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Examining Entrepreneurial Self-Efficacy among Students

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Abstract

Entrepreneurship is believed as a solution to unemployment problems. It is argued that Entrepreneurial Self-Efficacy is important for a person to act to be an entrepreneur. The aim of this study was to examine the level of Entrepreneurial Self-Efficacy among students from a university which adopted entrepreneurial education in the curriculum. The study focused on Entrepreneurial Self-Efficacy developed by De Noble et al. (1999) which consisted 6 dimensions. Subject of this study involved 199 undergraduate students who were in semester 4, who had been participating in the course of entrepreneurship for 4 semesters. Entrepreneurial Self-Efficacy questionnaire was selected as a data collection tool. The results showed that overall the level of Entrepreneurial Self-Efficacy among students was high. Based on the analyses of each dimension of Entrepreneurial Self-Efficacy, defining core purpose and initiating investor relationships achieved the highest level, whereas coping with unexpected challenges scored the lowest level. Detailed findings related to each dimension of Entrepreneurial Self-Efficacy and discussion of findings will be explored further in the paper.

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Key words: Entrepreneurship education; Entrepreneurial Self-Efficacy; Students

1. Introduction

Unemployment is still a social problem in Indonesia. Many people have a dream to have a chance to take higher education in the university. However it is a shame that many people also cannot get a job after completing their higher education.

Setiawan (2012) has argued that university needs to prepare students to face the challenges in their life after completing their study. University needs not only help students to be ready to seek jobs, but more than that university should equip students to be able to

create jobs. Therefore entrepreneurship education is strongly important and inevitable. Entrepreneurship education is expected to develop entrepreneurial mindset and intention among students and to equip their knowledge and skills to be an entrepreneur.

Hisrich et al. (2005: 8) defines entrepreneurship as “the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence.” Looking at this definition, it is clear that an entrepreneur has several important characteristics, such as innovative creative and calculated risk taking.

The character of innovative creative is also emphasized in the definition of entrepreneur by Bolton & Thompson (2004). They assert that an entrepreneur is “a person who habitually creates and innovates to build something of recognized value around perceived opportunities.” (p. 16)

Apart from innovative creative and calculate risk taking, other characteristics regarded as important characters for an entrepreneur include passion, independent, market sensitivity, and persistent.

Previous study by Setiawan (2012) has shown that entrepreneurship education had positive impact on the strengthened entrepreneurial characteristics among students. Specifically, there were significant increases on students’ entrepreneurial characteristics of market sensitivity, innovative creative, persistence, and high ethical standard, following the Entrepreneurship Personal Branding and Selling course. Thus entrepreneurship education is very important to help to develop entrepreneurial characteristics among students.

In the effort to prepare students to be an entrepreneur, many studies have been conducted. Some studies focused on entrepreneurial intention with the assumption this intention will drive students to be an entrepreneur. On the other hand, other focused on Entrepreneurial Self-Efficacy as this self-efficacy was regarded as a key antecedent to entrepreneurial intention (Boyd & Vozikis, 1994; Chen et al., 1998; Krueger & Brazeal, 1994, cited in McGee et al., 1999).

Riyanti (2009) asserts that intention to be an entrepreneur is not strong enough to drive students to be an entrepreneur. She explains that many of Indonesian students have high intention to be an entrepreneur. However this intention does not turn into reality as they do not have self-efficacy. Riyanti argues that students need to have high risk taking and self-efficacy to drive them to be an entrepreneur.

Therefore, it can be recommended that entrepreneurship education needs also to focus on developing self-confidence to be an entrepreneur. Efforts need to be done to develop entrepreneurial self-efficacy among students.

The aim of this study was to examine the level Entrepreneurial Self-Efficacy among students after completing four semesters of entrepreneurial education. This study was expected to provide feedback for the institution to develop its curriculum on entrepreneurship education. The study was expected to provide deeper understanding of entrepreneurial self-efficacy dimensions which need to get more attention in the curriculum development.

2. Entrepreneurial Self-Efficacy

Self-efficacy is a person’s belief in his/her ability to perform certain task (Bandura, 1997). This belief can be viewed as ‘can do attitude’. De Noble et al. (1999) in their study found that many participants of their study raised that the most important critical issue they

faced in start-up and developing a new company was ‘can do attitude’. This attitude was regarded as the most important or critical factor contributing to the entrepreneurial success during the stage of start-up a company.

De Noble et al. (1999) explain this in the concept of Entrepreneurial Self-Efficacy. They define Entrepreneurial Self-Efficacy as “a construct that measures a person’s belief in their own abilities to perform on the various skill requirements necessary to pursue a new venture opportunity.”

There are six dimensions in the concept of Entrepreneurial Self-Efficacy developed by De Noble et al. (1999), including *developing new product and market opportunities*; *building an innovative environment*; *initiating investor relationships*; *defining core purpose*; *coping with unexpected challenges*; *developing critical human resources*.

