IMPLEMENTATION OF THE ENTREPRENEURSHIP LEARNING MODEL BASED ON BUSINESS PROJECTS FOR THE DEVELOPMENT OF THE TECHNOPRENEURSHIP SPIRIT AMONG STUDENTS

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ABSTRACT

The learning approach for entrepreneurship based on business projects is more appropriate for current times because students can practice business according to their interests and will lead to the three domains of learning: cognitive, affective, and psychomotor. The aim of learning entrepreneurship based on business projects is to instill entrepreneurial attitudes and motivations, and for students to be able to understand the focus of the material being discussed, because the learning materials are more easily followed. This research is a descriptive research. The research population is the entirety of students of the State Polytechnic of Malang, while the sample is composed of 50 people, which is determined through purposive sampling. Data was collected by questionnaire, interview, and observation, using comparative analysis. Research results showed that the entrepreneurship learning model based on business projects have a greater learning objective achievement compared to the conventional entrepreneurship learning model. The other word that the project-based entrepreneurship learning model had a stronger effect on increasing entrepreneurial knowledge compared to the conventional entrepreneurship learning model. as such, the application of the entrepreneurship learning model based on business projects can be made to be more effective in the future.

Keywords: entrepreneurship, technopreneurship, project-based learning model

I. INTRODUCTION

Quality education covers educational standards and the abilities of the education system, both managerial and professional technical, to increase learning abilities (Suryadi, 1992). Thus educational (vocational) graduates should not only be focused on the preparation to become employees in the working world, but also be instilled to have the will to become an entrepreneur. This becomes the responsibility of educational institutions in imparting the values of independence, including making entrepreneurial values truly a part of students' interests (Salladien, 2006).

Riyanti (2002) found that the characteristic variables of entrepreneurs, composed of instrumental attitude, achievement, smooth communication, hard work, self-confidence, taking risks, self-control, innovation, and independence, are proven to have a positive and significant influence on the formation of innovative behaviors. In turn, innovative behaviors have a direct and significant effect on success in business, and in the end can foster entrepreneurship among students, which they can then apply in entrepreneurship activities to fulfill their life needs. As a result, teaching materials need to be composed in a modular format with reference to constructivist learning of entrepreneurship skills.

Thus far, the "mismemes" in education (Kovalik, Susan & Olsen, Karen, 1994) have been proven apparent: "1) All students learn in the same way, 2) Yesterday's curriculum is good enough for today, 3) Words create knowledge, 4) Acquisition of knowledge and skill is goal of education, 5) Textbooks equal curriculum and instruction, and 6) Changing one aspect of the system is sufficient".

Entrepreneurship courses have only been targeted for theoretical learning. On the other hand, research carried out by educational experts (Kovalik, Susan & Olsen, Karen, 1994) had shown that "we learn and retain as follows: 10 percent of what we hear, 15% what we see, 20% what we both see and hear, 40% what we discuss, 80% of what we experience directly or practice doing and 90% of what we attempt to teach others". As such, learning targets of courses must fulfill the three domains of knowledge, skill, and attitude. The results of learning through this course should be that students, from the standpoint of entrepreneurial concepts, must be able to understand that entrepreneurial skills must be possessed and entrepreneurial attitudes must be formed in order to become an entrepreneur.

Based on the explanation above, there needs to be a development for an entrepreneurship learning model based on business projects for students of the State Polytechnic of Malang.

1.1. Problem Formulation

These are the formulations of the research problems:

a. How can a model for entrepreneurship learning based on business projects for instilling entrepreneurial spirits of students of the State Polytechnic of Malang be applied?
b. Are there differences in the entrepreneurial spirits of students of the State Polytechnic of Malang between those that are taught by the developed entrepreneurship learning model based on business projects and those that are classically taught?

2. LITERATURE REVIEW

2.1. Previous Research

A research by Maskan and Purmiyati (2003) on the factors that affect the interest of students in entrepreneurship had found that the internal factors that affect the interest of students in entrepreneurship are personality and motivation. Meanwhile, the external factor that most affects the interest of students in entrepreneurship is the family environment.

Analysis had been conducted on the effect of attitude, motivation, and parental occupation background on the interest in becoming an entrepreneur (Rulirianto and Maskan, 2007). This research had the objective of seeing how far the attitudes, motivations, and potentials of vocational high school students in becoming entrepreneurs had been formed. Data was collected through the instrument of a questionnaire. Based on the data analysis, these results were obtained: (1) attitudes, motivations, and potentials of high school students in becoming entrepreneurs are very much affected by the occupation background of the occupations of the parents of the students and the method used by the teacher in the entrepreneurship class, and (2) students of Chinese ethnicity have greater attitudes, motivations, and potentials to become entrepreneurs because the occupations of their parents are entrepreneurs.

