

Development Of Creative And Entrepreneurship Teaching Materials Using Adobe Animate Application Based On Projects To Improve Student Learning Outcomes Class XI SMK Raksana 2 Medan

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Abstract. This study aims to determine the feasibility and effectiveness of PKK teaching materials using the project-based Adobe Animate application. Types of research development and experimentation at SMK Raksana 2 Medan class XI OTKP. Teaching materials developed using the ADDIE model. Teaching materials were assessed by material experts, design experts, PKK teachers and 3 tests by obtaining an overall average percentage of 88.51% very feasible criteria. The results showed that the experimental class obtained learning test results with an average value of 79.80, while the control class obtained an average value of 58.60 and the results of the t-test calculations obtained $t_{count} 32,682 > t_{table} 1,671$. Based on the results of the study, it was shown that project-based PKK teaching materials using the Adobe Animate application were feasible and effective in improving student learning outcomes for class XI OTKP SMK Raksana 2 Medan in PKK subjects.

Keywords: development of creative product and entrepreneurship teaching materials (PKK), project-based adobe animate application, learning outcomes

1 Introduction

The development in technology have increased, almost all activities are carried out by utilizing existing technology. It's just that the use of technological developments that occur is sometimes underutilized for self-development. For example in the world of education, technology is still often underutilized by educators to improve the skills or skills of their students. Technology should be used to create quality education that can make students more developed and have the ability to deal with changes following the times. Therefore, there is a need for appropriate new breakthroughs to support this, both in learning innovations which include the development of renewable teaching materials and supporting infrastructure, so that learning is carried out effectively.

The use of technology in education cannot be separated from the role of teachers who must be able to take advantage of the developing technology. In addition, the creativity of teachers related to the

use of technology in learning will greatly affect the quality of students in particular and improve the quality of education in general. The learning carried out by the teacher must be able to create students who have the skills and excel in facing change which is the goal of learning. As according to Isman, (2011:136) states that learning objectives are the responsibility of the teacher which must be chosen and determined carefully to create a meaningful learning process. The interest of students to take part in learning that is able to improve their skills and knowledge is influenced by the ability of educators to make the teaching and learning process not feel boring.

Teaching materials are one of the most important parts or components in the delivery of a material that teachers do to their students at school. According to Hamdani (2011), teaching materials are materials that are processed in a structured manner by students before carrying out teaching and learning activities. Teaching materials have various types of forms or classifications that can be chosen by educators as needed. As Lestari (2013: 6) classifies teaching materials in terms of their shape, they are divided into four: (1) printed teaching materials which include handouts, books and modules, (2) audio teaching materials which include radio, cassettes, vinyl records, (3) teaching materials. audiovisual which includes films and video compact discs, (4) interactive CD interactive teaching materials.

Teaching materials that utilize technology or in more detail software that continues to develop at this time can be implemented in one of the existing vocational subjects such as Creative Products and Entrepreneurship (PKK) subjects. Creative Products and Entrepreneurship subjects have a role and contribution to foster students' interest in entrepreneurship, because PKK subjects are not only about applying theory and materials, but in the learning process it is expected that educators are also able to teach how students practice directly, train courage. students and cultivate their mentality and entrepreneurial interest in accordance with the majors they take at school.

Students' abilities related to the material that has been studied can be seen based on daily scores or practice values obtained from the results of calculating the overall score. Students are declared to have mastered the material and can continue to the next material if students have achieved the Minimum Completeness Criteria (KKM). Students who get scores below the KKM should be given remedial or even re-learning. Values below the KKM in subjects can be caused by several factors as the results of Ediza's research (2014), namely: 1) lack of student motivation in learning; 2) lack of mastery of teaching materials and media by teachers; 3) economic conditions and how to educate parents. From the results of these studies that one of the causes of low student learning outcomes is that the teaching materials used are difficult to understand. In this case, it is clear how the creativity of educators in making teaching materials and the methods used greatly affect the learning outcomes of students to achieve KKM.

Based on the results of observations and interviews conducted at SMK Raksana 2 Medan to PKK Subject Teachers, the teacher concerned said that the learning carried out was still using teaching materials, namely textbooks. The available textbooks do not contain learning that raises problems or projects that can improve students' skills in analyzing or understanding the material. As according to Tian Belawati (2003:95) one of the weaknesses of printed books is the difficulty of providing guidance to readers who have difficulty understanding certain parts of the printed book, in addition to one-way presentation because printed books are not interactive so they tend to be used passively, without proper understanding. This certainly has an impact on students who are

less able to master the material both in terms of increasing knowledge and skills. Thus the learning objectives of the learning process on PKK subjects will not get maximum results where it is highly expected that students have broad skills and insights to compete in the business world and the industrial world.

