

# **The Implementation of Project-Based Learning to Improve Entrepreneurial Intention and Entrepreneurship Learning Outcome of Economics Education Students**

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**Abstract:** *The study implemented project-based learning in order to improve students' entrepreneurial intention and their entrepreneurship learning outcomes. This was quasi experimental research conducted at Economics Education Study Program, Sanata Dharma University. Research participants were divided into two classes, namely experimental class that implemented project-based learning and control class. The findings showed that project-based learning implementation in entrepreneurship learning were able to improve students' entrepreneurial intention as well as improve students' entrepreneurship learning outcome.*

**Keywords;** *project-based learning, entrepreneurship intention, learning outcome*

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## **I. Introduction**

Young citizens' unemployment phenomena have become world's serious concerns. Based on current data from Organization for Economic Co-operation and Development (OECD), International Labour Organization (ILO), and World Bank, it is estimated that over 200 million people are unemployed and about 75 millions of them are under the age of 25. Regarding the fact, at least 600 millions of employment formation is needed in the future 15 years to absorb year-to-year labour force growth. Young labour forces, generally, anticipate getting a job as either civil servants or private employees right after graduating from educational program. It was caused by common practical thinking that the main objective of studying is to facilitate the jobs search. According to Central Bureau of Statistics (Badan Pusat Statistik, Indonesia), the open unemployment rate in Indonesia for the last decade shows a good improvement, from 10.125.796 persons in 2004 went down to 7.244.905 persons in early 2014. On national scale, unemployment number has been decreasing for the last two years. Even though the decrement of unemployment number is a positive achievement, yet unemployment has still become a big issue in Indonesia. Moreover, in 2025-2030 Indonesia will prepare for demographic bonus; a state when the number of productive people is larger than the number of younger and older people. At that time, the number of productive people (the age of 19-64) will be larger than the number of younger people (under the age of 18) and older people (over the age of 65). Productive people who do not have any job opportunities will be such a catastrophe for the country. Therefore, the biggest upcoming challenge is how to transform plentiful productive-human resources in order to possess competences and skills through education so that they do not become burden to others.

One of the ways to reduce unemployment among the graduates is by developing entrepreneurial intention as early as possible. Entrepreneurial character introduction serves an important role because a nation will be called developed country if the number of entrepreneurs is at least 2% of its total population. In 2007, the number of entrepreneurs in Singapore was 7.2%; in United States was 2.14%; and in Indonesia with its population was around 220 millions, the number of entrepreneurs was only 400.000 persons (0.18%) instead of 4.400.000 persons ideally. It means that Indonesia still needed more than 4 million entrepreneurs (Pusat Kurikulum, 2010:2-3).

Nowadays entrepreneurship education in formal schools emphasizes more on mastering knowledge and technical skills (hard skills) and still paying less attention to self-and-people management (soft skills). Based on research findings in Harvard University, one's success is determined by 20% of hard skills and 80% of soft skills. (Pusat Kurikulum, 2010:2). Entrepreneurship education needs to be carefully designed to facilitate entrepreneurship learning at young age. Entrepreneurship is such an art that can be learned and developed (Fayole, 2007:13-14). Germany's experiences in entrepreneurship education generated a good result. Its curriculum framework for Vocational Education and Training (VET) was designed by *Kultusminister-konferenz* (Standing Conference of Education Minister) that required all vocational schools had to give sufficient knowledge of various jobs including entrepreneurship in order to support students' careers and entrepreneurial life planning. In practical entrepreneurship, every 10 to 15 students designed student mini-company. For 13 years now, over 40.000 students have successfully been establishing that mini company and experiencing the

real entrepreneurship (European Commission, 2009). The fact supports an idea that entrepreneurial intentions and skills can be taught and an entrepreneur can be born through education and practices. Meanwhile, the current phenomenon that occurs in our society is students' low intention in becoming entrepreneurs. On survey conducted at the beginning of Entrepreneurship course in Economics Education Program Study at Sanata Dharma University, almost 95% of students showed their reluctance to become entrepreneurs. Some reasons of it were there was no certainty of success, high uncertainty risks, unstable income, etc.

