

# The Effectiveness Of The Use Of Blended Learning Model Based On Video Tutorial Reviewed From Students' Understanding In The Basic Graphic Learning In Banyudono State Vocational School

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## ABSTRACT

This study aims to determine (1) Is there a difference in students' cognitive understanding of the blended learning model based on video tutorials and conventional learning; (2) Is the use of video tutorial based blended learning models more effective than conventional learning on basic graphic design subjects. This study uses a quasi-experimental design method with a pretest-posttest control group design model. The population in this study were students of class X TKJ 1 and X TKJ 2 SMK Negeri 1 Banyudono. The sample used was 71 people. The sampling technique used is non-probability sampling. Data collection techniques using pretest-posttest and observation sheets. Data analysis techniques used are the balance test, normality test, homogeneity test, and hypothesis testing using an independent sample t-test. The results of the study are as follows. First, First, there are differences in students' cognitive understanding of video tutorial based blended learning models with conventional learning. secondly, the blended learning model based on video tutorials has a higher effectiveness compared to conventional learning on the learning understanding of class X TKJ students in SMK Negeri 1 Banyudono

**Keywords:** Blended Learning, Video Tutorials, Conventional Learning, Learning Comprehension

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## 1. INTRODUCTION

Vocational High School (SMK) is a school that is prepared to produce graduates who are competent in their fields so they can directly enter the workforce. Vocational High Schools also play an important role in preparing students who excel in knowledge, attitudes, and skills (Guritno, 2016). Law No. 20 of 2003 concerning national education explains that Vocational High Schools (SMK) aim to prepare competent human resources to enter the workforce and become productive workers. Vocational school graduates ideally are workers who are ready to use, in the sense that they can directly work in the business and industrial world.

Minister of Education Regulation No. 22/2006 explained the purpose of vocational education is to increase knowledge, intelligence, personality, noble character, students' skills to attend further education following their vocational training. The fact that is happening on the ground today shows that the goals of vocational education have not been achieved optimally. Several factors make these lessons have not been fully achieved. Based on observations made by the author in the field that with conventional learning methods, the lack of understanding of students when teaching and learning activities take place certainly affects the learning goals that have not been reached to the maximum. From the cognitive value data of Class X TKJ 2 students in Graphic Design subjects shows that there is 1 student out of a total of 35 students from Class X TKJ 2 who can reach the specified KKM limits. The value data when presented is only 2.85%. This percentage is still very low when viewed by the number of students in the class.

To improve student understanding and improve learning goals, of course educators must find the right solution. In achieving these objectives several ways can be done, one of them through blended learning learning models. This learning model uses technological advances through online learning systems with traditional learning. The blended learning model applies a combination of face-to-face learning and online learning.

There are several supporting applications to implement blended learning, one of which uses Edmodo. Pityo (2012) states that Edmodo is a social network platform for teachers and students to share ideas, files, agenda of activities and assignments. Frank Gruber (2008) in his article entitled Edmodo: Microblogging for Education, Edmodo makes it easy for users to create groups and share files, links, videos (embed videos) and images equipped with warnings (alerts), assignments (assignments) and agenda of activities (event). By using Edmodo, the assignment system and the provision of material by teachers become easier. Like uploading video tutorial material as a student study guide to create a design in the Basic Graphic Design subjects.

The excess use of video media as learning according to Nugent (2005) in Smaldino et al. (2008: 310), video is a media that is very suitable for use in a variety of learning, such as small groups, classes, and even a student. The use of video tutorial media is suitable for a variety of practical learning. The results of a study by Francis M. Dwyer stated that humans can remember more than three days a message delivered through an audio message of 10%, large writing 10%, visual 30% and if added with practice it will reach 80%. Indirectly by using video tutorial material, it is expected that students will understand more about the learning material provided because video tutorials can guide students in understanding learning material. Students are not only given video tutorial material, but students must upload their work in the form of a graphic design video according to the guidance given by the teacher through a video tutorial in Edmodo application so that student work can be monitored by the teacher.