A research by Maskan and Herijanto (2007) titled "The Development of a Constructivist Entrepreneurship Learning Model in the Department of Financial Administration of the State Polytechnic of Malang" found that the learning model of the entrepreneurship course that used the approach of direct observation by students of the business practices of the enterprises found around where they live can actually construct understanding of more realistic entrepreneurial knowledge, attitudes, and skills and result in higher achieved objectives of the entrepreneurship course.

A research by Maskan (2009) on the development of an entrepreneurship learning model based on portfolios at a vocational high school in the City of Malang showed that entrepreneurship learning using various methods and approaches such as the conventional approach, discussions, and enterprise observations, as well as various learning media such as books, notes, newspapers, business magazines, radio, television, and the Internet can increase entrepreneurial attitudes and competence of vocational high school students in the City of Malang**.**

A research by Maskan and Fauzi (2013) on the development of an entrepreneurship learning model based on the Learning Management System (LMS) at the State Polytechnic of Malang showed that entrepreneurship learning based on the LMS can increase learning objective achievement because it was supplemented by learning materials that students can obtain anytime over the Internet.

2.2. Project-Based Learning

Project-Based Learning is a constructive learning approach for in-depth learning with a research-based approach on problems and questions that are substantial, actual, and relevant for life (Barron, B. 1998, Wikipedia, in Yudipurnawan, 2012). Several criteria need to be considered in the implementation of project-based learning. According to Thomas cited by Sofyan (2006: 298), there are five criteria of project-based learning, which are centralization, focused on questions or problems, constructive investigation, student autonomy, and realism.

2.3. Advantages of Project-Based Learning

One of the advantages of the project-based learning model is that the implementation of project-based learning can improve student learning results in

development courses based on audio media. Courses that utilize the approach of project-based learning can improve the activeness, seriousness, and cooperation of students over the progression of the course.

2.4. Targets of Project-Based Learning

According to Abdulrozak (2012), in the project-based learning (PBL) model, students are made to be involved in solving the assigned problems, allowed to be active in constructing and organizing learning, and shaped to become realistic students. Learning by PBL has the targets of curriculum, responsibility, realism, active learning, feedback, general skills, driving questions, and autonomy.

2.5. Benefits of Project-Based Learning

Moursund, Bielefeldt, and Underwood (1997), as cited in Hafismuaddab (2012), researched a number of articles on course projects which may be considered as testimonial for the teacher, in particular how teachers use projects and their perceptions of success. The benefits of project-based learning are (1) increased motivation, (2) improved problem-solving skills, (3) improved collaborative skills, and (4) improved skills in managing sources.

2.6. Principles of the Project-Based Learning Model

The method of project-based learning has the following principles:

a. Basic science – with this learning, students will obtain basic knowledge about entrepreneurship.
b. Constructivism – students are taught about the basic nature of human learning. Through constructivism, learning is about constructing understanding or knowledge.
c. Responsibility – students are imbued with a sense of duty to complete on time the assignments given by the lecturer.
d. Active learning – all activities in this kind of learning involve all of the activities of the student.
e. Realism – within project-based learning of entrepreneurship, there is always an emphasis on realistic things in everyday life.

f. Feedback – the presented results of investigation are open for responses from other students, in the form of questions, comments, or further discussion.
g. Driving question – within project-based learning of entrepreneurship, every project to be undertaken usually arises from a question or a case that presents a problem to be answered or solved.
h. General skills – within project-based learning of entrepreneurship, students will develop the skills of finding problems, conducting investigations, and discovering solutions to the issues which the projects are based on.
i. Autonomy – within project-based learning of entrepreneurship, each student possesses autonomy to conduct investigation and find solutions according to the issues the projects are based on.

2.7. The Meaning of *Technopreneurship*

Technopreneurship is defined through the Merriam-Webster Online Dictionary (http://www.m-w.com/dictionary/technopreneur) "Technopreneur" is "an entrepreneur whose business involves high technology." Technology can be separated to technology and high technology (hi-tech). Thus "Technopreneurship" has a broader scope than "IT-preneurship" which only deals with IT or ICT. "Technopreneur" is a blending of "technology" and "entrepreneur". These two terms refer to the presence of a technological component of business (enterprise) activities.

