

# **Effectiveness of the Use of Interactive Video Learning Media in Fashion Technology Courses**

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**Abstract:** The purpose of this research is (1) To find out that there is a significant increase in student learning outcomes by using interactive video learning media better than using previous learning media. (2) To find out whether interactive videos are used as learning media in the learning process of Fashion Technology courses. This study uses an experimental method with Pretest Posttest Control Group Design patterns. The population in this study amounted to 87 students from two Fashion Technology classes at Semarang State University. The research sample was obtained by random method, then the sample used was 29 students in class 1 as the experimental class and 29 students in the second class as the control class. Data collection uses the check list method, data analysis using descriptive statistics and t test. Based on the results of the analysis of the data obtained, that the average learning outcomes of fashion technology subjects in the experimental group which were originally 67.94 increased to 82.46 or an increase of 89.65%. Whereas in the average control group the results of the study which initially 66.93 increased to 74.01, resulting in an increase of 58.62%. There is an increase in learning outcomes by using interactive videos. Interactive video learning media are effectively used in the learning process of Fashion Technology courses. To the instructors it is recommended to apply learning with interactive video media because it is proven through the use of interactive video media that can improve the learning outcomes of the practice of Fashion Technology.

## **1 INTRODUCTION**

The development of technology in the field of education demands increasingly awareness of educators to use the media to convey messages, both visually and audio-visual. Management of teaching aids is very much needed. Media development arises since the teacher plan to use the media in the learning process as an integral material in the learning plan (Nur'aini 2008: 78).

Educational media today is able to create the creativity of each individual to be able to compete in developing every innovation that exists by human creativity, taste, and initiative. Therefore, in the field of education always adjust to the existing development according to the level of creativity of each. This includes the development of learning media as a form of support in the communicative learning process in the hope that the learning outcomes achieved later will be in accordance with the learning objectives. The process of teaching and learning is essentially a communication process that is the process of delivering messages from the source of the message using certain media to the

recipient of the message. This development is expected to be able to create conducive and attractive learning conditions for students.

Learning videos are media that can be made by the teacher through programs that are in the computer. Among other programs Ulead Video Studio, Windows Movie Maker, and so on. Learning videos can be made with bilingual, as an application of Informational Technology and bilingual systems. Learning videos not only help the theoretical learning, but also very helpful in the practical learning.

Fashion Technology is a practical course in the Fashion Study Education Program, where the application of learning media is needed to help improve student learning outcomes. During this time, the media used is Power Point. Based on the observations, this media can only help students understanding in theory (cognitive) domain, not yet in the affective and psychomotor domains. Thus, there is a need for other media that can be applied by lecturers in improving student learning outcomes. One of the media that can be used is interactive learning video media. This media is an audio-visual

media equipped with sound, images, attractive design layouts, as well as real demonstrations on making *kampus*. After using the media, it is expected that students can understand the material more clearly and can improve learning outcomes on the material.

However, this video media has never been tested for effectiveness compared to the Power Point media that has been used in learning about Fashion Technology courses. For this reason, research on the effectiveness of instructional video media is needed and is considered better than the media used previously.

Students will be more interested in learning if the learning media is different from usual, for example an interactive learning media that is needed by a lecturer in his teaching so that the learning process is not boring. Interactive learning media is a learning process tool that can be used to convey learning material by combining different innovations to make it more interesting. One example of learning media is interactive video learning media in the form of video media which is used as a learning tool to be made as attractive as possible so that the delivery of learning material is more easily understood. Submitting learning with media in the form of videos, students will be more interested because all the senses will be stimulated and tend to pay attention and be more curious about the existing media. Learning using interactive video learning media is innovative learning with theorizing of constructivism and meaningfulness, where students are required to construct or build what they get through the senses of sight and hearing and then produce a meaning from the learning outcomes. Another advantage of this interactive video learning media will minimize the function of a teacher, so that through this media interactive learning takes place with interaction and reciprocity between interactive video learning media with students, where interactive video learning media will stimulate students to be interested in the learning process and the students' responses will be explained further by the instructor. Learning media in the form of interactive videos will help students in learning the practice of Fashion Technology in preparation for implementing practical learning. Interactive video media has become a vital part of the learning process, especially in innovative learning.

Learning media in this case have an important role as a tool to create success in the learning process. Before the implementation of the learning process it is necessary to prepare for teaching, including syllabus, lesson plans, learning methods,

instructional media, grids and evaluation tools. Interactive video learning media is one of the determinants of learning effectiveness, this video transforms theoretical teaching materials into interactive activities that show the implementation procedures of teaching materials. Learning media is said to be successful if it can improve or achieve learning objectives.

Based on these thoughts, the authors feel interested in conducting research with the title "Effectiveness of the Use of Interactive Video Learning Media to Improve Learning Outcomes in Fashion Technology Courses".

## 2 METHOD

This research method uses quasi-experimental methods with a Pretest Posttest Control Group Design pattern. The population in this study is the second semester students who take Fashion Technology courses, amounting to two classes, with a total of 87 students. The sample in this study took two classes as a sample, the sample was taken by selecting two classes with a total number of students as many as 48 students with 29 students in each class.