Entrepreneurial intention is defined as individual's willingness to actualize entrepreneurial behaviours, get involved in entrepreneurship activities, be an entrepreneur, or establish new business (Dell, 2008; Dohse & Walter, 2010). Potentials to be an entrepreneur might be possessed by anybody, yet sometimes they are not making any steps to be an entrepreneur in spite of having some entrepreneurial intentions (Mohammad Ismail et al., 2009). According to Birds (1998), entrepreneurial intention referred to a state of individually thoughts for establishing new business, developing new business concepts or creating new values in existing companies. Meanwhile, based on entrepreneurship learning outcomes in recent years, students tend to pursue good marks in cognitive comprehension. They generally are not challenged to think and seek for new and different things in actualizing entrepreneurial characters. As a result, students' learning outcomes tend to be low due to much textual thinking without seeing it in real circumstances. It seems also related to entrepreneurship learning model chosen by the lecturers. Lecturers tend to teach textual entrepreneurship and do not approach them to the real circumstances.

To solve the problem, project-based entrepreneurship learning needs to be implemented in order to grow students' entrepreneurial intention as well as improve their learning outcomes in entrepreneurship course. Project-based learning is a learning model to organize learning in a project. Project is a complex assignment based on either questions or challenging problems. It involves students to design planning, solve problems, make decisions, or investigate; gives students opportunities to work relatively independent in a long term; and results to real product invention or presentation (Jones, Rasmussen, & Moffitt, 1997; Thomas, Mergendoller, & Michaelson, 1999; Thomas, 2000).

## **II. Research Methods**

This piece of research was quasi experimental research (Cresswell, 2014). The research generally aimed to find out the effectiveness of using project-based learning in order to improve students' entrepreneurial intention and entrepreneurship learning outcomes. The research participants were students of Economics Education Study Program, Faculty of Teacher Training and Education, Sanata Dharma University who were taking Entrepreneurship Education course in the even semester of academic year 2014/2015. The number of students who were taking this course was 41 students divided into two classes: experimental class and control class. In the control class, learning was held conventionally by using lecturing and common discussion; while in the experimental class implemented project-based learning.

Data gathering of entrepreneurial intention employed questionnaires; while Entrepreneurship Education's learning outcomes measured by students' final scores. At the stage of learning preparation in experimental class, lecturer developed plans of project-based learning scenario. Learning media was prepared, such as syllabus, lecture unit, learning materials, students' worksheets, and list of learning activities. Learning instruments arrangements were preceded by some observation towards targeted students' situations. Data gathering techniques used in this research were: (i) observations and interviews including observing and detailed taking notes of every event. The next data gathering was interview to be supplementary information for previous observation; (ii) documentation, by studying lecturers' archives, namely students' attitudes notes, questionnaire scores, pre-test scores, attendance, etc.

Hypotheses proposed in this study are: firstly, there is any difference in students' entrepreneurial intention in experimental class compared to control class. It means students in experimental class have higher entrepreneurial intention compared to control class. Meanwhile, the second hypothesis proposed is that there is any difference in students' learning outcomes in experimental class compared to control class. It means students in experimental class achieve higher learning scores compared to control class. Analysis test tool of independent sample t-test with SPSS software version 20 was used to test the hypotheses.

## **III. Research Findings & Discussion**

Experimental research was first begun with learning activities planning by implementing project-based learning in experimental class. On the other side, control class was given conventional learning model which emphasized on lecturing and cognitive mastering. Research was conducted in February-March 2015 on Entrepreneurship Education course. The data processing result of entrepreneurial intentions variable showed that there was significant difference of students' entrepreneurial intentions between experimental class and control class.

**Table 1.** Group Statistics for Entrepreneurial Intention

	Class	N	Mean	Std. Deviation	Std. Error Mean
Entrepreneurial intention	Control class	21	11.52	1.250	.273
	With action	20	18.15	1.182	.264

The average score of variable entrepreneurial intention in control class was 11.52, while it in experimental project-based learning class was 18.15 (Table 1). These averages was significantly difference at alpha 5 percent with the significance level 0.000 (sig 2-tailed) as seen in Table 2. It literally meant that project-based learning implementation on entrepreneurship learning process could improve one’s intention to be an entrepreneur.