Based on the daily test scores of students from the two classes that were the subject of the study, the researchers found that the PKK subject scores were more dominant under the KKM with the calculated percentage reaching 73% of the 30 students for the first class, while the second class reached 77% below the KKM of 30 students. The achievement of these values certainly must be the concern of educators so that they can be improved as much as possible through learning evaluations, especially the improvement and adjustment of the teaching materials used.

The teaching and learning process in PKK subjects applied at SMK Raksana 2 Medan is expected to be able to make teaching materials that give a pleasant impression, easy to understand so that students are enthusiastic about participating in learning which has an impact on satisfying learning outcomes and PKK learning objectives can be achieved. The solutions offered and can be used to achieve the intended learning objectives need project-based interactive teaching materials that make it easier for students to understand the material and improve skills by utilizing technology.

Teaching materials by utilizing technology are now quite diverse by bringing up visuals, images, videos and animations that aim to convey learning messages to students. The teaching material referred to as the solution offered is the use of the Adobe Animate Creative Cloud Application. Adobe Animate CC is a development of Adobe Flash Professional with several additions to its features. For this reason, Adobe Animate is no different from the Adobe Flash Professional application, where this application can be used to create animations accompanied by images, videos, text, charts, and sounds. Adobe Animate is one of many software that is able to produce new features to be used in the field of education, namely by combining the concept of learning with audiovisual technology. The use of teaching materials with Adobe Animate software can improve student learning outcomes and provide a very good response to student learning.

Adobe Animate makes it easy for students to obtain and utilize learning resource references with a time and place that is free to use both during class hours and outside learning hours. In addition, Adobe Animate is able to import almost all image files and audio files so that presentations with Adobe Animate can be more lively, animations can be created, run, and controlled. So that the application of teaching materials using the Adobe Animate application is believed to be useful for clarifying the delivery of PKK subject matter. Ahmadi, Alfian Khuswaidinsyah, (2018) with research results showing that Adobe Animate CC is able to improve student learning outcomes in class XI IPS 1 MAN1 Lamongan. The results of the pretest before getting treatment got an average score of 58 while the posttest after getting treatment got an average score of 80. There is a significant difference in student learning outcomes after using Adobe Animate cc as a learning medium. Meanwhile, the acquisition of students' learning motivation responses using Adobe Animate cc as a learning medium obtained an average result of 92% with a very good category. With the literature study on the results of research using the Adobe Animate application, it is hoped that it can be a reference for researchers in developing Teaching Materials Using the Adobe Animate Application in the Subjects of Creative Products and Project-Based Entrepreneurship to Improve Student Learning Outcomes of Class XI SMK Raksana 2 Medan".

2 Literature review

Learning outcomes are student scores as long as these students carry out the learning process. The learning process is a process of changing behavior by providing experiences and activities for students. Syah (2012:44) explains learning outcomes, namely the stages of changing a person's behavior that remains from the results of interacting activities in their environment using cognitive aspects. Changes in this behavior for example behavior due to physical maturity and the development of understanding of the experience. In line with the opinion of Gagne and Briggs (1979) learning outcomes are one's ability after the learning process. Furthermore, Dahar (1998:95) explains more specifically that learning outcomes are the formation of concepts, namely the categories that we give to stimuli in the environment, which provide an organized scheme to assimilate new stimuli and determine relationships within and between categories. Here the learning process has an important role to get an assessment of students. The process of assessing learning outcomes can provide information for teachers regarding the development of students and the level of knowledge of students after participating in learning which includes development and mastery of cognitive, affective and psychomotor. Learning outcomes are the level of success of students' mastery of learning materials obtained by students from the teaching and learning process. The delivery of learning materials at the time of learning is adjusted to the objectives so that the results obtained can shape changes in students' attitudes and behavior optimally.

Optimal learning outcomes indicate the success of learning through a process that tends to be optimal. Such learning outcomes certainly have characteristics that need to be understood as Slameto (2013) that student learning outcomes with learning activities have the following characteristics:

A sense of satisfaction and a nation that raises student learning motivation

Add a sense of self-confidence. Students will know their own abilities that are not the same as their friends

Learning outcomes will give new meaning to students in shaping behavior and making it easier to develop creativity during learning

Student learning outcomes as a whole.

