

# **The Effectiveness of Experiential Learning Based on Creative Industry to Improve Competency of Entrepreneurship of Vocational High School Students**

**Singgih Prastawa<sup>1</sup>, Muhammad Akhyar<sup>2</sup>, Gunarhadi<sup>3</sup>, Suharno<sup>4</sup>**

Email: [singgihprastawa@student.uns.ac.id](mailto:singgihprastawa@student.uns.ac.id)

**Abstract:** This study aims to determine the effectiveness of Experiential learning on entrepreneurial competencies of vocational high school students. This study used quasi experiment method with the design of Non-equivalent Control Group Post-test only. The research sample amounted to 40 students, consisting of each experimental group and one control selected by purposive sampling technique. Both groups were studied separately with Experiential learning based on creative industry and control groups using lecture method with interactive lectures with conventional learning media. Data were analyzed by t-test technique. This study reveals about learning outcomes in entrepreneurial competencies of vocational high school students learning on creative industry-based experiential learning are (75) higher than lecture learning method (69.75). The significance of differences with the t-test shows that  $t_{count} = 3.27 > t_{table} = 2.024$ , it means that there are significant differences between the two groups. It's concluded that the Experiential learning is effective for improving entrepreneurial competency of vocational high school students

**Keywords:** *vocational high School, effectiveness, entrepreneurship, experiential learning and creative industry*

## **INTRODUCTION**

The implementation of education in vocational high schools (SMK) is reflected in classroom learning. The learning process showed effective for students, therefore teachers must strive optimally to enable students to encourage an active role as a manifestation of the learning process (Aunurrahman, 2014: 54), meanwhile Hosnan (2014: 27) said that in learning activities need to 1) implement student-centered approach, 2) develop student creativity, 3) create pleasant and challenging conditions, 4) contain values, ethics, aesthetics, logic, and kinesthetic, and also 5) provide a diverse learning experience. The entire activity occurs on rapid progress marked 21<sup>st</sup> century learning. In learning, contextual includes the part of learning

Contextual Educators assert that knowledge is enhanced when students are actively engaged in learning process and when this is coupled with guidance and scaffolding from instructor, students are able to gain a better understanding of science concept (Simsek, P & Kabapinar, F, 2010; Correiro, Griffin & Hart, 2008; Martin-Hansen, 2005, Lindquist, 2001). Based on vocational high school curriculum, learning is grouped into three, namely classroom learning, practical learning, and learning for job training otherwise known as Field Work Practices (PKL)/PRAKERIN. The curriculum leads to market needs related to employment, especially in the world of work and industry (DUDI). Vocational education is basically an education system that prepares individuals to work or become self-employed (Prastawa, 2019; Ganefri, 2015).

The 21<sup>st</sup> century learning is not far from the role of 2013 curriculum which refers to the scientific approach. Fahmy et al (2015) mentioned that the implementation of 2013 curriculum was expected to improve the quality of Indonesian young generation, served all aspect of learners's humanited to become more civilized and competitive. The quality of the young generation in learning can not be separated from competence when facing learning problems

and being able to solve them. The 2013 curriculum learning process or 21st century learning in its application prioritizes how to use knowledge and skills such as critical thinking, applying knowledge in any situation, analyzing information, understanding new ideas, communicating, collaborating, problem solving, and making decisions (Sahin, 2009).

Learning in the 2013 curriculum cannot be separated from concept of critical thinking. The critical thinking is considered as one of the compulsory skills needing improvement in the 21st century, and considered as a skill that can be enhanced in a person's life. (Vong, 2017; Trilling & Fadel, 2009: 7; Ornstein & Hunkins, 2004: 119). Critical thinking as a part of vocational high school regarded to be capable of arousing motivation, or enthusiasm in learning. Motivation encourages creative thinking to develop new competencies and concepts. In entrepreneurship learning in vocational high school (SMK), it leads practical learners and theories in an integrated implementation. The main purpose of learning entrepreneurship is the acquisition of job creation's concept to face threat of unemployment, besides providing welfare, sustaining development, growing economic, that makes the country to realize the intentions of citizens towards setting up their own businesses and also how to perceive entrepreneurship, (Top, 2012; Hindle, 2000: 316). The implementation of entrepreneurship lessons in theory ends with the practice of accommodating the 2013 curriculum message that emphasizes phases of observing, asking, experimenting, associating and communicating.

