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Development of Entrepreneurial Teaching Materials by Using Project-Based Learning Model in Improving Students' Creativity and Self-Confidence

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ABSTRACT. This development research aimed to produce entrepreneurship teaching materials by using the PjBL method and improving student learning outcomes in running a small handicraft business. The research that was carried out is a development research (research and development) and followed by a quasi experiment (quasi experiment) that collaborates with class teachers. The research stages to be carried out are: (1) the preparation stage, (2) the development stage, (3) the experimental stage, (4) evaluation. At the stage of developing teaching materials using the Plomp model (2010) which includes (1) preliminary research, (2) prototyping phase, and (3) assessment phase. Furthermore, at the application stage a collaborative experiment is carried out in which the learning is carried out in collaboration with the teacher. The subjects of this study were teachers and students from SMA/MA/SMKN in North Bengkulu. In the experimental stage, it was carried out by taking two classes from each school as the experimental class and the control class. The target achievement in this study is the creation of entrepreneurship teaching materials that meet valid and practical criteria and there is an effect of project-based learning teaching materials on students' abilities and self-confidence.

Keywords: *Entrepreneurship Teaching Materials, Project based Learning, development*

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INTRODUCTION

National education goals listed in the Republic of Indonesia Law No. 20 of 2003 article 3 is developing the potential of students to become human beings who believe and fear God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens (Kemdikbud, 2013) . The goal of national education is achieved through the eight educational standards in the curriculum to improve the quality of education in Indonesia. Efforts to improve the quality of education also develop in line with changes and developments in science and information technology. In designing learning, the selection of a learning model or approach is the main key to implementing learning. One learning model that can be used is that learning can be done by involving students directly to develop their abilities, one of which is the project based learning (PjBL) model.

The PjBL model facilitates students to make products in order to solve real life problems. Product manufacturing projects can be carried out individually or in groups. Prastowo (2012) teaching materials are one of the important components in the learning process in the classroom

and all forms of materials used to help teachers, materials/instructors in carrying out teaching and learning activities in class (Donkor, 2011; Banerji, 2013; Fadlillah, 2014). The material in question can be written or unwritten. Meanwhile, according to Prastowo (2012) teaching materials are divided into four types, namely printed materials, listening teaching materials, listening point of view teaching materials, and interactive teaching materials. PBL allows students to practice and develop life skills (Scott Wurdinger, 2014). PBL encourages student motivation and improves transverse skills students, (Rodríguez, 2015; Genc, 2015; Ibrahim Bilgin, & Yunus Karakuyu, 2015; Daniel Spikol, Emanuele Ruffaldi, Giacomo Dabisias, 2018). Collaborative learning and teamwork is the most positive aspect of the experience, (V Ausín, 2016). But the teacher found some difficulties in implementing PBL in schools (Gómez-Pablos, 2017). The processes involved during collaborative activities and that online activities can be develop teachers' abilities to design projects in an interdisciplinary context, (Biasutti, 2015). Group-level social skills are more influential than skills social individual members in reducing conflict between groups and increasing collaboras, (Dabae Lee, Yeol Huh, 2015). Approaches to guiding learning can increase their learning motivation, critical thinking tendencies, and group self-efficacy, (Sun et al., 2018; Sunyoung Han et al., 2015; Kaj U. Koskinen, 2012), can determine the relationship between learning goals and collaborative learning, (Chuen, 2017; Telli et al., 2008). The effect of the online PBL environment with GA support varies based on duration (i.e., transient or sustained effects) in different SR level students (Jian-Wei Lin a, 2016).

