

The Linkage of Constructivist Learning Model with The Purpose of Building Entrepreneurial Intentions

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Abstract-*The research objectives is to analyze the linkage of constructivist learning model on entrepreneurial intention. The research population is all students of Vocational High School (VHS) in Malang Regency, East Java, Indonesia with sampling technique of simple random sampling from 11,505 students. The sample size is 200 students. Primary data was analyzes by structural equation model and test of significance. The result shows that the constructivist learning model influences the formation of the entrepreneurial intention. It means that, the learning model really becomes a new approach to build entrepreneurial intentions. In other word, in order to create young entrepreneurs, it necessary to apply constructivist model in the learning process at vocational high school.*

Index Term-*Learning Model, Constructivist, Intentions, Entrepreneurial*

1. INTRODUCTION

1.1 Background of the Study

The opportunity of entrepreneurship in the dynamics of changes in macro factors lately may be finding its best momentum. This happens because every change is sure to bring up various business opportunities. Moreover, it has to go through various innovations that lead to the production of quality products and services, which is a necessity of all markets. Joseph A. Schumpeter (1883-1950), argues that in the fast changing era seems to be the best momentum to do various efforts, especially innovative ones. When everything is in difficult one, it demands the spirit to break the deadlock of the system through innovative and creative (creative destruction) ways. In this case, it required good entrepreneurship skills. Unfortunately, the development of the education in this country is less able to produce graduates who have high entrepreneurial spirit.

In the meantime, the central and local governments through the education offices as the leading sectors are focused on vocational education development

only, whose graduates are just more ready to work for others than independently or for themselves. Although thousands of vocational schools High School were established in this country, the implication of the policy does not much help to reduce the unemployment rate. The graduates, furthermore, are very dependent on the availability of the employment opportunities. Consequently, the phenomenon of the problem must be overcome immediately by applying an educational model that encourages students to be entrepreneur. Based on the result of a research, it revealed that the kind of educational model can only be done through constructivist learning model (Zebua, Masidin & Jama (2015).

Based on the data from Education Office of Malang City, there are 148 Vocational High Schools in this region. The number of active students is 11,505 students. A relatively large number of young people, supposed they are provided with entrepreneurship, they will be a great regional asset. Even, it will also reduce the burden of local government in relation to the provision of employment opportunities. Then the school graduates will become more productive human resources and do not depend on the job vacancies, which are more difficult recently. Then, from the result of survey, it showed that almost 95% of vocational graduates work on others and only 5% who work independently. Interestingly, the average number of each school graduate ranges from 1-3 people are independent entrepreneurs even business owners. In relation to the aspect of employment absorption, it can be considered relatively good, amid the difficulty of getting job opportunities.

However, the young entrepreneur is faced with many problems. The growth is relatively slow as a result of its management is too far from efficient, meanwhile the quality does not change rapidly. They work away from the touch of modern management. The increasing of the relatively similar large-scale business that offers more interesting products and services. As a matter of fact, this reality becomes a serious threat that can interfere not only its

sustainability, but also its contribution to the employment aspect, especially, the possibility of increasing the poverty rate as a result of the potentially bankrupt business flow.

Based on the fact, the building and creating young entrepreneurs who have high spirit seems to be an urgent need for the students of the school in Malang. However, it must be remembered that the increasing of market opportunities will be followed by the increasing of competition in the market climate. So, the effort should be done in order to develop constructivistic learning model that empirically can build the intention of entrepreneurship. Consequently, it can encourage the school graduates into a new generation of promising and more sophisticated entrepreneurs.

1.2 Research Problem

The number of unemployment in Malang, East Java, Indonesia increase each year. At the end of 2016, based on the Central Statistics Agency, the number of unemployment in this region is 15%. Of course, this condition is unfavorable to the regional economy. Even, it has several implications that create many social problems, such as poverty, criminality and so forth. For that, the local government should respond this social problems by creating young entrepreneur.

1.3 Research Objective

The research objective is to analyze the linkage of constructivist learning model in relation to the entrepreneurial intentions of students at Vocational High School at Malang, East Java, Indonesia.

1.4 Significance of the Study

The output of this study will be an important information for local government, particularly in order to reduce unemployment in Malang, East Java, Indonesia.

2. LITERATURE REVIEW

2.1 Theoretical Foundation

2.1.1 Entrepreneurship

Hisrich, Peters, and Sheperd (2008) interpret entrepreneurship as a process of creating something new at value, using the time and effort required, taking on the financial, physical and social risks that accompany the receiving monetary rewards generated, as well as the satisfaction and personal freedom. Entrepreneurship can also be defined as the taking risks to run our own business by exploiting opportunities to create new businesses or with innovative approaches so that the managed businesses grow large and independent in the face of competitive challenges.