**Table 2.** Independent Samples Test for Entrepreneurial Intention

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Entrepreneurial intention	Equal variances assumed	1.195	.281	-17.422	39	.000	-6.626	.380	-7.395	-5.587
	Equal variances not assumed			-17.447	38.999	.000	-6.626	.380	-7.394	-5.858

Meanwhile, the data processing result of students’ learning outcomes variable on Entrepreneurship Education course revealed that its average score in control class was 69.19 and its average score in experimental class was 76.80 (Table 3). Scores gathered from control class were derived from written test scores after the lecture was done; while scores gathered from experimental class were sourced from students’ portfolio assessment. Both scores were the final scores for entrepreneurial course in both classes.

**Table 3.** Group Statistics for Learning Outcome

	Class	N	Mean	Std. Deviation	Std. Error Mean
Learning outcome	Control class	21	69.19	7.567	1.651
	With action	20	76.80	14.497	3.242

Statistical test result showed that there was significant difference of students’ learning outcome between control class and experimental class (sig. 2-tailed 0.040 at alpha 5 percent) as seen in Table 4. It literally meant that project-based learning implementation on entrepreneurship learning process could improve students’ learning outcomes.

**Table 4.** Independent Samples Test for Learning Outcomes

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Learning outcomes	Equal variances assumed	.019	.892	-2.122	39	.040	-7.610	3.586	-14.864	-.355
	Equal variances not assumed			-2.092	28.328	.046	-7.610	3.638	-15.058	-.161

Entrepreneurial intention is increasingly believed as the source of entrepreneurial formation and entrepreneurship growth of a nation. Even the continued impact of entrepreneurial intention development will be the source of economic growth and nation welfare. Meanwhile, it is revealed that in some countries, there were a small number of citizens interested in being entrepreneurs at the earlier age. Mentality tendency to avoid any risks and seek a stable and safe financial often becomes obstacles to grow entrepreneurial intention.

Entrepreneurial intention is defined as individual’s willingness to actualize entrepreneurial behaviours, get involved in entrepreneurship activities, be an entrepreneur, or establish new business (Dell, 2008; Dhose & Walter, 2010). Not many people are interested to be entrepreneurs. Series of factor can influence one’s entrepreneurial intention, such as internal factors: freedom preference, unwillingness of being ordered as an employee, strong willingness to establish own business and serious thoughts of running own business. On the other hand, external factors that can influence one’s entrepreneurial intention are family, peers, background education, etc. In this study, it was proved that any actions received in educational process could grow one’s intention to be an entrepreneur. This was in line with Agustina and Sularto (2011) research findings that needs

of achievements, self-efficacy, and academic outcome are dominant variables that influence students' entrepreneurial intention at economics faculty. Amari Farouk, Abbes Ikram & Bodabbous Sami (2014) research also showed that individual factors (motivation, needs of achievement, needs of freedom, passion to develop the ideas, individual characteristics, work and educational experiences) can influence one's intention to build his own business.

Research done by Zhengxia Peng, Genshu Lu, Hui Kang (2012) also showed similar results. Based on survey of 2,010 students from nine universities in Xi'an, China, researchers concluded that norms accepted by students positively influenced their entrepreneurial attitudes and self-efficacy which all those factors at the end influence their entrepreneurial intentions. This research also studied another factors, such as psychological factors, family background factors and social factors. João J. Ferreira et. al. (2012) also concluded that needs of achievement, self-confidence, and positive personal attitudes also influenced entrepreneurial intention. Then, subjective norms and personal attitudes influenced behaviour control. These findings had significant effects towards knowledge about the contribution of attitudes and psychological theories to grow entrepreneurial intention. Basing on the theory of planned behaviour, Vangelis Souitaris et al (2007) tested entrepreneurship program effects towards entrepreneurial behavior and intention of science and engineering students. It was needed to find out whether or not entrepreneurship education was able to grow students' entrepreneurial intention. Results showed that the implemented program could improve entrepreneurial attitudes and intentions. In the learning process that implemented project-based learning, students did activities in groups; started with observation on their neighbourhood and campus to notice and observe the existing businesses around. Each group was asked to conduct in-depth interview with businessmen to dig some information about the prior businessmen's intention to run their businesses. Then, students were required to provide written report of the observation results and present it to the class. The next step, each group was to create a creative business plan to be actualized soon in a month. Students were really enthusiastic to plan various businesses, such as: culinary, accessories, refilled pot, etc. At the end of the experiment, students were asked to reflect what they had done in the project. In general, students felt being helped to recognize their self-potentials so that it initiated their interests in entrepreneurship.