Variables in this study use interval type variables. This variable is produced from measurements consisting of two variables, namely the independent variable and the dependent variable. The independent variable ( $x_1$ ) is the influence of the use of interactive videos in the Fashion Technology course. The independent variable ( $x_2$ ) is the influence of the use of previous learning media on the competence of Fashion Technology. The dependent variable is the achievement of practical learning outcomes of the Fashion Technology course with learning using interactive video learning media and learning using learning media as before.

Data collection methods used in this study are the documentation method in the form of a teaching preparation book, student attendance, a list of grades and syllabus. Observation method used was the form of student learning activeness and a test method in the form of a practice test with a pretest and posttest model that includes Fashion Technology courses. The practice test instrument used was tested in advance about its validity and reliability. Before being analyzed, normality and homogeneity of the data are tested first, and then the hypothesis testing tool uses a t-test.

### 3 RESULTS

The results of this study are in the form of student assessment data after using a practical test instrument. This practice instrument is tested first to find out the validity and reliability of each assessment point indicator. Validity test was conducted with 30 respondents with 40 assessment point indicators. Based on the results of the validity test it can be seen that from the 40 indicator points are valid and reliable. Based on the results of the validity and reliability tests discussed earlier, it can be concluded that the instrument is valid and reliable and can be used in research. The use of interactive video learning media which is used as a research tool has been declared feasible as a learning media, because interactive video learning media has passed the feasibility test stage conducted by expert instructors in instructional media, expert lecturers by Fashion Technology material experts. With the criteria for evaluating interactive video learning media that are appropriate to be used as learning media, then interactive video learning media is used as a measurement tool for the data used by the experimental group. The use of instructional media in the form of interactive videos for the experimental group and using previous learning media namely power point previews, pdf previews, word previews, and books will be carried out as pre-test treatments for both groups. After the pre-test results are obtained then proceed with the treatment using interactive video learning media for the experimental group and using the previous learning media by power point preview, pdf preview, word preview, and book. During the learning process takes place an assessment of student activity is assessed directly by the lecturer and researcher here as instructors. After the interactive video learning media is applied to the experimental group and the previous learning media is applied to the control group the learning outcomes are obtained through a post-test.

The results of the assessment of these two groups will be analyzed to determine the level of effectiveness of learning, learning outcomes and a significant increase in learning outcomes. The figure 1 will show the results of the pre-test data similarity between the experimental group and the control group.

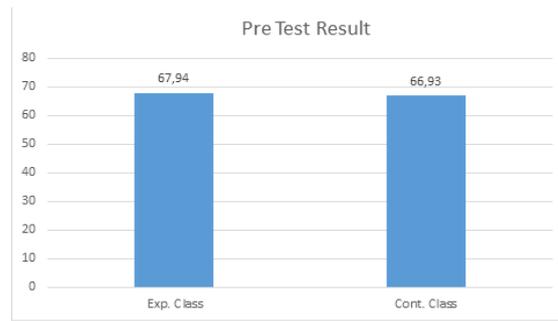


Figure 1. Pre test data result

From the results of this initial test, that prior to learning the two groups have the same initial ability and can be used as a reference to find out the differences in the post-test results later. Tests conducted after the experimental class is given treatment are usually called post-tests. Analysis of the data used is the description of posttest results, data normality test, data homogeneity test and t test.

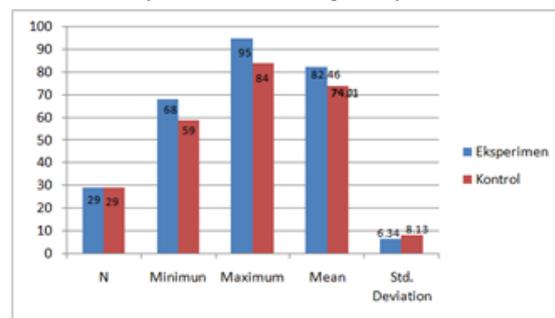


Figure 2. Graph Description of Post-Test Results Data

Based on Figure 2 shows that the learning outcomes of the Fashion Technology course in the experimental group who got learning using interactive video media were higher than the control group that got previous learning. Normality test data of pre-test and post-test of the experimental group and the control group summarized in Figure 3 below can thus be explained that the pre-test and post-test data in the experimental and control groups are normally distributed, because  $c^2$  count  $<$   $c^2$  table = 41.34 for  $\alpha = 5\%$  with  $dk = 28$ .