Entrepreneurs are different from managers. Nevertheless the duties and roles can complement each other. An entrepreneur who opens a company

must use managerial skills to implement his vision. On the other hand, managers should use the skills of entrepreneurs to manage the change and innovation. According to Kao (1989), the general position of the entrepreneur is to place himself at risk for the shocks of the company he is building (venture). The entrepreneur poses the risk of his own finances or the financials of others entrusted to him in starting the business. He is also at risk of negligence and failure of his business. Instead managers are more motivated by the goals charged and compensation (salary and other benefits) that will be received. A manager is intolerant of uncertain thing and confusing and less risk-oriented than entrepreneurs. Managers prefer salaries and positions that are relatively safe in work. Entrepreneurs have more intuitive skills in considering a possibility or feasibility and a sense of submission to others. On the other hand, managers have rational and detailed-oriented skills. The very classic debate is the debate whether the entrepreneur is borned, causing someone to have an outward talent to become an entrepreneur or otherwise an entrepreneur being formed or molded. Some scholars argue that the entrepreneur is partially asserted. So, the entrepreneur can be shaped by various examples and arguments. For example, a person does not have a higher education but now he is a big national counselor. On the other hand, there are many leaders or owners of highly educated companies but its reputation has not exceeded the person.

Another opinion is that the entrepreneur can be established through an entrepreneurial education or training. For example, after the Second World War some American war veterans learned entrepreneurship. They learn entrepreneurship through an education or training either education / short training or tiered education / training. They run the entrepreneurship based on their knowledge and other facilities. Samuel Walton, Walmart founder, becomes the world's largest retailer now. He is a veteran who started his business at the age of 47. In addition, Ross Perot, Texas Instrument founder, once ran for the US president of an independent party, was also a successful veteran to become an entrepreneur. Some people say that someone who becomes an entrepreneur is caused by the environment. For example, many descent citizens become successful entrepreneurs because they live in the environment of entrepreneurs or business actors. A very moderate opinion does not contradict whether the entrepreneur is born, shaped or because of the environment. The opinion states that to be an entrepreneur is not enough just because of talent (born) or simply because it was formed. The success entrepreneur is a talented entrepreneur who is subsequently formed through an education or training, and lives in an environment related to the business world.

A talented person who is not formed in an education/training, he will not be easy to do entrepreneurship at present. This is because the business world in this era faces problems which are more complex than the previous era. Conversely, a person whose talents have not been seen or hidden when he has a strong motivational interest, he will be easier to be formed into an entrepreneur. Those who want to learn the entrepreneurship should not be guided by having talent or not. The important thing is that he has a strong interest and motivation to learn the entrepreneurship. Like the fungus in the rainy season, now the term constructivism widespread increasingly in the world of education. The widespread of the term constructivism seems to be in line with the confusion of educational institutions, especially, in applying the practical level of education.

2.1.2 Constructivism

According to Brooks & Brooks (2007) constructivism is more of a philosophy and it is not a learning strategy. Constructivism is not an instructional strategy to be deployed under appropriate conditions. Rather, constructivism is an underlying philosophy or way of seeing the world.

Even in the further explanation, constructivism is regarded as a theory of knowledge with the roots in philosophy, psychology and cybernetics. The definition of radical constructivism always forms the conception of knowledge. The knowledge is seen as something that actively accepts everything whether through the mind or through communication. It is actively acknowledged by building knowledge. Cognition is adaptive and allows something to organize the experience of the world but it is not to find a reality purpose. Contrastively, the view of the objectivist refers that knowledge is stable because the essential richness of the object of knowledge and it is relatively unchanging. Thus metaphysically the objectivist assumes that the world is real, it is structured, and the structure can be modeled for students. The objectivist still believes that the purpose of mind is to mirror. Then the reality and its structure through the thought processes can be analyzed and decomposable. It means that it is produced by thinking processes beyond the learner, and determined by the structure of the real world.

