The Effect of Reading Image Ability of Clothing Design on Student Skill of Pattern Making

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Abstract—This study is correlational research that aims 1) to know the reading ability of clothing design of student, 2) to know the student skill of pattern making, and 3) to know the effect of the reading image ability of clothing design of students at Education Family Welfare Department, Universitas Negeri Makassar. The populations in this study were all students of the Department who programmed the Women's Clothing Construction courses as many as 45 people. The data was collected by using a questionnaire, documentation; research results were analyzed using descriptive statistics and inferential statistical analysis. The results showed the ability of students to understand was good, it can be seen from the ability to read design elements and principles of design. Based on the descriptive results obtained an average score of students was at 69.31, the maximum value of 80 while the lowest score was 58. The skills of changing patterns dressmaking at Education Family Welfare Department based on the silhouette, proportion, accent and harmony at the average value around 74.22 with a maximum value 80 and a value minimum 62. There was influence between the ability to read images with the skill level burst pattern show, there is strong significant relationship between variables was equal to 0.83, or 83% means that the relationship between the two variables was very high, or 83% of skills influenced by the fashion burst pattern understand the design drawings while 17% was influenced by other factors was not examined in this study.

Keywords— *reading ability; pattern; skills*

I. INTRODUCTION

The complexity of the education system especially in the Indonesia is based on the sustainable development concept to provide the community knowledge and motivation to improve their value of life of their next generation. Moreover, the industry or business sectors need to integrated with the education system to improve people awareness to improve the skills of the students and gaining more knowledge. Therefore, the need of vocational studies is increasing to provide more knowledgeable and create skilful students.

The fact shows that, students will perceive the links between problems encountered in school and the real world and between different task contexts, there is a call to improve

the vocational education system in context. Especially for vocational students.

Women's Clothing Construction course is one of the compulsory subjects for students of Family Welfare Education Department Universitas Negeri Makassar. Some of the competencies that must be owned by the students are making some ladies clothing such as skirts, blouses and dresses with some models, thus the necessary basic skills both in terms of understanding the concept of burst pattern as the basis for making clothing.

Designing is a first step in making clothing. Designing process illustrates in drawing. Drawing is interactive imagery and aid in designing [1]. After designing, student made pattern of clothing. The pattern is very important in making clothing. The clothing worn on a person's body is strongly influenced by the path of the pattern itself. Moreover, the pattern is a piece of cloth or paper used for example to make clothes. Pattern makers are usually also referred to as patternmaking [2].

The pattern of construction is the basic patterns created by the size of the body of the wearer, and in the picture with a mathematical calculation in accordance with the pattern of system construction [3]. Pattern drafting is the process of changing the basic patterns into patterns that match the fashion model. Way, among others by moving pleated, cut, splice, or lengthen and shorten (increase or decrease the size) in certain parts of the archetype [4].

II. METHOD

This research is a quantitative research by using correlational approaches as the methodology. In particular, the use of independents and dependent variables as the research variable application of the correlational approach is in line of educational research to see the causalities between the variables. This kind of research is common as a means of exploration of the phenomenon. Additionally, the use of correlational research is relevant in order to developing teaching methods and student learning by integrating ability of the students and the relevant issues in the vocational education. The correlational between independent and dependent variables. The independent variables include the ability to read drawings and the dependent variable is making pattern of women's fashion skills.

Fig. 1. Correlation of variable

The population in the study was all students of the Family welfare education Department who took Women's Clothing Construction courses. There were 45 student. The researcher used test instrument to found the read ability and the student skill.

In this study, the methods of obtaining data, namely, field notes, observation, and informal interview. The teaching and learning process in the classroom was observed, while I kept field notes. Observations were recorded by using a video recorder after getting permission from all the participants involved in this study.

Data obtained from the research analyzed using descriptive statistics and inferential statistical analysis. Inferential statistical analysis used is simple regression analysis.

III. RESULT AND DISCUSSION

A. Reading ability of fashion design images

The students skills to making clothing based on their ability to read the design drawing. The ability to read drawing is related with visual literacy. The meaning of visual literacy is the ability of students to interpret information presented of image. The based of visual literacy that the image has many meaning ingredients and must be interpreted [5].

The student ability to read the images of a fashion design is showed in Table 1.

TABLE I. READING ABILITY OF FASHION DESIGN IMAGE

Characteristic	Value
Mean	69.31
Standard Error	0.83
Median	70
Mode	70
Standard Deviation	5.58
Sample Variance	31.17
Kurtosis	0.61
Skewness	0.28
Range	22
Minimum	58
Maximum	80
Sum	3119
Count	45

The Table 1 shows that minimum value of students ability is 58 and the maximum is 80. It indicates that values show a small range and the standar deviation is 5.58. The result shows that students' ability to read images fairly uniform.

