish and manage a business are expected to become independent (self-employed) and become job creators.

It needs an effort to understand the process to see if entrepreneurship education at public universities in Indonesia has been able to increase student entrepreneurial intention. The large government attention to this field is a challenge to better understand entrepreneurship.

Kuratko (2005) states that entrepreneurship can be taught or at least directed through entrepreneurship education. Peterman and Kennedy (2003) argued that entrepreneurship education has aims to make the learners to become entrepreneurs. It will be more effective when administered at public universities level. Students have more potential to become entrepreneurs because they are relatively close to the stage of career choice (Fitzsimmons and Douglas, 2011; Solesvik, 2013). Although the benefits of entrepreneurship education have been often raised by many researchers, research the effect of entrepreneurship education is still very limited (Peterman and Kennedy, 2003). Entrepreneurship education builds individual's perception toward entrepreneurs through the process of character formation to supports the perceived desirability (Linan, 2004; Peterman and Kennedy, 2003; Soutaris et al., 2007) and self-confidence to create perceived feasibility (Fayolle et al., 2006; Linan, 2004; Peterman and Kennedy, 2003).

Student’s orientation and entrepreneurship behavior are also affected by personal and environmental factors (Lüthje and Franke, 2003). Educational institutions in various countries also involve a lot of role models in entrepreneurship education to motivate, inspire and support entrepreneurship of students and young people (Bosma et al., 2012). Exposure the positive or negative experience of role models can drive the people to evaluate their capacity in entrepreneurship career (Laviolette et al., 2012). The role model is derived from social learning theory to put an emphasis on a person’s ability to learn to others (Bandura and McClelland, 1977). Scheiner (2009) argues that core idea of this theory is individual behavior as a result of interaction with other individuals or a particular situation. The existence of an entrepreneur’s role model will higher at public universities levels than lower education (Bosma et al., 2012). The consequences, this relationship create a difficult to assess the impact of entrepreneurship education on entrepreneurial intention without involving their role models (Fayolle et al., 2006).

Entrepreneurship education practices at public universities in Indonesia are still limited to implementation of entrepreneurship courses as a compulsory subject. The training programs and funding by government through the Public universities is still sporadic and its application has not reached all students. It create little entrepreneur from public universities graduates, even at program management and business studies who chose a career as an entrepreneur. On other hand, existence of entrepreneurial role models as a factor to contribute to entrepreneurial intention in public universities education is still not widely used by the educators. Entrepreneurial role models are not integrated as part of entrepreneurship education process. Entrepreneurial role models in students are still very limited and have different characteristics with student profiles. It requires modeling to visualize this phenomenon to describe the conditions that link the entrepreneurship education, role models and entrepreneurial intention among students. This study aim is investigate the effect of entrepreneurship education and entrepreneurial role models to student entrepreneurial intention, either directly or mediated by self- perceived desirability and perceived feasibility.

**Entrepreneurship Education and Entrepreneurial intentions:**

Several empirical studies confirm the direct relation between entrepreneurship education and entrepreneurial intention (Kadir et al., 2012; Linan, 2004; Scheiner, 2009; Soutaris et al., 2007; Walter and Dohse, 2009). Walter and Dohse (2009) shows that entrepreneurship education activities (training of business plans, internships entrepreneurship and business start-up training) can increase student entrepreneurial intention. Similar research of Soutaris et al. (2007) also showed an increased students interest to work independently on those who follow entrepreneurship education program. Through the education process; knowledge, paradigms, norms, principles and logic of entrepreneurship can be transferred to the learners. Entrepreneurship education is provided through formal teaching, seminars, projects and field practice. Linan (2004) found the positive effect of entrepreneurship knowledge on student’s entrepreneurial intention. Fayolle et al. (2006) compare the entrepreneurial intentions of students before and after participating in entrepreneurship education at different stages of pre-defined time. They found that at an early stage, Students who participated in entrepreneurship education has higher entrepreneurial intention. This suggests that entrepreneurial intention can be increased when students still have a low level of interest in early education. Effects of entrepreneurship education on entrepreneurial intention decreases with increasing stage of entrepreneurship education. Fayolle et al. (2006) use an experimental method to compare the effects of entrepreneurship education on entrepreneurial intention in engineering students. The results showed that entrepreneurship education affect to increase student
entrepreneurial intention. Moufhe and du Toit (2011) compare the entrepreneurial intention in students who take and do not take minor field of entrepreneurship, in final year of management department at South Africa University. Their results showed that students who take a minor entrepreneurship have a stronger entrepreneurial intention than students who did not take a minor field of entrepreneurship.