Competency includes knowledge, skills and behavior are important to achieve high job performance (Hadi, 2015). Achievement of acquisition or making new jobs is a part of curriculum that has arranged between theory and practice on integrated entrepreneurial learning. The integration of entrepreneurship into the basic curriculum has been regarded as a means of reducing unemployment and stimulating communities' economic and social growth. (Solis, et al, 2017). Achievement of creative and entrepreneurial product learning lessons and the role of the creative industries has supported these learning. The indication of development of students is to be able to understand and carry out the phase of each learning by taking the concept of the creative industry. Creative industry is new era of economic activities which intensify on creativity and information by relying on idea and stock of knowledge as the main factor. In other word, the main actor needs to run this sector rely on human ideas, creativity, and produce originality and identity or even characters that blend to its product and service, (Wityono, K Sudarso et al, 2015). Creative industry can not be separated from the role of Triple Helix. According to Hutabarat (2012). Triple helix concept is cooperation between government, business, and academia. The synergy of them makes creative industry to advance especially the technology in accordance with the concept of Vocational High School. One of the main challenges faced people from industrialized nations in the new millennium is the double treat of businesses outsourcing jobs in pursue of cheaper labor costs and the elimination of jobs due to technological developments. (Balcazar et al, 2014).

Experiential learning theory defines learning as the process whereby knowledge is created through the transformation of experience. (Martin, 2015; Lidiasari, 2014; Dedouli, 2001). In the field of knowledge, students get a learning process encouraging to integrate creative product learning lessons and entrepreneurship. In entrepreneurship struction involves sharing methods for quality instruction and a range of practices to support different types of learning. Practices include effective questions, thinking devices, stories, cooperative learning, experiential learning, project-based learning and reflection learning (Mary Devine et al, 2013). Previous research from Efstratia (2014) entitled *"Experiential Education through Project Based Learning"* states based on experience, learning with any method, the problem will be solved well because it is related to real world. Other research as conducted by Marin Elena (2015) with the journal title

***“Experiential Learning: Empowering Students to Take Control of their Learning by Engaging Them in an Interactive Course Simulation Environment”*** It is stated that element of experience will be effectively used in simulation training courses because Experiential learning encourages the achievement of learning objectives according to the conditions of each individual. For other studies as reinforcement, Falloon (2019) in his article entitled ***“Using Simulations to Teach Young Students Science Concepts: An Experiential Learning Theoretical Analysis”*** explains that Experiential learning procedures help students use simulations in understanding learning knowledge’s concept.

This research was conducted with the aim of examining the effectiveness of the Experiential learning compared to the direct instruction learning model on the entrepreneurial competencies of vocational high school students.

## **METHOD**

The method used in this study was a quasi-experimental method. According to Sugiyono (2016: 168) this form of quasi-experimental design is a development of true experimental design, which is difficult to implement. This design has a control group, but it cannot function fully to control external variables that affect the conduct of experiments. The quasi-experimental research of this study used a non equivalent control group design carried out in 2018/2019, by dividing the two groups, namely the control group and the experimental group. For the experimental group was the Experiential learning model, while the control group is a lecture learning model.

The population in this study were students of class XI Muhammadiyah 1 Vocational High School, and Bhinneka Karya Vocational High School, for the sample was part of the representative of the students who are in the two Vocational High Schools. The 2018/2019 research sample for this study was class XI automotive 3 and the other was engine 1 used purposive sampling, taking into account the suitability of the learning conditions of the environment and the human resources of the students themselves.

The instruments used in this study were tests, questionnaires, and observations. The test was useful for knowing the competencies of students by using the Experiential learning, while the questionnaire was used to assess the extent to which the experiential learning was able to generate critical thinking skills and grasping creative industries beneficial for students using the Likers scale. Observations were used to observe the extent to which learning could run smoothly using observation guides.