The first dimension, *developing new product and market opportunities*, involves a person’s belief to be able to create new products and to find opportunity, in order to have solid foundation to launch a venture.

The second dimension, *building an innovative environment*, involves a person’s belief to be able to encourage others or his/her team to try a new idea or to take innovative action.

The third dimension, *initiating investor relationships*, involves a person’s belief to be able to find sources of funding for their venture.

The fourth dimension, *defining core purpose*, involves a person’s belief to be able to be clear with his/her vision and to maintain the vision, and clarify it to his/her team and investors.

The fifth dimension, *coping with unexpected challenges*, involves a person’s belief to be able to tolerate and deal with ambiguity and uncertainty in the start-up entrepreneur.

The sixth dimension, *developing critical human resources*, involves a person’s belief to be able to recruit and retain important and talented individuals to be the members of the venture.

3. Research method

3.1 Respondents

This study involved the 4th semester undergraduate students in a university in an urban area in Indonesia which provided entrepreneurship education in their curriculum. The students had been participating in the entrepreneurship courses for 4 semesters. The students came from three study programs, including International Business Management (56.82%), Visual Communication Design (21.6%), and Psychology (21.6%).

The total number of students participating in this study was 199, which consisted of 103 females (51.8%) and 96 males (48.2%). The mean of their age was 19.43 years old.

3.2 Instrument

To measure the level of Entrepreneurial Self-Efficacy, this study used a questionnaire which is a modification from the instrument developed by De Noble et al. (1999). The instrument consisted of 23 items, which covers 6 dimensions of Entrepreneurial Self-Efficacy, including *developing new product and market opportunities*; *building an innovative environment*; *initiating investor relationships*; *defining core purpose*; *coping with unexpected challenges*; and *developing critical human resources*.

The participants were asked to respond the items using a ten point Likert type scale (1= strongly disagree to 10= strongly agree) based on the degree of their agreement with the

statement. The higher the score they rate, the higher level of agreement they have. The lower the score they rate, the lower level of agreement they have.

The reliability test showed that this scale was reliable to measure the Entrepreneurial Self-Efficacy (Cronbach alpha = 0.953).

4. Results

4.1 General results

Table 1 showed the descriptive results of Entrepreneurial Self-Efficacy level among students.

Table 1. Entrepreneurial Self-Efficacy

Mean	SD	Category	N	Percentage
6.76	1.10	Very high	5	2.51%
		High	113	56.78%
		Medium	77	38.69%
		Low	4	2.01%
		Very low	0	0.00%

Looking at the mean score of Entrepreneurial Self-Efficacy, generally the level of Entrepreneurial Self-Efficacy of students was high. Nearly 60% students had high or very high level of entrepreneurial self-efficacy. 38.69% students were in a moderate category, and only 2.01% students scored low Entrepreneurial Self-Efficacy, and none of students scored very low.

4.2 Specific dimension of Entrepreneurial Self-Efficacy

The results of Entrepreneurial Self-Efficacy in each dimension is presented in Figure 1.

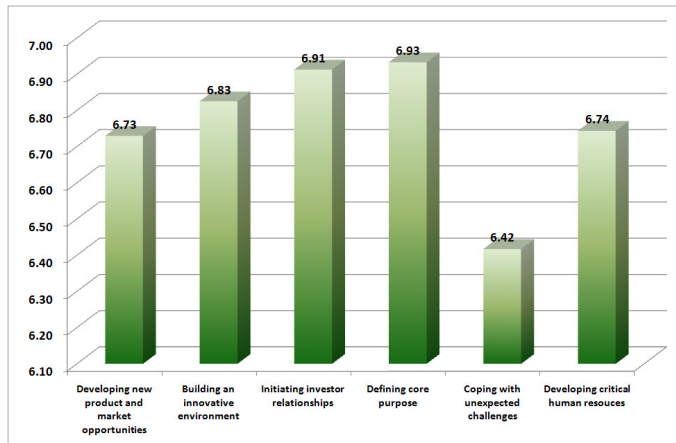


Figure 1. Dimensions of Entrepreneurial Self-Efficacy

The statistical test using Related-Samples Friedman Two-way Analyses of varians by ranks showed that there were differences in the distribution of these six dimensions ($p < 0.001$). The dimensions of *defining core purpose and initiating investor relationships*

achieved the highest level, whereas *coping with unexpected challenges* scored the lowest level.

The detailed distribution of each dimension can be seen in Table 2, 3, 4, 5, 6, and 7. To see whether certain dimensions achieved significantly higher level of efficacy than other dimensions, the researcher also conducted comparison of the mean scores of the dimension. As the dimension of *initiating investor relationships* did not follow normal distribution, some of the comparison was conducted using non-parametric test. The statistical tests used for comparing two dimensions Paired-Sample t Test, and Related-Samples Wilcoxon Signed Rank Test.