**Hypothesis 1:**
Entrepreneurship education at public universities increase the students entrepreneurial intention

Several studies support the effect of entrepreneurship education on entrepreneurial intention through, either directly or through mediation (Souitaris et al., 2007). Indirect effect of entrepreneurship education on entrepreneurial intention through perceived desirability and perceived feasibility was expressed by Peterman and Kennedy (2003). The study measured changes in students' perceptions before and after the entrepreneurship program with research design of pre-test, post-test and control group. The program increases the perceived desirability on student’s entrepreneurial intention. The magnitude depends on perception level of students to see positive entrepreneurship experience and level of students' positive views toward entrepreneurship program. Drennan et al. (2005) examine the first-year students at variety courses at university as a research subject. The results show that perceived desirability is created as a result of their perception of family business experience, childhood experiences and intensity of student’s relocation. It will be contribute to increases entrepreneurial intention. Krueger et al. (2000) indicate that higher perceived desirability will contribute to increase the entrepreneurial intention.

The view dynamics shifting at families and communities as a result of social dynamics changing makes the research on perceived desirability interests or behaviors associated with entrepreneurship remain relevant over time. Researches in these field take the differences in regions viewpoint (Linan and Chen, 2006; Ribeiro Soriano et al., 2012). Their research results show the differences in perceived desirability value between regions.

**Hypothesis 2a:**
Entrepreneurship education at public universities will increase student entrepreneurial intention through mediation of perceived desirability

Entrepreneurship education also affects to increase perceived feasibility through altered perception of control behavior and self-efficacy. Higher self-efficacy is obtained through learning activities in classroom, preparation and development of business plans, experience to set up and managing new businesses as well as their entrepreneurship internship during the entrepreneurship education. Perceived feasibility of strong learners will increase self belief that they can perform the behavior or entrepreneurship activity. Changes in self-efficacy was emerged as a result of entrepreneurship education to increase intellectual capacity and entrepreneurship skills of learners to raise confidence that they will be able to execute a business idea, establishing and managing new businesses.

An experimental study by Peterman and Kennedy (2003) confirm the positive effects of entrepreneurship education programs to increase the perceived feasibility on middle school students. Linan (2004) found that entrepreneurship knowledge has strong effect on perceived feasibility. Lorz (2011) uses the students who attend entrepreneurship education program at university as a research subject. The study results demonstrate the positive effect of entrepreneurship education to change attitudes towards entrepreneurship behavior. Changes in participants education attitude is occurred because of positive impact that is transmitted by faculty and practitioners involved in education program.

The positive and significant effect of perceived feasibility on entrepreneurial intention is supported by several studies (Drennan et al., 2005; Krueger et al., 2000; Ribeiro Soriano et al., 2012). Ribeiro Soriano et al. (2012) states that individuals have a tendency to not choose a job or environment that exceeds its capacity. Individuals will measure her ability to act and take decisions in uncertain situations, and this often happens in an entrepreneurship environment. Krueger et al. (2000) found that in both models, perceived feasibility has positively and significant effect on entrepreneurial intention.

Several previous studies support the mediating effect of perceived feasibility (Linan, 2004). The study shows that entrepreneurship knowledge affects on entrepreneurial intention through mediation of perceived feasibility. Barnir et al. (2011) also show the mediation of perceived feasibility (self-efficacy) on role models and entrepreneurial intention. Drennan et al. (2005) found that childhood background affect the entrepreneurial intention through mediation perceived feasibility. Referring to some of theories and results of previous research, perceived feasibility can mediates relationship between entrepreneurship education and entrepreneurial intention.

According to Robbins et al. (2013), higher self-efficacy will increase confidence level for success. In a difficult situation, individuals with low levels of self-efficacy tend to reduce the effort. On other hand, individuals with high levels of self-efficacy will continue to work to their best ability. Furthermore, when the individual is given the input (feedback) which is negative in nature, individuals with low levels of self-efficacy tend to give up easily, while people with high self-efficacy level it will be more motivated.
Hypothesis 2b:
Entrepreneurship education at public universities will increase student entrepreneurial intention through perceived feasibility mediation.

Role models and Entrepreneurial intentions:
A role model effectively motivates and helps to achieve a level of independence that significantly increases entrepreneurial intention (Walter and Dohse, 2009). BarNir et al. (2011) showed that role models will increase the student interest to become an entrepreneur. Van Auken et al. (2006) show a significant effect of role models on selection of an individual's career. Therefore, researchers also suggested involving role models in entrepreneurship education program as part of curriculum. The results also show the intensive interaction among business owners as a role model will increase the student interest to become entrepreneur.