This is in contrast to the constructivist view which assumes that knowledge and reality have neither an absolute goal nor value. In addition, we have no way of knowing this fact. Von Glasersfeld (2013) points to this relationship with the concept of reality: It consists of a network of things which has relation one to another. Furthermore, we rely on our lives, and others are equal to it, and we believe that others will do it too (Murphy 1997: 7). Students interpret and build a reality based on their interactions and experiences with the environment instead of

thinking about truth in relation to a match with reality. Also, it focuses on constructivism's continuing ideas, concepts, models, theories, and so on. Thus it can be distinguished between radical constructivism, social, physical, evolutioner, postmodern constructivism, social constructivism, information-processing constructivism, and cybernetic system constructivism (Ernest, 2015).

Thus the scope of epistemology of constructivism is clearly so wide and difficult to get the name. It depends on the reader since he may get a slightly different interpretation. Nevertheless, many writers, educators and researchers seem to have agreement on how this constructivism epistemology should be able to influence learning and educational practice. The following section reminds us the meaning of constructivism in learning. It is important for a consideration when he takes a certain form of activity. By providing the aspect of curiosity as part of his academic appetite, it is equally important to understand the meaning contained in the improvement of a learning system. This may provide something more useful, solid, and convincing as a better alternative approach of learning.

Furthermore, theoretically, the constructivist learning model is a learning approach centered on learners, which gives the students the freedom to be creative and explore ideas. Entrepreneurship, on the other hand, is an attitude that encourages a person to be creative and dare to take risks for his actions. Thus, the temporary conclusion can be stated that theoretically constructivist learning model has an impact on the intention of entrepreneurship. This theory is then reinforced research results of Hsiao (2012) in his article "Is entrepreneurial education available for graduates?". This reveals that entrepreneurship education can be done through constructivist learning model, especially on the subjects of social sciences.

In addition, Arpiyanen (2013) in his article "The Sources and Dynamics of Emotions in Entrepreneurship Education learning Process", reveals that entrepreneurial intentions can be built through learning models. Then, Aydin (2013) in her article "Learner Acquisition and Its Relationship with Constructivist Learner in Canada" states that constructivism learning model has a real impact on creative behavior and innovation. Lans et al. (2013) in his article "Learning For Entrepreneurship in Heterogeneous: Experience From Higher Education Program", explains that entrepreneurial intentions can be built with constructivist learning. This research is done on learners at several universities in Hong Kong.

The results of this research is strengthened by Boghasoa (2014) in his article "Applicability of Constructivist Theory in Qualitative Educational Research" which revealed that the model of constructivism learning has influence on the creative

behavior and encourage the formation of entrepreneurial culture. The other research results, Illie (2014) in the article "Developing entrepreneurial competencies in students through constructivist education" explains that entrepreneurial skills can be built through constructivistic learning. This increasingly becomes a reinforcement of the importance of constructivist model for the younger generation.

Some of the research findings are more and more logical because of the support of new research findings by Earnest (2015) in his article "Towards Entrepreneurial Learning Competencies: The Perspective of Built Environment Students" clearly states that entrepreneurial competence is built through learning that encourages creative behavior, known as constructivism. Moreover, the recent research by Zebua, Masidin & Jama (2015) in his article "Developing the Active Learning Model to Improve the Effectiveness Study Group on Entrepreneurship in Higher Education" reveals that the active learning model as the characteristic of a constructivist has a significant effect on the entrepreneurship. This, in further, reinforces that the linkage of constructivist is very closely in the formation of entrepreneurial intention attitude. Thus, based on some of these studies, presumably, the hypothetical formulation of the constructivist learning model seems to have a significant effect on the intention of entrepreneurship.

3. RESEARCH METHODOLOGY

3.1 Research Design

The research design uses the exploratory research with quantitative approach. It applies the surveys on assessment of development models which have been implemented. Then based on the results of the study, it is developed an adaptive constructivist learning model that can build entrepreneurial intentions. While the operational definition of research variables and indicators are (a) the constructivist learning is a learning model whose learning approach is centered on learners by giving students the freedom to be creative, exploring ideas and upholding the attitude of tolerance and social empathy towards the diversity of the intelligence and talents and (b) the entrepreneurial intention is one's desire and attitude to produce something new by having courage to take the risks and uncertainties in order to achieve profit and growth by identifying opportunities and combining the necessary resources in order to make them happen.

3.2 Sampling technique

The population in this study is all of the students of Vocational High School in Malang, East Java, Indonesia, with a total of 11,505 active students. The

simple random sampling was used in this research. To obtain the primary data, the preparation of the questionnaire is conducted first. then it was distributed vocational 200 students as a minimum requirement of structural equation model analysis. The primary data are analyzed by regression weight which is used to confirm how big the relationship between research variables is.