Data analysis used in this study was descriptive statistical analysis. The analysis included calculating the mean, median, standard deviation, variance, minimum and maximum scores, after implementing analysis of the research, data were compared to the final results using the t-test. The acquisition data were compared between the learning outcomes after using the Experiential learning and learning using the lecture method. Before looking for validity and reliability of the instrument, (using Pearson Product Moment for validity, and reliability using Alpha Cronbach) preceded by prerequisite test, data normality with Liliefors test, while for homogeneity of data used Bartlet test.

## **RESULTS AND DISCUSSION**

Descriptive analysis was conducted to find out the high and low competencies of students after following the learning with experiential learning compared with students who participated

in learning with lecture method. The presentation for the results of each aspect is shown in the following table:

**Table 1.** Description of each aspect

No.	Data Aspects	Competency of Students	
		Experimental Group	Control Group
1	Mean	75	69,75
2	Median	75	70
3	Variance	23,68421053	27,56578947
4	Deviance Standart	4,866643	5,250313
5	Minimum	70	60
6	Maximum	85	80

The results after pre and post tests, there were many changes. A noticeable change is seen in mean score of 75 for the experimental class, while the control class only gets 69, 75. For the maximum value of experimental class has increased by 0.5, namely from 80 to 85. In this study there are differences in the competencies of special students that arise in the learning outcomes of students who followed learning using the Experiential learning method versus students who took learning using lecture method. Based on the findings, the results of the t test stated that judging  $H_0: X_1 = X_2$ , there is no difference between students using the Experiential learning using the lecture method, **rejected**. The conclusion shows that there are differences in students who used the experiential learning got higher scores than students who used conventional learning.

The study of experiential learning models reinforced by Marin (2015) in his journal said that the use of experience especially learning using experience proved to be useful in obtaining high self-confidence with the integration of skills in the learning process. The integration of skills brings the influence of products obtained based on processes gained by individual experience. The learning process is supported by the experience of emerging product results. Learning products are competencies or results carried out by students.

On products, the learning process by prioritizing experience will get good results with the process in accordance with the flow. Experience also brings contextual aspects so that students will appear according to the circumstances and conditions allowing it. Contextuals will lead students to get something new. The acquisition is influenced by a critical bit of something new. According to Demir, M et al. (2011) critical thinking is more than thinking logically or analytically; it also means thinking rationally or objectively. Demir also said that critical thinking has 5 sub-dimensions. These are as follows; 1) Getting to know the problem, 2) Collecting and selecting suitable data for the solution of the problem, 3) Getting to know the structured and non-structured assumptions, 4) Selecting and formulizing the assumptions that are related and leading to conclusion, and 5) Deducting the valid results and discussing the validity of the deductions. Critical thinking brings the concept of thinking more acceptable to common sense so that it produces something scientific and appropriate. Student competencies are easier to obtain, because students are able to actualize themselves with the process of thinking critically. Critical thinking brings significant learning effects. The real impact on critical thinking based learning coupled with a contextual approach brings satisfying results. The description how contextual based learning and critical thinking integrated in experiential learning are tested through tests and analyzed by t test. Before the test is carried out, the prerequisite test is first done, namely the normality test and homogeneity test. Based on the prerequisite test results, the data obtained from the experimental group test results and the

control group are assumed to be normally distributed and confirmed that the two variables of the class are homogeneous, so that the t test can be carried out. In the summary the results of the t test calculation are presented in table 2.

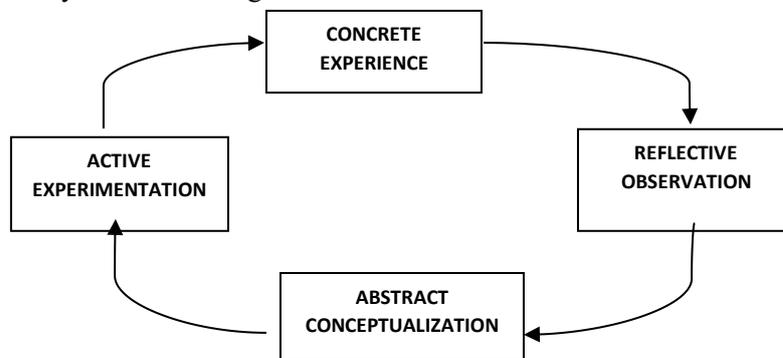
Based on the table, obtained tcount of 3.27, while the table at the significance level is 5% is 2.024. This means that  $t_{count} > t_{table}$ , so  $h_0$  is rejected as long as  $h_1$  is accepted. From these results, it can be interpreted that there are differences in learning outcomes in entrepreneurial competencies between students of class XI Vocational High School who take part in learning activities using experimental learning method compared to students of class XI Vocational High School who attend teaching and learning with lecture method at Muhammadiyah 1 Surakarta and Bhinneka Vocational High Schools of Surakarta in the year 2018/2019