B. The skill to making pattern

Pattern is a flat as aid for designer to realize the idea of design. There are three difficulties of pattern making for

beginner designer namely, understand the size, cutting and scales [6].

The student skill to making clothing pattern shows in Table 2.

TABLE II. STUDENTS SKILL TO MAKING CLOTHING PATTERN

Characteristic	Value
Standard Error	0.71
Median	75
Mode	75
Standard Deviation	4.77
Sample Variance	22.77
Kurtosis	0.60
Skewness	1.07
Range	18
Minimum	62
Maximum	80
Sum	3340
Count	45

The table 2 shows that minimum value of student skill is 62 and maximum is 80. The range values between maximum and minimum.

C. Effect of reading ability design images to pattern making skills of students

Results of normality test sample data on reading ability and skill of design drawings burst pattern women's fashion will be described in the following table:

TABLE III. RESULTS OF ANALYSIS NORMALITY AND ITS INTERPRETATION

One-Sample Kolmogorov-Smirnov Test			
		Ability to understand an image	Skill of make a pattern
N		45	45
Normal Parameters ^{a,b}	Mean	69.3111	74.2222
	Std. Deviation	5.58334	4.77155
	Absolute	.171	.187
	Positive	.086	.113
Most Extreme Differences	Negative	-.171	-.187
Kolmogorov-Smirnov Z		1.149	1.254
Asymp. Sig. (2-tailed)		.142	.086

^a. Test distribution is Normal

^b. Calculated from data

Table 3 shows that the ability of student to understand the design drawings is normal category. Furthermore, the student skil of pattern making also in normal category.

Linearity test is required to determine the linear relationship between independent variables and the dependent variable. The results linearity analysis shows in Table 4.

TABLE IV. ANALYSIS OF LINEARITY CORRELATIONS

		Ability to understand an image	Skill of make a pattern
Pearson Correlation	Ability to understand an image	1.000	.913
	Skill of make a pattern	.913	1.000
Sig. (1-tailed)	Ability to understand an image		.000
	Skill of make a pattern	.000	
Skill of make a pattern	Skill of make a pattern	.45	.45
	Skill of make a pattern	.45	.45

Based on the data in Table 4 obtained a description that the correlation coefficient between the ability to understand the image and pattern-making skills is seen that the output 0.913 of the significant value of 0.000. To test the significance of the correlation coefficient is to compare the significance value obtained with $\alpha = 0.05$ because the price of 0.000 significance of $\alpha = 0.05$, H_0 unacceptable. The conclusion is the ability to understand the correlation coefficient between the image and the skills to make a statistically significant pattern.

The correlation between two variables interpreted in uji F (Table 5)

TABLE V. UJI F

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1142.631	1	1142.631	214.542	.000 ^b
1 Residual	229.014	43	5.326		
Total	1371.644	44			

^a. Dependent Variable: Ability to read an image

^b. Predictors: (Constant), Ability to make pattern

ANOVA test results using the F test obtained F count 214.542 with 0.000 significance level of the comparison of calculated F and F table then deduced reject H_0 which means the correlation coefficient is statistically significant. Thus, the hypothesis has been proposed in this study that there is influence between the ability to read design drawings to a skill burst pattern of women's clothing is acceptable.

TABLE VI. REGRESSION EQUATION

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-9.957	5.423		-1.836	.073
1 Skills of making pattern	1.068	.073	.913	14.647	.000

^a. Dependent Variable: Ability to understand an image

The table 6 shows that the regression equation results:

$$Y' = -9.957 + 1.068X$$

Interpretation of figures:

- Constants for 1. 068 indicates that ability to understand images (x) value is 0 then the ability to create patterns (Y) value is negative, namely -9.957
- Variable regression coefficient value (x) of 1.068: that if the value of the ability to understand the picture one the ability to make a pattern (Y) will be increased by 1,068. Coefficient is positive, meaning a positive relationship between the ability to understand images with the ability to create a pattern. The higher the value of the ability to understand the image then the increasing the ability to create patterns.

Based on the results of descriptive analysis known that the ability to understand the design drawings on dressmaking student is in the good enough category. The students skill about patternmaking also in good enough category.

IV. CONCLUSION

The reading ability design images of students are categorized based on the descriptive results obtained an average score of students is at 69.31, the maximum value of 80 while the lowest value is 58. The students skills to make pattern is an average of 74.22 with a maximum value of 80 and a minimum value of 62. There is the influence between the ability to read images with the skills to maki pattern. The relationship between the two variables is very high, or 83% skill fashion burst pattern influenced by the understanding of the image design while 17% are influenced by other factors not examined in this study.

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