Table 2. Developing New Product and Market Opportunities

Mean	SD	Category	N	Percentage
6.73	1.18	Very high	9	4.52%
		High	98	49.25%
		Medium	86	43.22%
		Low	6	3.02%
		Very low	0	0.00%

Looking at Table 2, 53.77% students had very high or high level of self-efficacy in *developing new product and marketing opportunities*. Entrepreneurial Self-Efficacy in this dimension is significantly higher than *coping with unexpected challenges* ($p < 0.001$). However this dimension is significantly lower than *initiating investor relationships* ($p < 0.01$) and *defining core purpose* ($p < 0.001$).

Table 3. Building an innovative environment

Mean	SD	Category	N	Percentage
6.83	1.22	Very high	9	4.52%
		High	103	51.76%
		Medium	82	41.21%
		Low	5	2.51%
		Very low	0	0.00%

Looking at Table 3, 56.28% students had very high or high level of self-efficacy in *building an innovative environment*. Students' level of self-efficacy in this dimension was significantly higher than the dimension of *coping with unexpected challenges* ($p < 0.001$).

Table 4. Initiating investor relationships

Mean	SD	Category	N	Percentage
6.91	1.21	Very high	8	4.02%
		High	128	64.32%
		Medium	56	28.14%
		Low	7	3.52%
		Very low	0	0.00%

Table 4 showed that 68.34% students in this study scored high or very high level of self-efficacy in *initiating investor relationships*. Students' self-efficacy in this dimension was significantly higher than their self-efficacy in the dimensions of *developing new product and*

market opportunities ($p < 0.01$), *coping with unexpected challenges* ($p < 0.001$), and *developing critical human resources* ($p < 0.05$).

Table 5. Defining core purpose

Mean	SD	Category	N	Percentage
6.93	1.29	Very high	16	8.04%
		High	114	57.29%
		Medium	61	30.65%
		Low	8	4.02%
		Very low	0	0.00%

It can be seen in Table 5, 65.33% of students had high or very high level of belief that they were able to define core purpose of their business. Comparison test showed that students' self-efficacy in this dimension was significantly higher than their self-efficacy in the dimension of *developing new product and market opportunities* ($p < 0.001$), *coping with unexpected challenges* ($p < 0.001$), and *developing critical human resources* ($p < 0.01$).

Table 6. Coping with unexpected challenges

Mean	SD	Category	N	Percentage
6.42	1.36	Very high	6	3.02%
		High	88	44.22%
		Medium	92	46.23%
		Low	13	6.53%
		Very low	0	0.00%

As seen in Table 6, nearly half of students scored medium level of self-efficacy in *coping with unexpected challenges*. Statistical tests showed that *coping with unexpected challenges* was significantly lower than all other dimensions ($p < 0.001$).

Table 7. Developing critical human resources

Mean	SD	Category	N	Percentage
6.74	1.26	Very high	10	5.03%
		High	105	52.76%
		Medium	75	37.69%
		Low	9	4.52%
		Very low	0	0.00%

The study showed that 57.79% students had high or very high level of self-efficacy in developing critical human resources. Entrepreneurial Self-Efficacy in *developing critical human resources* is significantly higher than students' efficacy in *coping with unexpected challenges* ($p < 0.001$). Students' self-efficacy in *developing critical human resources* was significantly lower than their self-efficacy in *initiating investor relationship* ($p < 0.05$) and *defining core purpose* ($p < 0.01$).

5. Discussion and recommendations

Current study showed that generally students' level of self-efficacy in completing entrepreneurial tasks was in high category. Only very small percentage of students (2.01%)

had low level of Entrepreneurial Self-Efficacy. None of students had very low level of Entrepreneurial Self-Efficacy.

Although this study did not conduct pre and post tests to see the effectiveness of entrepreneurship program, which is the limitation of this study, it still can be argued that these results were related to entrepreneurship education in the curriculum of the university. Students in this study had participated Entrepreneurship courses starting from their first semester. They have had entrepreneurship courses for 4 semesters, which facilitated by academicians and business practitioners.

Each of these courses is project-based. In the first semester, the project was to do personal selling. In the second semester, students in group should develop their business ideas using design thinking. They were required to make the prototype of their business and acquire comments and feedback from potential customers. In the third semester, students in group started up their business. The business concepts prepared in semester two was turned into reality. In this stage, students need also to hire staff/employees to help them run the business. In the fourth semester, students were challenged to make innovation in their business.