Optimal learning outcomes with the characteristics described above are certainly influenced by the learning process carried out by educators who provide appropriate teaching materials as a way to make it easier for students to understand the material presented. Because teaching materials are important things that will facilitate and help students understand the material. Lestari (2013) explains that teaching materials are a set of learning tools or tools that contain learning materials and methods, as well as evaluations that are designed systematically in order to achieve the expected learning objectives. In line with this right, Farida (2017) explains that teaching materials have a role in making students learn independently, anywhere and anytime, students can learn according to the speed of each individual. Thus it can be concluded that teaching materials are a set of tools/materials that contain learning materials used by teachers during learning that will

support in achieving learning objectives that affect the achievement of scores above the KKM by students.

Quality teaching materials will make it easier for students when learning and make it easier for teachers when giving the material. The Ministry of National Education (2008) develops teaching materials using the following principles: (1) starting easy things to understand difficult things, from concrete things to understanding difficult things. (2) repeating to strengthen the understanding that is absorbed. (3) Positive feedback strengthens students' understanding. (4) High motivation as part of the factors that determine student success (5) getting goals such as climbing which must be done step by step. (6) Knowing the results will motivate students in achieving goals. Based on this principle, the researcher believes that the teaching materials based on the Adobe Animate application are very suitable for use in learning. Because the Adobe Animate application provides a variety of animation features that make learning can be designed to increase students' enthusiasm for learning and facilitate understanding of the material. As Chun (2017) states that Adobe Animate CC is a comprehensive application in creating sophisticated animation and interactive applications with many media published from various platforms.

The teaching materials developed do not only focus on the use of the Adobe Animate application, but the teaching materials developed include the delivery of project-based materials. It is intended that students not only understand in terms of theory, but also understand in terms of skills or practice presented in the form of animation. As according to Moursund in Wena, (2013: 147) explains the advantages of PjBL, namely:

Increase students' motivation to learn and do important things.

A learning environment that causes students to be active in solving complex problems.

Group work on development projects and practice skills in communication.

PjBL provides conditions for students to be able to quickly obtain information through information sources, so as to improve the skills of students to seek and obtain information.

Provide learning opportunities to develop based on real world conditions.

Improved thinking skills.

A pleasant learning environment.

Based on the advantages of project-based learning, the researcher believes that the teaching materials developed have a very significant impact on the achievement of the KKM scores by students in PKK subjects.

3 Method

The type of research used by the researcher is a type of development research known as Research and Development (R and D) using the ADDIE teaching material development model. The ADDIE model was developed by Reiser and Mollenda in 1990 (Rohaeni, 2020:123). The product resulting from this development will be continued with experimental research using a quantitative approach.

In this study, the researcher wanted to know how to improve student learning outcomes with the developed teaching materials. The research method used is to use a t-test in the form of a post-test for the experimental class using the developed teaching materials and the control class without using the developed teaching materials.

The population in this study is class XI OTKP with a total of 2 classes consisting of 60 students and 1 teacher who teaches PKK subjects. Based on the sample, the researcher determined the sample using Random Sampling, namely 1 class with 30 students as the experimental class and 1 class with 30 students as the control class.

The data analysis technique in testing the feasibility of the product developed is using feasibility analysis, namely validation analysis obtained from material experts, design experts, PKK learning practitioners (individual testing, small group testing, field trials) and feasibility trials based on questionnaire sheets which were analyzed using descriptive analysis technique. The data analysis technique used to test the effectiveness of the product on improving student learning outcomes is the average difference test or t test (independent sample t test) because the data are homogeneous and normally distributed. In decision making, H_0 is accepted if the significance value is more than 0.05.

4 Results and discussion

4.1 Product development feasibility results

PKK Teaching Materials Using Project-Based Adobe Animate Applications on creative product lessons and entrepreneurship with learning materials Design concepts and product/service product packaging that have been researched and developed with reference to the ADDIE development model. The ADDIE development model consists of 5 main stages, namely: (A) analysis, (D) design, (D) development, (I) implementation, (E) evaluation.