**Table 2.** Result Of The Research

Data	Group	N	$\bar{X}$	$s^2$	t-count	t-table
Competency	Experiment	20	75	23,68421053	3,27	2,024
	Control	20	69,75	27,56578947		

**Discussion**

The results of research implemented in the field between the control group and the experimental group in SMK XI students in Surakarta is proven that the experimental group showed better at their learning outcomes. The application of experiential learning produces better learning products based on achievement of scores after the post-test experimental group with experiential learning implemented compared to the control group that does not use the learning model but applies conventional methods. The experiential learning encouraged students to apply what was in their mind and organize the concept of learning procedure learning concepts with syntax that is able to integrate between findings with experience that is owned by each individual. The syntax of learning is as below:



**Picture 1.** Kolb's learning style

The picture consists of concrete experience, reflective observation, abstract conceptualization, and active experimentation. At each stage, it has its own steps. These steps must be implemented sequentially, so that the process has an effect for every circle. For the first step, the concept experience is a stimulus that is able to encourage activities. This activity is based on the experience of the individual. The next stage is the reflective observation stage. This stage is carried out by students by observing the experience of activities with the five senses of each individual, as well as reflecting the experience. In the third step is abstract conceptualization. This third step is implemented after observing and reflecting, this part is related to the abstract conceptualization stage that is in learning. This phase is the integration of experience with something new, so as to create a new theory that facilitates the instructor for the

learning process. The last stage is active experimentation, this phase is a real action to be implemented with the help of a conceptualized theory and integrated with individual experience. The whole stage is part of experiential learning

Experiential learning is a multidimensional process, it begins from the concept of experience to reflective observation, then to abstract conceptualization to active experimentation (Dunlap et al, 2008; Efstratia, 2014). phase stages that exist basically are every step formed based on individual experience Experiential learning or doing something to be done but not instead formed and reformed through Experience. (Ridzwan, & Ruhizan, 2015).

Learning on the basis of experience and without experience becomes a part of learning activities in secondary schools. Vocational High school learning in entrepreneurship lessons is facilitated with the help of individual experience. With experience, plus the progress of learning with the media even using technology leads to 21st century learning. Students are encouraged to be seen to be far more interested in approaches to technology and even online learning. Students who use online learning are more positive in giving feedback to peers, (Kleinman, & Enrin, 2002; Lou, 2013). The ease in online learning often makes it easier and becomes a separate entertainment for students to get learning outcomes. Instructional media and technology have important roles for insupporting learning. Especially when bringing the entertainment of enhanced in the class media (Pasawano, 2015).

The development of knowledge and training in art, technology and economic life skills are the goals of entrepreneurship lessons. With entrepreneurship, active students are encouraged to turn on the micro economy. The life of the micro economy develops the running of the creative industry which is the foundation of the establishment of supporting economic life with domestic goods and services products and even able to revive a populist economy that is able to open up new jobs. Based on the study, it means that the creative industry becomes an inseparable part of the development of the nation's economy, and the creative industry is an integral part of entrepreneurship learning taught in vocational preventive schools

## **CONCLUSIONS AND RECOMMENDATIONS**

Based on the results of the study and the description of findings, results, and discussion, it can be concluded that the competence of vocational high school students in the experimental group taught with experiential learning models has increased in value, it can be seen from the t test, namely the mean score is 75, while the control group with the mean score of 70 is still below the experimental group. By integrating the creative industry in entrepreneurship learning, students are directed to think logically with the current conditions together with microeconomic growth. Entrepreneurship learning based on the creative industry is able to encourage students to implement theory in the classroom and practice experience-based learning outside the classroom.