The PjBL model requires students to be able to produce good products can be used to solve real life problems. In project implementation, students are required to be able to understand the concept well and produce products related to the concept. This is suitable with Entrepreneurship learning where students can directly practice in the field in finding material concepts. In addition, the results of an empirical study which states that the effectiveness of the Project Based Learning model of learning outcomes is the result of research by Filcik, Bosch, Pederson, & Haugen (2012) which shows that the learning model is effective in terms of aspects conceptual knowledge. Based on the above problems, it is necessary to carry out research by developing entrepreneurship teaching materials using the method project based learning that can help students to improve creativity in running a small business in Bengkulu Utara. Project-based learning (PBL) is a form of active, student-centered teaching characterized by student autonomy, constructive inquiry, goal-setting, collaboration, communication and reflection in real-world practices as well as involving teachers in various projects that incorporate digital technology (Tsiplakides & Fragoulis, 2009; Zhang et al., 2015; Ausín et al., 2016; Basilotta Gómez-Pablos et al., 2017;). Project-based learning (PBL) is known as a motivating problem-centered teaching method that not only places students at the core of teaching and learning activities but also gives them the ability to transfer acquired scientific knowledge into industrial practice (Zhang et al., 2015). PBL in schools is beneficial for underachieving students and reduces achievement gaps (S Han, 2015). Besides that, it can improve students' transverse skills (Rodríguez, 2015). Project-based curriculum materials that combine science practice together with disciplinary content can help students achieve next-generation science learning outcomes when there is coherence with district guidelines on teaching (Biasutti, 2015). Project based learning according to (Susanti et al., 2020) project-based learning refers to student activities in designing, planning, and implementing projects that produce output in the form of products, publications, or presentations. Awayed-Bishara (2015) states that project based learning can be used as an effective approach to link the professional development of teachers and student learning achievement.

Entrepreneurship lessons listed in economics subjects are used as a benchmark for graduation at SMA/MA/SMKN. Furthermore, in the selection of economic tertiary institutions, one of the subjects is a prerequisite for determining graduation in the SOSHUM choice. This shows that entrepreneurship lessons are important for students to master. However, the reality shows that student learning outcomes, one of which is the entrepreneurship subject, need to be

improved. Data from the Ministry of Education and Culture (2019) shows that the average value of the Computer-Based National Examination (UNBK) for the SMA/MA/SMKN level of the Social Studies major for the 2018/2019 academic year is 46.86 on a scale of 0-100. This shows that the subject that was tested was that the economy was low.

In entrepreneurship learning, there are many aspects that affect the achievement of learning outcomes. One of them is the aspect of student confidence in learning. According to Eggen and Kauchak (2010) self-confidence is a statement that describes a belief, a cognitive idea is accepted if it is true without the need to consider other things that support it. From the previous field survey, there were several things that caused the ineffectiveness of entrepreneurial teaching materials in teaching and learning activities and low student learning outcomes in North Bengkulu, including: (1) improper use of entrepreneurship teaching materials, such as government aid textbooks, (2) lack of creative and innovative in the process of teaching and learning activities in the classroom, (3) providing information from teachers who are less communicative so that entrepreneurship lessons received by students find it difficult to get a score above the KKM. This shows that there is a need for efforts to develop teaching materials in increasing student creativity in running small businesses. In addition, the level of disturbance is one of the factors hampering sustainable development in Indonesia. This can occur due to a lack of entrepreneurial literacy. By referring to the 2013 curriculum, it is hoped that students can further develop themselves by innovating to create real work projects (Cakmak & Takayama, 2014; Gray, 2013; Donkor, 2010; Chen & Tzeng, 2011).