The concept of information technology in an entrepreneurial context based on information and communications technology, or conducting a business (enterprise) in the field of technology is referred to as an IT entrepreneur, IT-preneur, or Technopreneur. All of these aforementioned terms deal with successful entrepreneurs that are able to conduct "technology business".

3. RESEARCH METHODS

This research, based on its methodology, is considered a descriptive research. The variable of this research is the variable of application of the project-based entrepreneurship learning model with an exhibition approach.

The population in this research is all State Polytechnic of Malang students in their sixth semester. The sample was taken by purposive sampling to a number of 50

students, composed of 27 male and 23 female students. Data collection was performed through interviews with students, lecturers of the entrepreneurship course, and experts in the field and technologies of learning; documentation of lesson plans and the unit of entrepreneurial events at the di State Polytechnic of Malang; and observation of the execution of business exhibition. Data analysis techniques utilize descriptive qualitative analysis and comparative analysis. Proportional difference testing is also conducted between the classical and project-based entrepreneurship learning models with the achievement of entrepreneurial spirit aspects.

4. RESEARCH RESULTS AND DISCUSSION

The project-based entrepreneurship learning model with a business practice approach was executed by holding a business exhibition with various interesting products, where all activities related to the exhibition, including determining the type of business to exhibit, laying out the exhibition, and finding equipment, are managed by students, who are divided into groups composed of three to four people. The business exhibition was held on March 30, 2017, from 8 AM to 2 PM. The business exhibition was opened by the Head of the Department of Financial Administration of the State Polytechnic of Malang. The visitors and consumers of the exhibition were the lecturers and students of the State Polytechnic of Malang.

Research results also showed that the project-based entrepreneurship learning model had a stronger effect on increasing entrepreneurial knowledge compared to the conventional entrepreneurship learning model. This is shown by the average score of entrepreneurial knowledge with the project-based entrepreneurship learning model, which is 3.620 (significant), while the average score with the conventional model is 3.503 (significant).

This research supports the results of research by Widiastuti, Saliman, and Wibowo (2015) that the character of students of UNY suits being given an entrepreneurship learning process based on business practices. Based on the results of the research that was conducted, the characteristics of students in conducting business practices was found to be hard-working, honest, responsible, independent, creative, action-oriented, confident, disciplined, cooperative, patient, smart, optimistic, tolerant, spirited, communicative, polite, innovative, risk-taking, friendly, and

religious, among others. The characteristics with the highest scores were hard work and honesty. These characteristics are able to be internalized within students through business practices, because in practicing business, students are demanded to act honestly and always work hard. Fundamentally, all the characteristics are important to be possessed and developed by the students and to be implemented in everyday life. These characteristics are expected to grow and develop not only as students practice business but also as they become internalized within students as time progresses. Students who possess the characteristics of hard work and honesty are expected to not easily give up under circumstances and to be able to become students with high quality and competitive nature.

Pramono (2004) explains that this achievement is supported by an appropriate learning strategy that pays attention to the potentials, needs, and learning interests of each individual; the difference is priority on independent learning, though a tutorial model is also necessary. Tutorial is only needed to provide the basic conceptual framework and knowledge that students need. Further on, the methods of inquiry and discovery, as well as problem-solving, are prioritized. This may be used to foster attitudes of strength, persistence, always finding solutions, daring to taking risks, understanding the ever-changing real world, constantly facing changes, and finding opportunities from these changes, of which all of these are necessary for an entrepreneur. In this way, the learning experience of students become more beneficial to fulfill their interests and learning needs. The expectation is that the knowledge of students becomes more in-depth and becomes beneficial for their lives, and that students are able to develop confidence and trust, to see current and future problems, to see opportunities they may capitalize on, and to create new things. The final goal of this stage is to form a positive attitude of entrepreneurship. In line with this, Jones and English (2004) stated that entrepreneurship education is a process of forming an individual that possesses the ability to recognize commercial opportunities in depth, the desire to explore oneself, and the knowledge and skills of managing certain enterprises, by providing the foundations of recognizing opportunities, counting profits through concepts, compiling resources and its risks, and starting new enterprises. In this program, the processes and responsibilities of learning that occur transfers to a student-centered learning process, where this learning method provides a

challenge in the tendency to teach practices. This method of learning with a practical approach, according to Gartner (2006) will give rise to student abilities to compose narration of how and what enterprises should be from the entrepreneurial experiences of other people in order to come up with ideas to shape their mental narration of entrepreneurial knowledge.