Hypothesis 3:
Entrepreneurial role model will increase the student’s entrepreneurial intention.
A role model becomes entrepreneurship knowledge source and motivation (Walter and Dohse, 2009). They also concluded that role models are a complement of entrepreneurship education. Kirkwood (2012) also found that norms, attitudes and values towards entrepreneurship in individuals are affected by their role models through a lot of contact with people. A role model in this case serves to reinforce the self-concept as a form of personality assimilation of a role model (Gibson, 2004). Linan (2004) found that higher education makes one has higher the sensitivity to career choice, which is formed of existence of a role model. These role models will affect the higher interest in personal and social norms of individual (Linan and Chen, 2006). Some of existing research results and concept the linkage between entrepreneurship education, perceived desirability and role model create study propositions was to moderate the effect of role models in entrepreneurship education to the perceived desirability.

Hypothesis 4a:
Perceived desirability moderate the effect of entrepreneurial role models on student’s entrepreneurial intentions.
The role model becomes a decisive element to increase the eligibility of individuals (Linan, 2004). Entrepreneurship education is expected to improve the skills and capabilities of individuals in entrepreneurship. A role model in this case serves as a medium to validate the capabilities and skills of entrepreneurship individual to make him felt worthy to start a business (Davidsson and Honig, 2003). Improved skills and entrepreneurship abilities will increase perceived feasibility of individual entrepreneurship. BarNir et al. (2011) also shows the effect of role models to increase self-efficacy. Referring to some of results of these studies, perceived feasibility moderate the effect role models on entrepreneurship education.

Hypothesis 4b:
Perceived feasibility moderate the effect of entrepreneurial role models on student’s entrepreneurial intention.

Research methods:
This research uses quantitative methods through structural equation modeling. The study population is students and business management courses at four universities in Indonesia, namely (1) Trunojoyo University; (2) Airlangga University; (3) Brawijaya University and (4) Jember University. Population already passed entrepreneurship courses and does not their own business. Stratified random sampling is used to take sample size of 209 respondents and students as unit of analysis. Data is collected by distributing questionnaires that have been tested for validity and reliability through pilot test. Data is analyzed by generalized method of structural component analysis (Hwang and Takane, 2014), using a program (GeSCA). Moderation effect is tested by Sobel's Test (Preacher and Hayes, 2004).

Discussion:
This study result describes some research gap of previous studies inconsistencies. The study findings are different with hypotheses that entrepreneurship education has positive effect on entrepreneurial intention (Linan, 2004; Soutitaris et al., 2007; Walter and Dohse, 2009). Previous research also indicates low effect between these two variables (Lorz, 2011; Matlay et al., 2012; Rodrigues et al., 2012). This study show entrepreneurship education decreases the student entrepreneurial intention. This study supports the research results of Oosterbeek et al. (2010) that entrepreneurship education has negative effect on students entrepreneurial intention. The researchers found that after following entrepreneurship education, students become more realistic about her abilities. Lower optimism on success make students becomes more realistic about the chances to become a successful entrepreneur. The same thing could potentially happen to students who become respondents in this
study. This was confirmed from entrepreneurship education in public universities that still uses awareness education.

These study findings indicate that entrepreneurship education does not have benefit to improve student’s self-perception on entrepreneurship interest (perceived desirability). Perceived desirability is not a mediator effect of entrepreneurship education on entrepreneurial intention. These results differ from previous research that higher perceived desirability is a direct consequence of entrepreneurship education (Drennan et al., 2005; Krueger et al., 2000; Linan and Chen, 2006; Peterman and Kennedy, 2003; Ribeiro Soriano et al., 2012). However, this study supports the study results that entrepreneurship education does not directly affect to increase student’s entrepreneurial intention (Linan, 2004; Lorz, 2011; Souitaris et al., 2007). In this case, consistent with LINAN, (2004), entrepreneurship education is not specifically preparing students to become entrepreneurs. In this case, entrepreneurship education in public universities is not designed to increase the student’s entrepreneurial intention. Consistent with Fayolle et al. (2006), entrepreneurship education in public universities is not exclusively focused on establishment of new businesses. Entrepreneurship education can be described as a pedagogical program or educational process to form an attitude and entrepreneurship skills by involving the development of personal qualities in entrepreneurship field.