4. DATA ANALYSIS

4.1. Descriptive Analysis

Based on the data from the Department of Education Malang 2016, the number of vocational schools both public and private sector in Malang City there are 148 units. In addition, the number of active students is 11,505 students. A relatively great number of young people when they are provided with entrepreneurship will become a great regional asset. In fact, it will also reduce the burden of local government in relation to the provision of employment opportunities. The school graduates will become productive human resources then do not depend on the job vacancies, which recently they are more difficult to find.

The number of samples in this research activity is 200 students. Based on the results of the study it was found that the respondents consisted of 66% male and 44% female. In more detail, it can be explained in table 1 below:

Table 1. Respondents Identity

No.	Gender	Total Respondent	Percentage
1	Male	132	66%
2	Female	68	44%
Total		200	100%

Source: Primary Data Processed, 2017

Furthermore, the descriptive analysis is an analysis that aims to describe respondents' perceptions on all research variables consisting of constructivist learning and entrepreneurial intentions. The average graph of respondents' responses to the recapitulated variables from the results of questionnaires distributed on 200 student respondents in SMK se Malang Raya presented in the figure 1 are as follows:

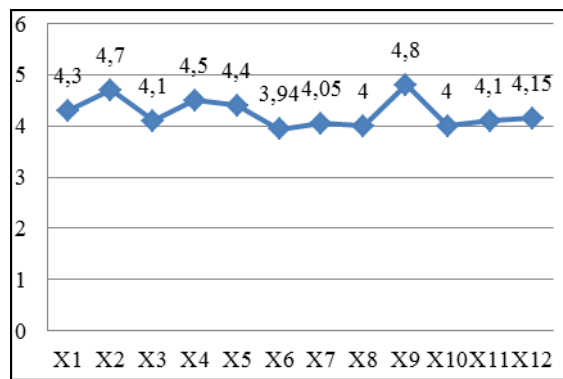


Figure 1. Student Response

Source: Primary Data Processed, 2017

Based on the figure 1, it was revealed that the response of 200 respondents to the research variables consisting of 12 indicators showed relatively good enough. This is because of the response ranges from a score of 3.94 to 4.80. The highest response is in x9 which is the risk taking indicator of the entrepreneurial intention variable. As for the constructivist model of learning model, the highest is X2 indicator ie sharing idea.

4.2. Inferential Analysis

Furthermore, the results of inferential analysis is shown by the path diagram of the relationship of the constructivist learning model with the entrepreneurial intentions, as follows:

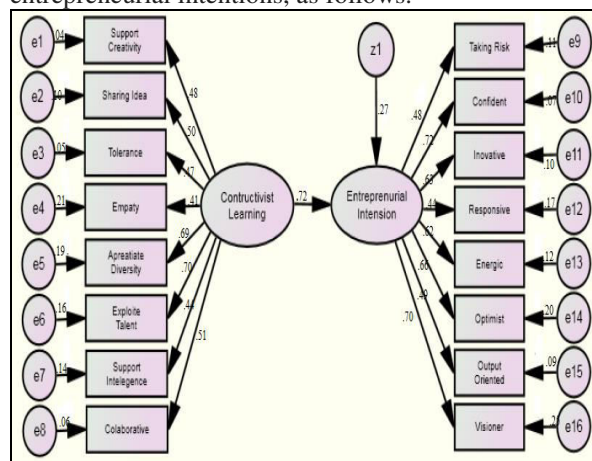


Figure 2. The Linkage of Constructivist Learning with Entrepreneurial Intentions

Source: Primary Data Processed, 2017

Based on the figure 2 it is revealed that there is a positive influence between constructivist learning with the intention of entrepreneurship with coefficient of 0.72. While the feasibility test of the relationship of the two research variables described in the Goodness of Fit Index table in table 2.

Table 2. Goodness of Fit Index

The Linkage of Constructivist Learning with Entrepreneurial Intentions

Goodness of	Cut-off	Value	Model
X ² - Chi-square	P=5%, Chi-Square 68.673	17.226	Good
Significance Probability	≥ 0.05	0.083	Good
RMSEA	≤ 0.08	0.079	Good
GFI	≥ 0.90	1.030	Good
AGFI	≥ 0.90	0.955	Good
CMIN/DF	≤ 2.00	1.804	Good
TLI	≥ 0.95	0.990	Good
CFI	≥ 0.95	0.917	Marginal

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The source of pimer data is processed, 2017

From Table 2, it can be seen from the significance level of 0.083, indicating that the null hypothesis states that there is no difference between the sample covariance matrix and the estimated population covariance matrix can not be rejected. Other indices also show good levels of acceptance.

