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The Improvement of Learning Outcomes of Women Fashion Management by Using Model Media (Fragment)

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***Abstract*—Women Fashion Management Course is one of the compulsory courses taken by the Fashion Design Education Study Program students in the 5th semester, which contains material about clothes making using tailoring technique. Learning Outcomes of Women Fashion Management course obtained by students in the 2015/2016 school year were not satisfying, with around 50% of the students got "average" score. Data was collected using a test and non-test method. The test method was a written test and the non-test method was in the form of observations and documents. The hypothesis testing used Wilcoxon test and gain test. The Wilcoxon test showed a calculation of 2.5 <table 81, which means that there was an increase in the learning outcomes of women fashion management which used model media (fragment). The gain test result showed that the learning outcomes of women fashion management which used model media (fragment) increased by 36% and belonged to medium criteria. It can be concluded that model media (fragment) can improve the learning outcomes of women fashion management by 36%. It is suggested that the subject lecturer can combine model media (fragment) with other media, thus it will help students in understanding the material.**

Keywords—model media (fragment); learning outcomes; women fashion

I. INTRODUCTION

The Department of Family Welfare Vocational Education (*PKK*) is one of departments in the Faculty of Engineering, Universitas Negeri Semarang (UNNES) which has an aim of producing prospective professional educators who are in line with their fields. There are 4 categories in the Family Welfare Vocational Education Department, which are Fashion Design, Culinary, Beauty and Family Welfare Vocational Education. The Fashion Design Education study program can be finished in approximately 8 semesters, with the condition that students can pass all compulsory courses and select 3 elective courses. The total number of courses is 68, which contain of 62 compulsory courses and 6 elective courses, with a total of 144 credits [1].

Women fashion management is a 4 credits course, which presents the concept of fashion knowledge and fashion making skill using construction patterns with semi-tailoring solutions based on the model and opportunity including: the scope of women fashion management, including the manufacture of pants and blouses, two pieces, dress with lining, and modified with lining-attached *kebaya* [2]. Women fashion management course consists of several components, which is in accordance with the opinion of Nur'aini that said that the components of learning are the learning objectives, students, teachers, learning materials, methods, media, and evaluation [3]. Media is one of the learning component and has an important role in the teaching and learning process, including as a tool to convey material and lecture to students. Printed media is a medium that has been used in the learning of women fashion management in the form of books, texts, job sheets, and handouts.

Printed media only provides visuals in the form of pictures and writings which constitute the entire content of the material, and if the presentation is not attractive it will be dull which will affect the student's learning outcomes.

The data of learning outcomes in the two pieces material shows that by using printed media, the learning outcomes obtained by students are not optimal. There are 50% of the students who get average score, thus it is deemed necessary to use other media in the form of model media (fragment) in the women fashion management learning. The use of model media is expected to be able to help delivering the material from the lecturer to students in more detail since the media model shows artificial objects or original objects that the students can see directly, which is expected to improve the student's learning outcomes.

The formulation of the problem of this study are: (1) is there an increase in the learning outcomes of women fashion management using model media (fragment)? (2) how much is the increase of the learning outcomes of women fashion management using model media (fragment)?.

This study aims to (1) find out whether there is an increase in the learning outcomes of women fashion management using model media (fragment) and (2) find out how much the learning outcomes of women fashion management using model media (fragment).

II. METHODOLOGY

Population in this study were students registered in women fashion management course in the 2015/2016 school year. The population of this study consists of 50 students, while the sample technique used was purposive sampling which determine the sample based on certain considerations Sugiyono [4]. The learning group class used for the research was learning group 2, with a total of 24 people (the 2015 Family Welfare Vocational Education Department). The independent variable in this study is model media (fragment), with indicators covering the appearance of media and material, while the dependent variable in this study is the learning outcomes of Women Fashion Management course on two pieces material, with indicators: cognitive, affective and psychomotor domain.

The design used for this study was a one-group pretest-posttest design. This study measured the learning outcomes in the previous material, that is *kebaya* before the application of the model media (fragment) as a pre-test and two pieces learning outcome after the application of the model media (fragment) as a post-test.