Entrepreneurship learning can help teachers improve student creativity in creating new products. The purpose of entrepreneurship learning is not only directed at producing a businessman or business entrepreneur, but a profession based on entrepreneurial values. Entrepreneurial values can be taught through entrepreneurship subjects. Learning entrepreneurship does not only contribute to shaping students to become entrepreneurs. Because basically entrepreneurship is inherent in a person. For this reason, entrepreneurship learning is more directed to form an entrepreneurial spirit and entrepreneurial values in students. This is as expressed by suherman (2008) that "the main goal of entrepreneurship learning is to form the entrepreneurial spirit of students, so that they become creative, innovative, and productive individuals". Student creativity in running a small business is by designing learning so that it can facilitate students in developing skills and confidence in learning. These efforts can use learning media in the form of teaching materials that are specifically designed to develop students' abilities in understanding the concept of the material. However, the reality in schools shows that it is still rare to find learning tools that can be used by teachers directly for learning, especially in developing students' abilities and confidence. There is a significant influence using the image learning model, the jigsaw learning model, the pjbl model on economic achievement (Sipahutar, 2018; Ritonga, 2018; Susanti et al., 2020).

METHOD

Research Stages

The research implementation method used was Research and Development (R&D) and quasi-experimental. This research was conducted in two stages, namely the development stage of teaching materials and the collaborative quasi-experimental stage. At the development stage, Entrepreneurship teaching materials were developed based on a project-based learning model. Furthermore, quasi-experiments were carried out to test the effectiveness of the teaching materials being developed. The stages in this research are as follows (Sugiono, 2008).

Preparation Phase. At this stage, coordination with the target schools for research and analysis of the learning curriculum in schools is carried out. At this stage, teachers also observe the use of teaching materials in schools.

Development Stage. The development procedure in research is carried out in stages described as follows; (1) Preliminary research phase (preliminary research). This stage is the stage of observing carefully the conditions of learning in schools. Activities carried out, namely: (a) front-end analysis, (b) Student Analysis, (c) Material analysis, (d) Task analysis, and (e) Competency specification; (2) Development Phase The development stage consists of: (a) Preparation of learning plans, (b) media selection, (c) selection of learning device formats, (d) initial design; (3) Assessment Stage At this stage two main activities are carried out, namely: (a) Validation, (b) practicality, (c) Field Trial Activities. Collaborative Experiment Stage At this stage a quasi-experiment was carried out. In the implementation of experimental research at each research target school, two classes were selected by random sampling to be selected as a class given learning using project-based learning (experimental class) and conventional learning (control class).

Research design. The research carried out was designed with two stages of the type of research, namely (1) research and development, and (2) quasi-experimental research. Development research is carried out to produce Entrepreneurship teaching material products based on project based learning. Furthermore, experimental research was carried out to determine the effectiveness of the learning model that had been designed in teaching materials on students' abilities and self-confidence. The design in this experimental study used a posstest-only control design (Sugiyono, 2012). The design of the procedure for the implementation of this research is as follows:

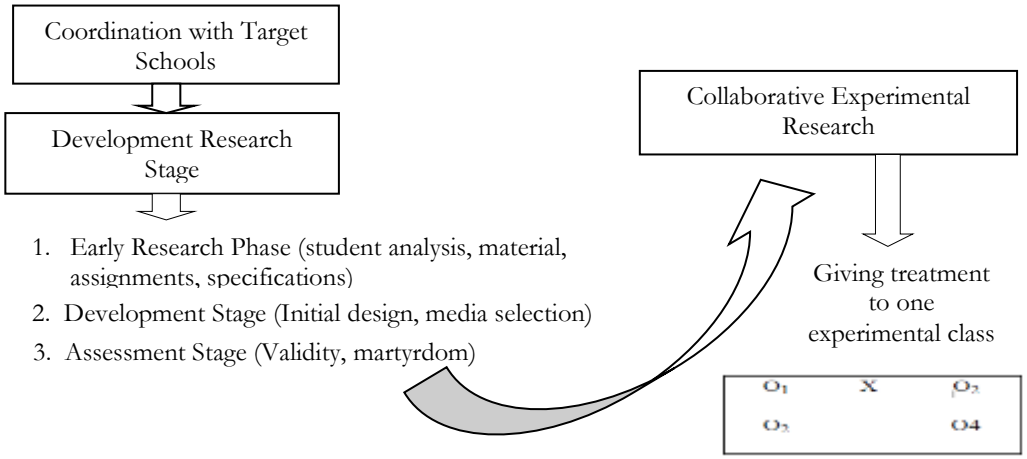

Figure 1 Research Design

Data Analysis

Development Research

Validity Analysis, The estimation of the content validity used in this study used item validity index proposed by Aiken with the following formula:

$$V = \frac{\sum s}{n(c-1)}, \qquad s = r - I_0$$

V = item validity index; s = score assigned to each rater minus the lowest score; r = rater's preferred category score; I_0 = the lowest score in the scoring category; c = number of categories that the rater can choose; n = number of rater (Retnawati, 2014: 3)

Practicality Analysis, The experimental data that have been obtained are converted into qualitative data with a scale of five. The conversion on a scale of five was adapted from Widoyoko (2009) as in the following table.

Table 1 Criteria for Practicality of Learning Devices

Score Interval	Category
$\mathbf{X > \bar{X}_i + 1,8sb_i}$	Very Practical
$\mathbf{\bar{X}_i + 0,6sb_i < X \leq \bar{X}_i + 1,8sb_i}$	Practical
$\mathbf{\bar{X}_i - 0,6sb_i < X \leq \bar{X}_i + 0,6sb_i}$	Enough
$\mathbf{\bar{X}_i - 1,8sb_i < X \leq \bar{X}_i - 0,6sb_i}$	Less Practical
$\mathbf{X \leq \bar{X}_i - 1,8sb_i}$	Impractical

Collaborative Experimental Research, Average Learning Outcomes

$\bar{X} = \frac{\sum X}{N}$, Information: $\bar{X}$ = The student's average score; $\sum X$ = Total student score; N = Number of students (Sudjana, 2009).

Hypothesis test, At the collaborative experimental stage, data analysis was carried out to test the following hypotheses.

$H_0 : \mu_1 = \mu_2$

$H_1 : \mu_1 \neq \mu_2$

$\mu_1 =$ average learning outcomes by teaching using teaching materials

$\mu_2 =$ average learning outcomes without Teaching Materials

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s^2 gab\left\{\left(\frac{1}{n_1}\right)+\left(\frac{1}{n_2}\right)\right\}}}$$

$$s_2gab = \frac{(n_1-1)s^2_1 + (n_2-1)s^2_1}{n_1+n_2-2}$$

RESULT AND DISCUSSION

Results of the Validity of Teaching Materials

Project-based learning entrepreneurship teaching materials that have been compiled are assessed by experts who aim to see the quality of the product in terms of content. How to obtain the data on teaching materials was by using reference books, namely entrepreneurship books for high school students. The development of this model was done by giving practical assignments to students. Students are asked to do assignments in the student worksheets i.e. entrepreneurship worksheets.

The test results show that the teaching materials in the form of Student Activity Sheets (LKS) meet the valid criteria. The results of the validity test of teaching materials are as follows;

Table 2 Validation Results of Teaching Materials

No	Rated aspect	Aiken Index	Criteria
1	Suitability of Content and Material	0,68	Valid

2	Learning Activities	0,68	Valid
3	Language Accuracy	0,72	Valid
4	Educator Practicality	0,70	Valid
5	Practicality of Learners	0,69	Valid

The results of the validator's assessment of the teaching materials above indicate the valid category. This shows that in theory, project-based learning model-based economic teaching materials meet valid criteria.

Eksperiment Colaboratifve Result

Description of student learning outcomes

The schools selected for the collaborative experiment implementation consisted of two schools, namely: (1) SMA Negeri 5 Bengkulu Utara, and (2) SMA Negeri 15 Bengkulu Utara. In each school, one class was chosen as the experimental class, namely class XI, majoring in social studies. Description of student learning outcomes after being given learning using project-based learning materials as in the following table:

Table 3 Student Learning Outcomes Data

School	Total Student Score	Number of Students	Student's Average Score	Persentase KKM (%)
SMAN 05 Bengkulu Utara	2199	29	75,82	89
SMAN 15 Bengkulu Utara	2363	31	76,22	87,09

Based on the table above, it can be seen that the percentage of classical student learning completeness who reaches the KKM is more than 65%. In addition, the average score of the two trial classes has reached the KKM score. This shows that the learning tools developed have met the criteria for being effective.