Bandura (1997) asserts that sources of self-efficacy can be obtained from mastery experience, vicarious experience, social persuasion, and physiological and affective states. It can be argued that entrepreneurship education which involved entrepreneurial projects can help students obtain mastery experience in many of entrepreneurial tasks. In the first semester, students in their entrepreneurial projects were also required to find parties to buy their products or to sponsor their projects. When students develop business ideas, they practiced in developing new product and market opportunities. In this process, they also practiced in building innovative environment, as they encouraged each other to try new ideas or to develop innovative action. Students were also helped to sharpen the vision of their business and the value they want to create from the business. When students started up their business, they needed also to think of important staff to support their business. Therefore their skills of developing critical human resources were also exercised.

To put it simply, entrepreneurship courses that involved entrepreneurial projects provided opportunities for students to have mastery experience as the source of self-efficacy (Bandura, 1997). In the process of the courses, students had also many opportunities to see the success of their peers. This vicarious experience was also the source of self-efficacy (Bandura, 1997).

The results of this study confirm the previous study conducted by Cooper and Lucas (2006) and Kilenthong et al. (2008). Cooper and Lucas (2006) in their study examined whether the Enterprisers program gave an impact on entrepreneurial self-confidence. The curriculum of Enterprisers program equipped students with entrepreneurial project/venture skills. The results of their study showed that Enterprisers program was benefiting participants with the foundation of entrepreneurial self-confidence. Similarly Kilenthong et al. (2008) also found that entrepreneurship education has a positive impact on students' entrepreneurial self-efficacy. Compared to those who did not major in entrepreneurship, those who majored in entrepreneurship showed higher self-efficacy in performing business-related tasks.

Surprisingly, this study also showed that student's level of self-efficacy in coping *with unexpected challenges* was the lowest compared to their self-efficacy in other entrepreneurial tasks. This result meant that compared to other dimensions, students were not very sure that they could tolerate and deal with ambiguity and uncertainty in the start up entrepreneur. Students were unsure that they could work productively under continuous stress, pressure and conflict. They were unsure that they could tolerate unexpected changes in business

situation. They were unsure that they could keep going in facing hardship and unfavorable experience.

Looking at this dimension closely, it seems that this dimension is more related to the psychological condition of students, not to the entrepreneurial hard skills. Therefore, it can be argued facilitating students to develop their entrepreneurial hard skills only such as business planning, finance, and management is not sufficient. These results support the argument of Katz (cited in Chell, 2008) that entrepreneurship education should also focus on psychological aspect of entrepreneurship.

The results of this study suggest that students need extra psychological support especially in dealing with stress. Students need to learn about stress management and how to cope with stress. Students need help to develop their adversity quotient.

In conclusion, entrepreneurship education should also put attention to develop students' psychological assets such as striving power, stress management and adversity quotient, as these will help students cope with difficult and unexpected changes and challenges which often happen in business life.

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References

- Bandura. A. (1997). *Self Efficacy. the Exercise of Control*. New York: W.H. Freeman and company.
- Bolton. B. and Thompson. J. (2004). *Entrepreneurs: Talent. Temperament. Technique*. 2nd edn. Norfolk: Biddles Ltd.
- Chell, E. (2008). *The Entrepreneurial Personality: Social Construction* (2nd ed). London: Routledge.
- Cooper, S.Y. and Lucas, W.A. (2006). Enhancing Self-efficacy for entrepreneurship and innovation: an educational approach. *Entrepreneurial Education. Regional Frontiers of Entrepreneurship Research*. 667-688.
- De Noble. A., Jung, D., and Ehrlich, S. (1999). *Entrepreneurial Self Efficacy: The Development of a Measure and Its Relationship to Entrepreneurial Action*. *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College. 73-87.
- Hisrich, R.D. Peters, M.P., & Shepherd, D.A. (2005). *Entrepreneurship*. 6th edn. Boston: McGraw-Hill.
- Kilenthong, P., Hills, G. and Monllor, J. (2008). The Impact of Entrepreneurship Education on Entrepreneurial Self-Efficacy and Intention (Summary), *Frontiers of Entrepreneurship Research*: 28: 4, Article 11. Available at: <http://digitalknowledge.babson.edu/fer/vol28/iss4/11>.
- McGee, J.E., Peterson, M., Mueller, S.L., and Sequeira, J.M. (2009). Entrepreneurial Self-Efficacy: Refining the Measure. *Entrepreneurship Theory and Practice*. 33(4): 965-988.
- Riyanti, B.P.D. (2009). *Kewirausahaan Bagi Mahasiswa*. 1st edn. Jakarta: Fakultas Psikologi Unika Atma Jaya.
- Setiawan, J.L. (2012). *Entrepreneurship Program Assessment by Students Outcome on Their Perceived Entrepreneurial Characteristics*. Paper presented at Indonesia International Conference on Innovation, Entrepreneurship, and Small Business, Surabaya. 26-28 June 2012.