Table 1. Results of Assessment of Teaching Materials

| Category | Average Score (%) | Criteria |
|----------------------------|-------------------|----------|
| Design expert assessment | 90 | Feasible |
| Material expert assessment | 89,3 | Feasible |
| PKK teacher's response | 91,76 | Feasible |
| Individual Test | 85 | Feasible |
| Small group test | 86 | Feasible |
| Limited Field Test | 89 | Feasible |
| Average Score | 88,51 | Feasible |

Based on the table of the results of the feasibility study on the developed teaching materials, the percentage of the average overall score of 88.51% is included in the "very feasible" category, which means the development of Creative and Entrepreneurial Product Teaching Materials (PKK) Using the Project-Based Adobe Animate Application. has been developed that is proven to be suitable for use in the teaching and learning process.

4.2 Results of testing the effectiveness of the developed product

Setelah dilakukan uji prasyarat analisis data terpenuhi baik normalitas dan homogenitas data, maka dapat dilanjutkan pengajuan hipotesis menggunakan hasil belajar siswa dan melakukan pengujian uji t. Dalam melihat seberapa besar perbedaannya hasil belajar kelas eksperimen dan kontrol tersebut dapat dilihat pada tabel berikut :

Tabel 2. Statistic Group

| Class | | N | Mean | Std. Deviation | Std. Error Mean |
|---------------------------|-------------------|----|-------|----------------|-----------------|
| Student learning outcomes | Experimental Test | 30 | 79,80 | 5,714 | ,367 |
| | Control Test | 30 | 58,60 | 1,358 | ,248 |

Based on the results of the statistical group calculations above, it is clear that the average student learning outcomes of the experimental class are 79.80 and the control class is 58.60. This explains that the average learning outcomes in classes that apply creative and entrepreneurial products (PKK) teaching materials using the project-based Adobe Animate application are greater than those in the classrooms where student handbooks use conventional methods.

Table 3. Independent Sample t-Test Results – Learning Outcomes Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---------------------|-----------------------------|---|------|------------------------------|--------|-----------------|-----------------|-----------------------|---|--------|-------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | | |
| | | | | | | | | | | Lower | Upper |
| Hasil Belajar Siswa | Equal variances assumed | 2,961 | ,091 | 32,682 | 58 | ,000 | 14,467 | ,443 | 13,581 | 15,353 | |
| | Equal variances not assumed | | | 32,682 | 50,939 | ,000 | 14,467 | ,443 | 13,578 | 15,355 | |

Judging from the results of the independent test sample output above, it was taken from homogeneous data by looking at the equal variance assumed that the significance value (2-tailed) obtained was $0.00 < 0.05$ with statistical tests using the t test with test results showing t count $32.682 > t_{table} 1.671$ with 0.05 and $df = 58$ or. Based on the difference in the value of learning outcomes and the t-test carried out, it can be concluded that the PKK teaching materials developed are effective in improving student learning outcomes.

5 Conclusions

Based on the formulation, objectives, results, and discussions in the research on the development of Creative and Entrepreneurial Product Teaching Materials (PKK) with Adobe Animate Application-Based Projects for creative products and entrepreneurship for class XI OTKP SMK Raksana 2 Medan, it can be concluded that: 1) Development Creative Products and Entrepreneurship Teaching Materials (PKK) with Adobe Animate Applications Based on Creative and entrepreneurship product subjects with learning materials for product/service product design and packaging concepts in class XI OTKP SMK Raksana 2 Medan are eligible and suitable for use by conducting an assessment of the category – a predetermined category by obtaining an average percentage result of 88.51% with very feasible criteria. 2) The use of Creative Products and Entrepreneurship Teaching Materials (PKK) with the Project-Based Adobe Animate Application that was developed effectively improves student learning outcomes who are taught to use Creative and Entrepreneurial Product Teaching Materials (PKK) with the Project-Based Adobe Animate Application for creative product subjects and entrepreneurship that developed is higher than the average of student learning outcomes who are taught without the developed teaching materials have an average of 79.80.

Based on the findings that have been described at the conclusion of the research results on the development of teaching materials, the following suggestions are proposed, namely: 1) For students, the teaching materials that have been developed have been proven to improve student learning outcomes in learning activities so that the use of teaching materials for creative product subjects and entrepreneurship really need to be supported by more adequate facilities. 2) Teachers should be more creative in making teaching materials and need to learn how to make interesting teaching materials, and must follow technological developments in the learning process so that they are not monotonous and boring. 3) Principals should encourage teachers to be creative in making project-based teaching materials by utilizing technology that is much needed as teaching materials in the learning process. 4) For other research, in order to make teaching materials more interesting because basically teaching materials really could help students in following the learning process. Product developments could be further developed with broader materials or materials that have never existed based on the characteristics of students and subjects.

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