Statistical Testing Results

The results of the analysis show that there are differences in the average student learning outcomes in entrepreneurship material before and after the use of teaching materials. To analyze these differences statistically performed t test analysis. The hypothesis tested is as follows;
H0: There is a significant difference between student learning outcomes and KKM
H1: There is no significant difference between student learning outcomes and KKM

With the test criteria: If tcount> ttable and the significant level <α = 0.05 then H0 is accepted. if -table <tcount <table and significant level> α = 0.05 then H0 is rejected. The results of the t test for students' abilities after being given teaching materials are shown in the following table:

Table 4 Data T Test Results

Sekolah	Test Value = 82, 83, 81					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
SMAN 5	81.895	28	.000	75.82759	73.9309	77.7242
SMAN 15	80.715	31	.000	76.22581	74.2971	78.1545

The t-test table shows the students' knowledge of SMAN 5 and SMAN 15 Bengkulu Utara after the use of teaching materials with tcount> ttable and significant <0.005. From these results indicate a significant difference between the ability of students and KKM in SMA 5 and SMA

Bengkulu Utara before using project based learning and after using the project based learning model.

Discussion

Project-based learning entrepreneurship teaching materials are assessed by experts with criteria for assessing the suitability of content and material, learning activities, language accuracy, educator practicality, and student practicality testing. The evidence for improvement is in the pretest and posttest results. The KKM score of students using teaching materials is higher than the one without using teaching materials

The purpose of this validity assessment is to see the quality of the product in terms of content. The test results show that the teaching materials in the form of Student Activity Sheets (LKS) meet the valid criteria. After applying modeling in learning with a project based learning approach, the result is that the learning ability and self-confidence of students of SMAN 5 and SMAN 15 Bengkulu Utara Regency can increase. By using teaching materials in the form of worksheets that have been assessed by experts, it can improve students' skills and KKM in SMA 5 and SMA Bengkulu Utara before using project based learning and after using the project based learning model.

CONCLUSION

Giving lessons using a project-based learning model can improve students 'skills in entrepreneurship, besides that it can increase the creation of entrepreneurial teaching materials that meet valid and practical criteria and there is an effect of project-based learning teaching materials on students' abilities and confidence. Research by developing entrepreneurship teaching materials using project-based learning methods that can help students to improve their creativity in running small businesses in bengkulu utara.

So the results of this study are to accept ho and reject ha, meaning that after the application of this project based learning model there has been an increase in creativity and self-confidence of students of sman 5 and sman 15 north bengkulu regency in their work. Teaching materials for the project based learning model can improve students 'skills in entrepreneurship, so this research is in line with the research of susanti et al., (2020) which shows that the learning model with the project based learning model can increase students' knowledge in receiving lessons in terms of conceptual knowledge aspects.

The impact of the theory is that project-based entrepreneurship teaching materials have been well developed and are in accordance with R&D theory. Teaching materials used in learning have met the validation test. Students' responses after using the teaching materials were very good to support and complement teaching materials when learning entrepreneurship.

The practical impact of using teaching materials that were tested in entrepreneurship learning was able to improve students' critical thinking skills which are seen from the average score of students before using teaching materials with students' KKM scores after using the teaching materials. The average score of students of SMAN 05 Bengkulu Utara before using the teaching materials was 75.82%, and it increased to 89% after using teaching materials. Whereas, the average score of students of SMAN 15 Bengkulu Utara before using teaching materials was 76.22%, and it also increased to 87.09% after using entrepreneurship teaching materials.

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