Regarding learning outcome variable, this study showed that the implementation of project-based learning can definitely improve students' entrepreneurship learning outcomes. Activities done by students in this study were started by brainstorming idea to arouse any business opportunity in their surroundings. In groups, students were asked to identify any existing business opportunities, yet also explore any possible opportunities to create. After that, students systematically designed a creative business based on previous observation with the assistance of lecturers.

Scheduled meeting was held every week to monitor its project progress, from plans, productions, marketing, finance, etc. During the process, students showed their enthusiasm to create the products even though they encountered some problems. Some dominant problems that hampered their efforts were: not being accustomed to creative thinking and acting, reluctant to take a risk, afraid to start a business, etc. Nevertheless, the problems could be well-solved. This state was known from students' reflection while working on project. They encountered many problems indeed yet by implementing this learning project, they were highly assisted to comprehend what entrepreneurship is. Assessment of project-based learning prioritized students' skill in managing in order to finish their chosen and planned project, its project relevance to learning topic, and also its project originality. Assessment aspects in this project were idea uniqueness and usefulness, product excellence, whether the product met public needs, profit potential, business sustainability, schedules, and tasks division within group, completeness and suitability of budget arrangement. For project final report, assessment was emphasized on suitability of expense and market demand, success of the used method, suitability of weekly report, implementation suitability, group cohesiveness, and potentials of product development to have patent and commercial opportunities.

Project-based learning implementation was in line with Piaget's notion about education philosophy. Piaget stated that people's knowledge will develop when facing new experiences that force them to either improve or modify the previous knowledge. In line with Piaget's, Vygotsky also stated that individual intellectual development is face-to-face with new and challenging experiences, then trying to solve the problems aroused from those experiences. These two notions became the base of constructivism theories which emphasized on individual's own knowledge development by employing experiences and cognitive structures (Wrigley, 2003). Education philosophy can become a good base to conduct project-based learning. Project-based learning is basically an innovative learning model, emphasizing on contextual learning through complex activities. This learning model involves students to have problem solving activities and other fruitful tasks, gives students opportunities to work independently in constructing knowledge which results to authentic and valuable products. The following are project-based learning characteristics: (a) students as problem solvers and framework designer; (b) unsolved problems; (c) students as process designers to achieve the goals; (d) students are responsible to gather and process the information; (e) continuous evaluation; (f) students regularly look back

of what they have done; (g) final results in the form of product and its quality evaluation; and (h) class atmosphere that tolerates fault and change. This result was in line with research done by Dewa Kadek Dwi Manggala Putra et. al. (2015). The research applied project-based learning to improve students' learning outcomes with research participants were grade X students at SMA Negeri Singaraja. Implementation of this project-based learning proved that it could improve students' learning outcome.

#### **IV. Conclusion and Recommendation**

The implementation of project-based learning proved that it could improve students' entrepreneurial intention and students' entrepreneurship learning outcome. Students were really help to find out their self-potentials as well as inspire them to enter a field of entrepreneurship. Project-based learning implementation assisted students to comprehend entrepreneurship materials and relate them to a business real operation. Generally speaking, students positively responded to this learning model implementation. Project-based learning can be used as an alternative to solve learning problems. However, to obtain maximum results, like other learning methods, project-based learning implementation needs to consider material characteristics being taught. Not all materials or concepts in economics are appropriate to be taught using project-based learning. Teacher's accuracy is considered very important to arrange learning scenario.

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