The theory underlying experience-based learning is able to integrate experience-based competencies contained in contextual and critical thinking. The critical thinking encourage students to be able to show their identity and actualize themselves, so that what is conceptualized in thinking produces products according to the purpose of learning in vocational high schools, especially entrepreneurship lessons in class XI. Based on the study, some suggestions for improving student competence in entrepreneurial learning are;

1. Teachers / teachers in the field of entrepreneurship studies, to increase the competency of their students, are advised to be taught with experiential learning models. The experiential learning model is proven to be able to improve the competence of students,

- because the experiential learning uses process-based learning, not product-based learning.
2. To improve competency, it is recommended to also use experimental learning models, because experiential-based learning models are able to support the learning process by linking contextual learning that makes it easier for students to implement real conditions in learning.
  3. For entrepreneurship learning it is recommended to present creative industries, which are considered capable of increasing the competency of students and able to improve macro and macro economics with their integrated "triple helix" between government, academics and entrepreneurs as a pillar of populist economy that is able to increase people's micro economic, so as to be able to open new jobs.

## **BIBLIOGRAPHY**

- Aunurrahman. (2014). *Belajar dan Pembelajaran*. Bandung: ALFABETA
- Balcazar, E. F. Et al. (2014). An Empowerment Model of Entrepreneurship for People with Disabilities in the United States. *Psychosocial Intervention* 23 (2014) 145-150
- Correiro, E. E., Driffin, L. R. & Hart, P. E. (2008). A Constructivist Approach to Inquiry-Based Learning. A TUNEL Assay for the Detection of Apoptosis in Cheel Cells. *American Biology Teacher*, 70 (8) 457-460
- Dedouli, M. (2001). Experiential Learning-Possibilities of Development through the Framework of Flexible Zone. *Inspection of Educational Subject*, 12, 6, 3-8 (in Greek)
- Demir, M et al (2011). Quadruple Thinking: Critical Thinking. *Procedia Social and Behavioral Sciences* 12 (2011) 426–435
- Efstratia, D. (2014). Experiential Education through Project Based Learning. *Procedia-Social and Behavioral Sciences* 152 (2014) 1562 – 1260
- Devine, M, et al. (2013). Instructional Coaching for Teachers: A Strategy to Implement New Practices in the Classrooms. *Procedia-Social and Behavioral Sciences* 93 (2013) 1126 –1130
- Dunlap, J, et al. (2008). Preparing E-learning Designers using Kolb's Model of Experiential Learning. *Journal of Online Education*, 5, 2, 1-9
- Fahmi, R et al (2015). Measuring Student Perceptions to Personal Characters Building Education: An Indonesian Case in Implemenation New Curriculun in High School. *Procedia-Social and Behavioral Sciences* 211 (2015) 851 –858
- Falloon, G. (2019). Using Simulations to Teach Young Students Science Concepts: An Experiential Learning Theoretical Analysis. *Computers & Education* 135 (2019) 138–159
- Ganfri, & Hidayat, H. (2015). Production Based-Learning: An Instructional Design Model in the Context of Vocational Education and Training (VET) *Procedia-Social and Behavioral Sciences* 204 (2015) 206-211
- Hadi, Cholichu. Et al. (2015). Entrepreneurship and Education: Creating Business Awareness for Students in East Java Indonesia. *Procedia-Social and Behavioral Sciences* 177 (2015) 459 – 463
- Hindle, K. ve Rushworth, S. (2000). *Global Entrepreneurship Monitor* Hawthorne, Victoria, Swinburne University of Technology Australia
- Hosnan, M. (2014). *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21: Kunci*