In regard to the relation of entrepreneurship learning processes in forming the entrepreneurial competence of students, Imtikhana (2003) explains that one of the factors that support the preparedness of students to create enterprises is the learning achievements that are oriented to entrepreneurial competence. This is affirmed by the results of research by Suparman (2003), where it was found that there is a correlation between entrepreneurship learning with the interests of participants to start enterprises. Senge (2000) stated that learning experience can develop the potential of learning participants to be used in solving actual problems in life. Hamalik (1990) meanwhile stated that one of the dimensions to increase and foster different kinds of enterprises is to develop the work skills needed to carry out occupational tasks in the field of work appropriate to the interests and abilities possessed by a person. This is affirmed by the results of research of Subkhan (2002) who found that entrepreneurial competence at the vocational high school level indicates a positive correlation between entrepreneurial knowledge and competence in the field of productive skills.

Meanwhile, Man *et al.* (2000) explains that in general there are five areas of entrepreneurial competence: a) opportunity competencies, which concern competencies related to the ability to recognize and develop market opportunities through various ways; b) relationship competencies, which are competencies related to the ability of interacting with individuals or groups, for example in the contexts of cooperation and trust, the use of relationships and connections, the ability to negotiate, communication skills, and interpersonal relationships; c) conceptual competencies, which are competencies related to the ability to create concepts, usually reflected in abilities to understand problems, take in information, and make business decisions; d) strategic competencies, which are competencies related to the confirmation, evaluation, and application of goal achievement strategies of the enterprise; and e) commitment competencies, which are competencies related to the

seriousness of a person in undertaking and developing the enterprise in a continuous manner.

Considering these entrepreneurial characteristics and competences, it appears that it would be hard to achieve the formation of entrepreneurs, especially if the learning process continues to use classical learning strategies (Pramono, 2004). For that, what needs to be considered in evaluation is not simply the final results of learning, in particular its quantitative aspect; as stated by Chittenden (1991), evaluation should be intended to achieve several objectives such as keeping track of, checking up, finding out, and summing up the entirety of the learning process that is taking as well as has taken place, and a good evaluation also must be able to have the functions of motivation, thorough learning, learning effectiveness indicator, and feedback (Majid, 2006).

As is characteristic of project-based entrepreneurship learning, the lecturer plays the roles of both motivator and facilitator. As a motivator, Winarno (2007) stated that evaluation of learning that aims to create graduates with entrepreneurship mentality should be done at each stage of the learning process in order to find out how students have developed along all stages of development of entrepreneurship values as well as their skills in doing business; in this function, evaluation must become encouragement for students to gradually achieve the learning objectives. To carry out the function of thorough learning, the key is to find out if the student has mastered the abilities that should be possessed; in this case, thoroughness depends on its measure. The results of this research have indicated that a productive educational and training course does not show many problems considering that student achievement is sufficient, but the thoroughness in forming graduates that possess high entrepreneurial values still becomes an important issue. As for evaluation as an indicator of effectiveness and feedback, the learning of ignored values may cause the focus of evaluation to become less relevant in the effort to form graduates that possess entrepreneurship values.

5. CONCLUSION AND SUGGESTIONS

These are the conclusions of this research: (1) Student opinions of entrepreneurship learning based on business practices through business exhibitions

are in a good category (2) Entrepreneurship learning based on business practices through business exhibitions has a greater score in terms of mastery of entrepreneurial knowledge compared to the conventional entrepreneurship learning model, and (3) The knowledge obtained by students in entrepreneurship learning based on business practices are management, business planning, financial management, management of marketing, operational management, and human resource management, among others.

6. IMPLICATIONS, LIMITATION AND FUTURE RESEARCH

Meanwhile, improvement related to entrepreneurial attitudes involve honesty, hard work, responsibility, independence, creativity, action orientation, confidence, discipline, cooperation, patience, intelligence, optimism, tolerance, spirit, communication, politeness, innovation, taking risks, friendliness, and religiosity.

To improve the results of the project-based learning model with a business exhibition approach, these are the suggestions: (1) Information about the business exhibition should be spread so that the people around the State Polytechnic of Malang; (2) The location of the exhibition stands for the business exhibition should have a larger space so that the layout of the exhibition becomes more interesting, and (3) The schedule of the business exhibition should be adjusted according to the course schedule of the students so that students can focus more on the exhibition and the exhibition does not interfere with other course activities.

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