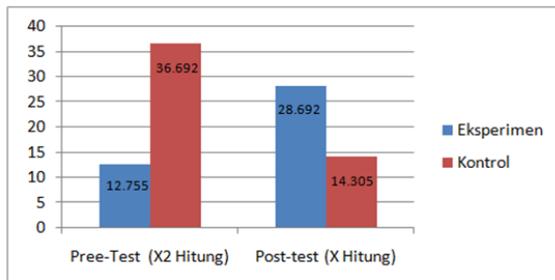


Figure 3. Graph of Data Normality Test Results

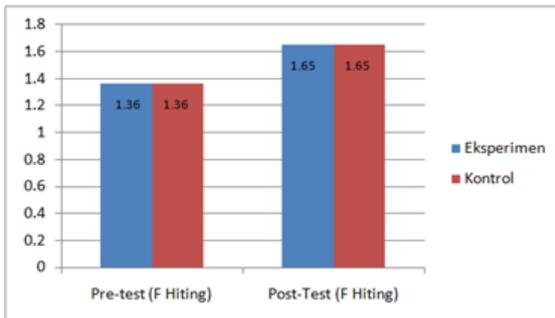


Figure 4. Graphs of Data Homogeneity Test Results

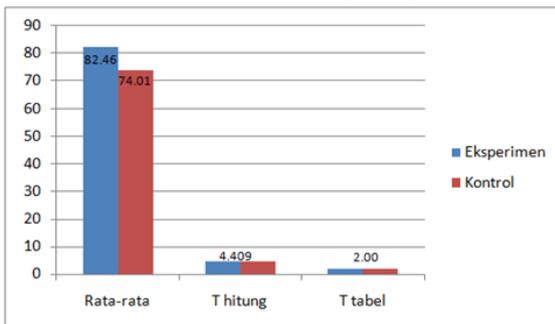


Figure 5. Graph of T Test Results Learning Outcomes

Based on the results of the homogeneity test of the data using the similarity test of two variances or the F test in Figure 4 above shows that the pre-test and post-test data obtained the value of  $F_{count} < F_{table} = 2.13$  at  $\alpha = 5\%$  with  $dk = (28:28)$ . Thus, it can be explained that the pre-test and post-test results are homogeneous. Based on the results of the t test on Figure 5, obtained  $t_{count} = 4.409 > t_{table} = 2.00$  at  $\alpha = 5\%$  with  $dk = 56$ . Thus, it can be decided that the research hypothesis ( $H_a$ ) which states: "There is an increase in mastery of student material in the Technology course Clothing and its components using interactive video media on learning about Fashion Technology are accepted. Based on the results of student activity evaluations, an average of 84.4 for the experimental group and 74.8 for the

control group was obtained. These results indicate that the average learning activeness of the experimental group is better than the average learning activeness of the control group. From table 1 it can be explained that the use of interactive video media is effective for learning Fashion Technology in students because by using interactive video media can improve student learning outcomes can also lead students to achieve mastery learning. UNNES students in the achievement of learning outcomes in Fashion Technology courses are still under the KKM, to meet the graduation criteria in learning it is necessary to do learning that is easy and quickly understood and understood by students. The achievement results as much as 37.94% reached KKM and only 62.06% did not reach KKM. The average value achieved by students is 72.75 out of 29 students in one class. The use of several different and innovative methods and media is possible to overcome this problem. Interactive video learning media is one of the media that delivers material using mechanical and electronic machines that present audio and visual messages, through images in frames that are projected mechanically to make the images look more vivid, so as to increase student interest in learning, increasing student learning references, and arousing student attraction and imagination.

Early stage analysis of the results of the pretest between the experimental group and the control group showed that the initial abilities of the two groups were the same. The success of interactive video learning media has been proven from the average value of the experimental group's posttest after using interactive video learning media in the learning process, and the differences between the control groups that get learning using instructional media as before with the experimental group who get learning using interactive video learning media, so that the application of interactive video learning media can later be used as teaching aids in the learning process during the learning process. In contrast the results of the posttest descriptive analysis for the control group showed lower results compared to the experimental class. This is possible because students who were given previous learning media such as power point previews, pdf previews, word previews, and books felt the media used was less attractive as a learning tool. Based on significant differences from the results of the post-test scores can show that learning with interactive video media is better than the previous media. Indicators of effectiveness are also measured from low manufacturing costs and time that is not too long. At

the time of the learning process also measured the level of effectiveness of the time, where the delivery of learning by using interactive video learning media is relatively faster. Based on the above statement it can be concluded that the use of instructional media using interactive video media is more effective than the previous learning media.

#### **4 CONCLUSIONS**

Based on the results of the research above, it can be concluded that the results of this study are as follows: There is a significant increase in learning outcomes in Fashion Technology courses from the average experimental class before being given an interactive video learning media 67.94 to 96.55 after using video learning media interactive. Whereas the previous control was 66.93 to 74.01. Interactive video learning media are effectively used as learning media for Fashion Technology courses. This is based on the results of increasing the value of student learning outcomes and the tendency of students to be more interested in learning by using interactive video learning media than in the previous media. Based on the above conclusions, there are a few suggestions from the author, namely as follows:

In order for a more optimal understanding of students expected during learning by using interactive video learning media, there needs to be equality between applicative understanding and theoretical understanding. It is advisable for instructors to apply learning by using interactive video learning media when discussing Fashion Technology lecture material. Given the use of interactive video learning media proven to improve student learning outcomes in Fashion Technology courses. There needs to be further research for a larger population with diverse class conditions so that the research conclusions can apply to a broader scope.

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