- Sukses Implementasi Kurikulum 2013*. Bogor: Ghalia Indonesia
- Hutabarat, Z. (2012). The Potential Growth of Creative Industries in Orooence of Riau. . *Procedia-Social and Behavioral Sciences* 65 (2012) 839-211
- Jamaris, M. (2012). *Orientasi Bat\tu dalam Psikologi Pendidikan*. Bogor: Penerbit Ghalia Indonesia
- Kleinman, J & Entin, E. B. (2002). Comparison of in-Class and Distance Learning Students' Performance and Attitude in an Understanding Computer Science Course. *Journal of Computer Sciences in Cokkege* 17 6 (22) 206-219
- Lidyasari, T. A. (2014). Developing PGSD Students Character rhrough Experience Learning Theory. *Procedia-Social and Behavioral Sciences* 123 (2014) 189-195
- Lou, j. Shi. Et al. (2013). Effects of Applying Blended Teaching Approach to English Sentence Translation for Vocational. *Procedia-Social and Behavioral Sciences*. 106 (2013).997-1003
- Linguist, W. P. (2001). *A Case Study of Online Collaborative Inquiry in an Elemantary Classroom*. Ph.D. Thesis, University Of Minnesota,
- Marin, E. (2015). Experintial Learning: Empowering Students to Take Control of their Learning by Engaging them in an Interactive Course Simulation nvironment. *Procedia-Social and Behavioral Sciences* 180 (2015) 854-859
- Martin-Hansen, L. M. (2005). Crayfish Investigations: Inquiry n Action for Grades 4-8 *Science Activities*, 41 (4), 3-6
- Ornstein, A.C, & Hunkins, F. P. (2004). *Curriculum: Foundations, Ptnciplrs and issues (4th ed)*. Boston, MA: Pearson
- Pasawano, T. (2015). Results of Enhanced Learning with the Edutainment Format. *Procedia - Social and Behavioral Sciences* 176 (2015) 946 – 951
- Prastawa, S. Et. al (2019). Need Assessment of Experiential Learning to Improve Student Competency of Vocational High School Students. *Advances in Social Science and Humanities Research*. Volume 178
- Ridzwan, C. R, & Ruhizan., M. Yasin. (2015). Cultivating Learning: A Grounded Theoy of skill acquisition fo Vocation in Modern Apprenticeships. *Procedia Social and Behavioral Sciences* 174 (2015). 275-282
- Sahin, C. M. (2009). Instructional Design Principles for 21<sup>st</sup> Century Learning Skills. *Procedia Social and Behavioral Sciences* 1 (2009) 1466-1468
- Seyfi , T. Et al. (2012). Evaluating Entrepreneurship Intentions of Vocational High School Pupils Based On Self-Efficacy Concept. *Procedia-Social and Behavioral Sciences* 58 (2012) 934 – 943
- Simsek, P, & Kabapinar, F. (2010). The Effect of Inquiry-Based Learning on Elementary Students'Conceptual Understanding of Matter, Scientific, Process Skills and Science Atritudes. *Procedia Social and Behavioral Sciences* 2 (2010)1190-1195
- Solis, et al. (2017). Developing Entrepreneurship in Primary Schools. The Mexican Experience of “My first Enterprise: Entrepreneurship by Playing. *Teaching and Teacher Education* 64 (2017) 291-304
- Sugiyono. (2016). *Cara Mudah Menyusun: Skripsi, Tesis, dan Disertasi*. Bandung: Penerbit Alfabeta
- Sujarwo. (2011). *Model-Model Pembelajaran: Suatu Strategi Mengajar*. Yogyakarta: Venus Gold Press

- Sutarto. (2014). *Evaluasi Pelaksanaan Proses Pembelajaran dalam Implementasi Kurikulum 2013 pada Program Keahlian Teknik Bangunan di Kota Yogyakarta*. Yogyakarta: Fakultas Teknik UNY
- Trilling, B, & Fadel, C. (2009). *21st Century Skills: Learning for Life in our Times*. San Francisco, CA: Jossey- Bass
- Triyono, B. M. (2015). The Indicators of Instructional Design for E- learning in Indonesian Vocational High Schools. *Procedia-Social and Behavioral Sciences* 204 (2015) 54–61
- Wiryono, K, S et al. (2015). Risk Mapping on Dynamics Creativity Industry: Case Study at Bandung City, Indonesia. *Procedia-Social and Behavioral Sciences* 169 (2015). 125-130
- Vong, A, S. & Kaewurai, W. (2017). Instructional Model Development to Enhance Critical Thinking Teaching Ability of Trainee Students at Regional Teaching Training Center in Takeo Province, Cambodia. *Kasetsart Journal of Social Sciencies* 38 (2017) 88-95