Based on the background of the problem as described earlier, the author is interested in researching with the title "Effectiveness of Using Video-Based Blended Learning Models in Review of Students' Understanding of Basic Graphic Design Subjects at SMK Negeri 1 Banyudono".

## 2. RESEARCH METHOD

The method used in this study is the Quasi-Experimental Design method, which is an experimental research development of True Experimental Design. This design is almost the same as Pretest-Posttest Control Group Design, only in this design, the experimental group and the control group are not randomly selected. In this study, the population used was class X students of SMK Negeri 1 Banyudono with a total of 71 students consisting of 2 classes. Class X TKJ 1 with 36 students and class X TKJ 2 with 35 students. While the sampling in this study uses non-probability sampling by using the entire population to be sampled, namely some control classes and some classes with experiments. Data collection techniques used in this study are learning outcomes tests (THB).

## 3. RESULT AND ANALYSIS

### 3.1. RESULT

For the results to be accounted for, the data analysis in this study must meet the analysis prerequisite test. The analysis prerequisite test in this study consisted of a balance test, a normality test, and a homogeneity test. The test results show the sig value  $> 0.05$ . Then hypothesis testing can be done. Hypothesis testing is done by using the t-test (Independent Sample t-Test) to analyze the data on the hypothesis so that there is any influence. The basis for making a hypothesis test is if the Sig.  $< 0.05$ , which indicates an influence.

#### Testing the First Hypothesis

H<sub>0</sub> : There is no difference in cognitive learning outcomes for the use of video tutorial-based blended learning models and conventional learning as learning models for students in the basic subjects of graphic design.

H<sub>a</sub> : There are differences in cognitive learning outcomes for the use of video tutorial based blended learning models and conventional learning of students in basic graphic design subjects.

The first hypothesis testing is used to determine differences in student learning outcomes in both classes. This test is carried out using a t-test with an error level of 0.05. The decision to test the first hypothesis is that the hypothesis is accepted if Sig. (2tailed)  $< 0.05$  and the hypothesis is rejected if Sig. (2tailed)  $> 0.05$ .

Table 1 Results of the First Hypothesis Analysis

Class	N	Sig	$\alpha = 5 \%$	Criteria	Information
Class Eksperimen	35	0,000	0,05	0,000 $<$ 0,05	H <sub>0</sub> rejected

Class Kontrol	36				H <sub>1</sub> accepted
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Based on Table 1, the results of the first Hypothesis Test with Sig <0.05 the result is Sig. 0,000 <0.05 Thus, H<sub>0</sub> is rejected and H<sub>a</sub> is accepted, so it can be concluded that there are differences in students' cognitive understanding on the use of video tutorial based blended learning models and conventional learning of students in basic graphic design subjects

#### Testing the Second Hypothesis

H<sub>0</sub> : The use of video tutorial based blended learning models is not effective when compared to the conventional learning of students in basic graphic design subjects.

H<sub>a</sub> : The use of video tutorial-based blended learning models is more effective compared to the conventional learning of students in basic graphic design subjects.

The second hypothesis testing is using Gain on the results of the pretest and posttest to be able to prove the hypothesis that has been made. The following are the results of calculations using a Gain that can be seen in table 2.

*Table 2 Results of the Second Hypothesis Analysis*

Class	Average Pretest	Average Posttest	Standart Gain	Information
Experiment	44,5	73,0	0,57	Medium
Control	51,7	62,5	0,28	Low

Based on table 2 it can be seen that the analysis uses a standard gain in the experimental class that is equal to 0.57, which means the effectiveness of using a video tutorial based blended learning model with the medium category. While the standard gain results in the control class that is equal to 0.28 which means the effectiveness of using conventional learning with a low category. Therefore, based on table 2 it can be concluded that the effectiveness of students' understanding of learning by using video-based blended learning methods is higher when compared to conventional learning.