Therefore this model is acceptable so it can be stated that there are two different collisions with dimensions. The other model conformity indexes such as RMSEA (0.079); GFI (1,030); AGFI (0.955); CMIN / DF (1.804); TLI (0.990) and CFI (0.917) provide sufficient confirmation for acceptability of the unidimensionality hypothesis. The above two variables may reflect the latent variables analyzed.

Furthermore, the test is conducted to find out whether a variable can be used together with other variables to describe a latent variable being studied. The stages of analysis is used as follows:

a. Lambda Value or Factor Loading

The required Lambda value has to reach greater than or equal to 0.40. If the lambda value or the loading factor is lower than 0.40 then it will be considered that the variable is not dimensionless with other variables to explain a latent variable. The Lambda value for the variables in this confirmatory analysis explains that the ISFs financials is 0.54; 0.49; and 0.70. Thus it can be concluded that these variables simultaneously present the unidimensionality for latent variables.

b. Weight Factor (Regression Weight)

This analysis is conducted to find out how strong the dimensions that form its latent factor by using test to regression weight generated by model. Seen from these results, each indicator of each latent variable is eligible so it can be accepted, since it has a significant loading factor (Coefficient λ) or regression weight or standardized estimate with a Critical Ratio (CR) value above or equal to 2.0. The results of this Latent Regression Weight Variable can be seen in the following table 5.20.

From these results it can be seen that each indicator of each dimension has a significant loading factor (coefficient λ) or regression weight or standardized

estimate with a Critical Ratio or CR > 2.0 value. So all indicators are acceptable. On the other hand, the high correlation coefficient among these variables does not always indicate the high causal relation of the variable. The overall P value (Probability) is below 0.05. From this result, it can be concluded that the indicators of latent variables have shown unidimensionality. With reference to the results of this confirmatory factor analysis, the research model can be used to further analyze without modification. The hypothesis testing is used to test some research hypotheses as previously formulated. The hypothesis testing is based on data processing research using SEM analysis tool. It is done by analyzing the regression value as shown in the previous table. Hypothesis testing is done by analyzing CR value and P value by Regression Weights Full Model data. Comparing to the required statistical limit, the value must be greater than 2.00 for CR value and below 0.05 for P value. If the data result shows the value which meets the requirements, then the research hypothesis will be discussed gradually in accordance with the hypothesis proposed in this study. The following table 3 describes the estimation of regression weights parameter as the result of primary data.

Tabel 3. Estimasi Parameter Regression Weights

	Estimate	S.E	C.R.	P
Entrepreneurial Intension <--- Constructivist Learning	0.72	0.14	5.14	.009

Source: Primary Data Results, 2017

The hypothesis indicates that the constructivist learning has a significant effect on the intention of entrepreneurship. Table 6 reveals the effect on CR of 5.14 is greater than 2.00 with a p value of 0.009 which means <0.05. Thus the hypothesis in this study is acceptable. It means that the implementation of constructivist learning significantly affect the desire of students to do entrepreneurship. A finding that is certainly very meaningful for the world of education to create the candidates of young entrepreneurs.

The results of this study support some of the previous findings, such as, Arpiyanen (2013) discloses in his article "The Sources and Dynamics of Emotions in Entrepreneurship Education learning Process". He reveals that entrepreneurial intentions can be built through learning models. Then, Aydin (2013) in her article "Learner Acquisition and Its Relationship with Constructivist Learner in Canada", states that constructivism learning model has a real impact on creative behavior and innovation. Lans et

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5. CONCLUSION & RECOMMENDATION

5.1 Conclusion

Based on the results of the research analysis revealed that the constructivist learning model has a significant effect on the intention of entrepreneurship. This means when a vocational school intends to create new entrepreneur, then one of the efforts that must be done is to apply constructivistic learning model. In addition, it will also be able to ensure optimism that becomes the mission of every secondary education institution in Malang Raya area, even in this country.

5.2. Recommendation

Based on the conclusion of the research on the relevance of constructivistic learning with the intention of entrepreneurship, the next researcher should focus on this research findings especially on the idea sharing indicator that gives the greatest influence to constructivistic learning. It means that the further research should focus on these indicators.

As a matter of fact, it will have a major impact on the entrepreneurship intention of vocational students in Malang, Indonesia.

5.3 Limitations and Future direction

Due to this research was conducted in Malang, Indonesia, the findings can be only applied in this country. However, it can be also applied in other countries by modification.

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