Tests in this study were conducted to measure cognitive and psychomotor domain. The cognitive domain of this study used items in the form of an objective test with 4 answer choices. The psychomotor domain in this study was conducted by asking students to sew two-pieces clothing according to the instruction. Non-test method is usually used to evaluate the affective (attitude) and psychomotor (practice) aspect. This study used a technique of observation and documentation.

The instrument testing was conducted on fashion design students who had taken women fashion management course. A test instrument needed to be conducted prior to a research. This was to make sure that the instruments used were valid and reliable when used during in research data collection. Tests were conducted on students who had taken the Women Fashion Management course with a total of 26 students. Afterward, the result showed that there were 30 valid questions and 5 invalid questions.

From the calculation at the significant level of 5% with n = 26, it resulted in $r_{table} = 0.388$, and from the calculation of the theoretical test instrument reliability, it resulted in $r_{11} = 0.879 > r_{table} = 0.388$, thus the instrument was considered reliable and trusted. The observation sheet in this study used rating reliability. Azwar states that rating is a procedure for scoring based on subjective judgment on certain aspects or attributes that are carried out through systematic observations both directly and indirectly [5].

$$r_{xx'} = \left(\frac{S_{s^2} - S_{e^2}}{S_{s^2} + (k-1)S_{s^2}}\right)$$

The price of r_{xx} obtained was then consulted with r table. The calculation result of the observation sheet reliability (affective) was $r_{xx} = 0.6$. The calculation result at the significant level of 5% with n = 24 was $r_{table} = 0.404$, then the calculation result of affective sheet reliability was $r_{11} = 0.6 > r_{tabel} = 0.404$, therefore the affective instrument was reliable and trusted to be used to collect the research data. The calculation result of instrument reliability (psychomotor) was $r_{xx} = 0.5$. The calculation result at significant level of 5% with = 24 was $r_{table} = 0.404$, then the calculation result of affective sheet reliability was $r_{11} = 0.5 > r_{table} = 0.404$, therefore the psychomotor instrument was reliable and trusted to be used to collect the research data.

Normality Test is used to determine whether the data to be used is normal or not, and to determine the next test, which is using parametric or nonparametric statistic. Normality test used Liliefors test because the data used is a single data or single frequency data, not a group distribution data and the sample used were less than 30 [6]. Liliefors Formula is F (Si) -S (Zi). The calculation result is:

TABLE I. THE RESULT OF DATA NORMALITY TEST

Statistical Data	L_{count}	N	$L_{table(0,05;24)}$	Criteria
PRE	0,397	24	0,173	NOT NORMAL
POST	0,272	24	0,173	NOT NORMAL

The table above shows the L_{count} of learning outcomes of kebaya sewing before the application of model media (fragment) is 0.397 and the learning outcomes two pieces sewing after the application of the model media (fragment) is 0.272. L_{table} value with significant level of 5% is:

$$L_{table} = L_{(\alpha;\, n)} = L_{(0,05;24)} = 0,173.$$

As a conclusion, the normality test analysis of kebaya sewing and Two pieces sewing learning outcomes are L_{count} 0.397 > L_{table} 0.173, then Ho is rejected, thus the data distributed is not normal.

The variance homogeneity test conducted in this study uses t-test statistics because the data tested are two groups of data that are not independent (correlated), thus they have the variance of two samples which correlated with pre and post [7]. The homogeneity test in this study can be observed from the calculation result between the learning outcomes of kebaya sewing before the application of the model media (fragment) as a pre-test and the learning outcomes of Two Pieces sewing after the application of the model media (fragment) as a post-test. T-test homogeneity formula Kadir is [7]:

$$t = \frac{|{s_1}^2 - {s_2}^2|}{2s_1 s_2 \sqrt{\frac{1 - {r_{xy}}^2}{db}}}$$

TABLE II. THE DATA OF HOMOGENEITY RESULTS TEST

Statistic data	t_{count}	n	db (n-2)	t_{table}	criteria
Pre	4,596	24	22	2,074	Not homogen
Post					Not homogen

The table above shows that the t_{count} score of the learning outcomes of kebaya sewing before the application of model media (fragment) and the learning outcome of two pieces making after the application of the model media (fragment) is 4,596. T table score is obtained from $t_{table} = t_{(\alpha;\, n-2)} = t_{(0,05;22)} = 2.074$, while both data of the learning outcomes of kebaya making and learning outcome of two pieces making in Women

Fashion Management Course is above the significant level of 5%. It can be concluded that the homogeneity test analysis of the learning outcomes of kebaya making and the learning outcomes of two pieces making is t_{count} 4,596 > t_{table} 2,262, then Ho is rejected, so the data distributed is not homogen.