Analysis Results:

Table 1: Path Coefficient and Hypothesis Testing.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Variables</th>
<th>Path Coefficient</th>
<th>Sobel Test</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>EE → EI</td>
<td>-0.126*</td>
<td>-</td>
<td>Significant</td>
</tr>
<tr>
<td>H2a</td>
<td>EE → PD → EI</td>
<td>-</td>
<td>0.062</td>
<td>Not significant</td>
</tr>
<tr>
<td>H2b</td>
<td>EE → PF → EI</td>
<td>-</td>
<td>0.085*</td>
<td>Significant</td>
</tr>
<tr>
<td>H3</td>
<td>RM → EI</td>
<td>0.120</td>
<td>-</td>
<td>Not significant</td>
</tr>
<tr>
<td>H4a</td>
<td>RM → PD → EI</td>
<td>-</td>
<td>0.215*</td>
<td>Significant</td>
</tr>
<tr>
<td>H4b</td>
<td>RM → PF → EI</td>
<td>-</td>
<td>0.096*</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Sources: The results of data analysis using GeSCA and Sobel Test

The result of this study also shows that entrepreneurship education in public universities was able to increase entrepreneurial intention through increasing the self-perception about student entrepreneurship ability (perceived feasibility). Perceived feasibility moderate the effect of entrepreneurship education on entrepreneurial intention. These results certainly support and consistent with previous research (Drennan et al., 2005; Krueger et al., 2000; Lorz, 2011; Peterman and Kennedy, 2003; Ribeiro Soriano et al., 2012).

The role model in this study does not have direct effect on entrepreneurial intention. This result is inconsistent to study hypothesis that higher student’s entrepreneurial intention is a direct result of role models (BarNir et al., 2011; Walter and Dohse, 2009). In this case, process of self-identification or self-reflection on entrepreneurship characteristics of role models does not necessarily lead to increased student entrepreneurial intention. The results of descriptive analysis also show differences between the characteristics of entrepreneurial role models on student characteristics. This difference creates difficulty for students to find their similarities to role models characters, creating difficult in identification process and self-reflection on entrepreneurship character of role models (Gibson, 2004).

Perceived desirability and perceived feasibility moderate the effect of entrepreneurial role models on student entrepreneurial intention. Kirkwood (2012) state that norms, attitudes and values towards entrepreneurship in individuals are affected by their role models who has a lot of contact with individual. A role model in this case serves to reinforce the self-concept in form of personality assimilation of a role model. In addition, a role model also serves as a provider for a learning process, a source of motivation and inspiration (Gibson, 2004). A role model is a source of entrepreneurship knowledge and motivation (Walter and Dohse, 2009). This research result show that entrepreneurial role models increase student knowledge about the
knowledge, skills, different abilities and skills necessary for entrepreneurship. Entrepreneurial role models can also provide support and guidance for individuals to become entrepreneurs (Nauta and Kokaly, 2001).

This study results imply that entrepreneurship education at public universities is still awareness education. It confirms the results of previous studies (Linan, 2004; Walter and Dohse, 2009) that only active mode of entrepreneurship education will affect on entrepreneurial intention, such as creating a business plan. Reflective entrepreneurship education as theory presentation in lectures does not affect on entrepreneurial intention. To increase student’s entrepreneurial intention, manager of entrepreneurship education at public universities can more focused to improve self-perception of willingness and student entrepreneurship ability. In addition, the study also has implications on role model function which may increase entrepreneurial intention through improved desire perception and ability to become entrepreneurs. In this case, educational institutions can assist students to create an ideal role model of entrepreneurship as proposed by Gibson (2004). There should be a role model who can also serve as a mentor to guide students in a pioneering career as an entrepreneur.

This study has some limitations. The entrepreneurship education is measured by benefit value perception from the student’s perspective. In addition, entrepreneurial role models are still not clearly identifiable from the proximity of characteristics and interactions with students. The research object is still focused on entrepreneurship education at public universities, it decrease generalizability of findings. However, these study limitations can become guidance and direction for further research.

**Conclusion:**
Data analysis results and discussion show that entrepreneurship education in public universities directly is still not able to increase student entrepreneurial intention. In fact, entrepreneurship education had lower student interest to become an entrepreneur. However, after participating in entrepreneurship education, students can still benefit by increasing self-perception about entrepreneurship abilities to increase student interest to become entrepreneurs.

The existence of entrepreneurial role models affect to increase student’s entrepreneurial intention through the mediation of perceived desirability and perceived feasibility. In order entrepreneurial role model function become more effective, it is necessary to present role model with close character to students. The character closeness of role model will facilitate students in identification process and self-reflection. In addition, in order entrepreneurial role models increase the student’s interest optimally, the role models are expected to increase interaction intensity with students to improve knowledge and skills transfer.

**REFERENCES**