### 3.2. ANALYSIS

#### First Hypothesis

The first hypothesis concludes that there are differences in students' cognitive understanding of video tutorial based blended learning models with conventional learning.

Based on testing the first hypothesis using the results of the pretest and posttest values using the t-test shows that there are differences in students' cognitive understanding between the use of video tutorial-based blended learning methods and conventional learning. The difference in understanding of learning is obtained from the experimental class and the control class. The experimental class is a class that uses video tutorial based blended learning methods, while the control class is conventional learning.

The first test is in the form of a balance test against the results of the pretest value whose results are 0.705. The results of these values indicate that the value of Sig. greater than the error level of 0.05. So it can be concluded that by looking at students' pretest data there is no significant difference in the students' initial ability in the experimental class and the control class, both classes have equal or equal initial abilities.

Then in the second test of the first hypothesis that is viewed from the results of the students' posttest scores in the experimental class and the control class. The results of these calculations produce Sig. 0,000 which means that the value is less than 0.05 so H<sub>0</sub> is rejected and H<sub>1</sub> is accepted. Thus it can be concluded that the results of testing on the first hypothesis are accepted, namely that there are differences in the use of video tutorial-based blended learning methods and conventional learning as learning methods in the basic subjects of graphic design.

Differences in cognitive understanding due to video tutorial-based blended learning is a learning process carried out with the help of electronic media or a learning process that can take place online. Where in blended learning there is a unity between face to face learning and online Therefore this blended learning process is very suitable for the needs of students now who carry out the learning process in an interesting manner with the help of multimedia technology via the internet, where the internet media is currently very closely related to student activities in obtaining information knowledge especially about basic graphic design materials. Learning by using video tutorial-based blended learning methods can increase student attention in learning basic graphic design. Students can see how to make graphic designs in detail in the tutorial video that has been uploaded to Edmodo so students can follow it clearly because the video tutorial is easy for students to understand. This can increase students' understanding because the explanation in the video tutorial is easy to remember for students so that when working on written tests students understand the material taught in the video tutorial.

The results of this study are supported by the statement of Fitria Arfika and Surniaty Chalid (2017) in their research using video tutorials in learning to make various kinds of camp. The results of the study said that student learning outcomes in the initial test made various kinds of camps before the application of video tutorial-based media obtained an overall average score of 77.61 with 45.71% of students who completed and 54.29 incomplete % with the highest value that can be achieved is 87 and the lowest value is 70. After the implementation of video-based media tutorials make the various camps in the first cycle of learning obtained an average value increased to 85.96 with the number of students who completed as much as 94.29% and incomplete as many as 5.71% with the highest value that can be achieved is 96.75 and the lowest average value is 72.5. This shows a fairly high increase and can exceed the specified KKM limit of 75 so it can be said that the use of video tutorial media can improve student learning outcomes.

Student learning outcomes have increased to 94.29% of students who achieved the complete value of the total number of students of 35 people. Thus the application of video tutorial-based media can significantly improve student learning outcomes with the achievement of learning completeness that is expected to be classically surpassing 75%.

### **Second Hypothesis**

The second hypothesis concludes that the use of video tutorial-based blended learning models has a higher effectiveness compared to conventional learning.

There are differences in improvement in student learning outcomes after the implementation of the blended learning model based on video tutorials and conventional learning in subjects in graphic design. The conclusion is reviewed based on the results of the average value in the pretest and posttest in the control class and the experimental class. The average value is calculated using the Gain index test.

In the experimental class, the standart gain is 0.57 in the medium category, while in the control class the standard gain is 0.28 in the low category. Therefore this test accepts the hypothesis that the use of video tutorial-based blended learning methods is more effective when compared to conventional learning.

## **4. CONCLUSION**

Based on the results of the research and discussion conducted, it was concluded that:

1. There is a difference in students' cognitive understanding of video tutorial based blended learning models with conventional learning.
2. The use of video tutorial-based blended learning models has a higher effectiveness compared to conventional learning.

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