III. Result and Discussion

The Improvement of learning outcomes of Women Fashion Management can be seen from the learning results before the application of model media (fragment) on kebaya material as a pre-test with two pieces learning outcomes after the application of the model media (fragment) as a post-test, which can be seen in the following table 3:

TABLE III. Statistical Data of Pre-Post Results

Statistic Data	Pre	Post
The number of students	24	24
Average	78,42	86,09
Varians	32,60	7,43
Standard Deviation	5,71	2,73
Max value	87	91
Min value	70	81

The results from the table above show that the average learning outcomes of kebaya sewing before the application of the model media (fragment) at the Women Fashion Management Course is 78.42 with the highest score is 87 and the lowest is 70. The learning of *kebaya* material has not used model media (fragment). The learning only uses printed media and lecturing method, thus there are only few students who are dare to ask the teacher when there is unclear material.

The result in the subject of two pieces making using the model media (fragment) shows the average of learning outcomes of two pieces making after the application of the model media (fragment) is 86.09 with the highest score is 91 and the lowest is 81. The data shows that there is an increase in learning outcomes by using model media (fragment).

Hypothesis testing was used to determine whether there was an increase before and after the application of the model media (fragment). This learning outcomes increase can be seen in the previous subject learning results, which is *kebaya* sewing subject as the pre-test, and the learning outcomes of two pieces making as the post-test. The hypothesis of the non-parametric statistical testing used for this study is the Wilcoxon Match Pairs Test statistical test where $\omega_{count} < \omega_{table}$, then Ho is rejected, thus there is an increase in learning outcomes in women fashion management course using model media (fragments).

TABLE IV. Hypothesis Test Result

Statistic data	ω_{count}	N	$\omega_{table(0,05;24)}$	Criteria
Pre	2,5	24	81	Significant
Post		24		Significant

The table above shows that the results of the research analysis obtained from the hypothesis test of kebaya sewing learning outcomes and two pieces sewing learning outcomes of ω_{count} 2,5< ω_{table} is 81. The score of w table obtained from $\omega_{table} = \omega_{(a;\ n)} = \omega_{(0,05;24)}$ is 81 with significant level of 5%, Ho is rejected, thus there is an increase in the learning outcomes of women fashion management using model media (fragments).

The gain test result was used to see how much improvement occurred before and after the application of the model media (fragment). The gain test result can be seen in the table below:

TABLE V. Gain Test Results

Calculation	Pre	Post
Total	1882	2066
Average	78,4	86,1
Varians	32,60	7,43
Standard Deviation	5,71	2,73
Max value	83	91
Min value	70	81
Gain score	0,36	

The table above shows that the pre-test learning outcomes, that is before the application of model media (fragment), has an average of 78.4 with the highest score of 83 and the lowest of 70 while the post-test learning outcomes, which is after the application of the model media (fragment), has increased by 36%, which belongs to the medium category with an average score of 86.1, and the highest score of 91 and the lowest score of 81.

The learning outcomes obtained in the pre-test table is lower than the post-test table, which because the learning has not used fragment model media, and only used printed media and lecturing method, therefore it is less effective. Students who are passive and unable to understand the material will not be motivated to be more active and ask questions to the lecturer. Learning by using model media (fragments) requires students to play a direct role in learning. This media also guides students starting from materials that are still in the form of a piece of cloth until becoming two pieces clothing. Students can follow every step well and sequentially, and they can do the learning process independently because there is already a medium that can be followed by students.

IV. Conclusion

The conclusions of the research are as follows: (1) The use of model media (fragments) can improve the learning outcomes of women fashion management. This can be seen from the calculation results of Wilcoxon test ω_{count} 2,5< ω_{table}, which is 81, (2) The learning outcomes of women fashion management using media models (fragments) shows a large increase of 36%, which is categorized as medium criteria.

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