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### THE DEVELOPMENT AND APPLICATION OF GRAPHICS MEDIA ON THE STUDENTS' WRITING ABILITY OF THE FIFTH SEMESTER STUDENTS OF INDONESIAN LANGUAGE AND LITERATURE

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#### **ABSTRACT**

This research focuses on determining the extent of graphics media development and application on the students' writing ability of the fifth semester students of Indonesian and Literature at Faculty of Teacher Training and Education Nommensen University in Academic year 2019/2020. This research is designed by Experimental Research Design, the sample is divided into two groups namely the experimental group and the control group. Quantitative data is used to answer the research question or problem which was obtained by using essay test instruments that contain writing narrative paragraphs based on the type of graphics presented to the experimental group. Based on the statistical data analysis, it is obtained that: (1) The fifth semester students' ability to write narrative paragraphs is categorized as good with an average of 72.25. (2) The results of the hypothesis test shows that  $t_{count} > t_{table}$  ( $4.06 > 1.65$ ) thus the Alternative Hypothesis ( $H_a$ ) proposed is accepted, and the Null Hypothesis ( $H_0$ ) is rejected.

## INTRODUCTION

According to Rivai and Murni (2009: 30-37) There are four national education problems, namely educational equity, management and efficiency, management and autonomy of education, and the relevance of education. On the other hand, Ismaya (2015:1) states the ideal level of education a paradigm shift occurred which initially looked at the educational institutions as the social institutions, now seen as a wet business that indicates the need for management changes. The Management changes must be in tune with the demands of the times. Based on these two opinions, education is experiencing national degradation that must be taken seriously, it requires a full attention from the education observers, education managers, educators, elites involved in the world of education, as well as other parties who care about education.

Tilaar (2002: 60) states that "the resilience of a society is determined by three elements, namely: its natural resources, the quality of human resources, cultural resources and historical". It is only civilized members of society who have pride in their society and culture that will be as the productive human resources in the era of globalization. Humans who are not cultured will sink into the current of globalization and does not have an identity. Globalization greatly affects the developing countries, including Indonesia. Such influence will also be experienced by its citizens, their human resources. Therefore, the readiness of the Indonesian people to face the era of globalization is to improve the quality of human resources. The issue of increasing human resources fully is the quality of human beings with a balance of the material aspects and spiritual aspects/religious values.

The research problem of this study is formulated as follows; What is the extent of the students' writing ability taught by the development and application of graphic media of the fifth semester students of Indonesian Language and Literature Study Program, Faculty of Teacher Training and Education at the University of Nommensen Medan?

## TEORITICAL FRAMEWORK

### *Using graph media*

The purpose of making graphs is to pay attention to comparisons of qualitative information quickly and simply. Printed and graphic media in the teaching and learning process are the most widely used. This media is included in the category of non-projected visual media that functions to channel messages from the giver to the recipient of the message (from lecturers to students). The message is written in written form, letters, images and symbols that contain meaning.

There are here are some suggestions coming from some researchers who used graphic organizer technique to solve the problems in writing. As Sharrock (2008) and Emerson (2010) found that graphic organizer is the effective writing strategy. And the series of studies, principally by Clark in Zaini et. al. (2010), examined that graphic organizer not only enables students to record

and categorize information, but also help students to understand difficult concepts, generate thoughts, and identify connections between ideas. It means that graphic organizer strategy can help students to write in English especially in writing text. Sharrock (2008) and Emerson (2010) argue that graphic organizer strategy can help students to make a good topic sentence, supporting idea, supporting details, and concluding sentence so that students can write well and readers can understand the idea.

Graphic media including silent visual media, as is the case with other media, graphic media has a function to channel messages from lecturers to students. The channel used involves the sense of sight as outlined in interesting and clear symbols. This media does not include media that is relatively inexpensive in its procurement, when compared in terms of cost. The function of graphic media is to attract attention, clarify the presentation of the lesson, and illustrate a fact or concept that is easily forgotten if only done through verbal explanation. Graphic media can be long in the memory of students because it attracts the attention of students, so the material will be easily understood and recorded longer. Graphic media is highly recommended in the learning process of writing.

### ***The meaning of writing ability***

The ability is the power to carry out an action as a result of being carried out and exercising. The ability is an action that can be carried out at the present. According to Daryanto (1997: 420) in Indonesian's Big Dictionary; ability is a capability, strength, someone is able to do something by himself/herself. Based on this opinion, the ability is the capability or skill to do something based on the ability possessed by someone or something, whether it is innate or through practice. This research focuses on determining, the ability of the students to write based on the use of media in the learning process of writing course that is carried out by the lecturer who handle the course.

Atar Semi (1996:8) argues thatwriting or narrating is essentially a transfer of thoughts or feelings into symbols of language". In line with this opinion, Tarigan (2008: 3) states thatWriting is a language skill that is used to communicate directly, not face to face with others. Writing is a productive and expressive activity. Furthermore, Kamisa (1997: 99) argues thatwriting is the same as composing". In addition, Widyamartya (1989: 9) argues thatWriting is a process of human thought activity that wants to express the content of his soul to others, or to oneself in writingBased on these opinions it can be concluded that writing is essentially an organized thought process, so that what is written is easily understood by the reader.

## **RESEARCH METHODOLOGY**

### ***Context of the study and participants***

This research was designed with experimental research design. Experimental methods include quantitative methods, as a research method based on

scientific philosophy that is used to examine a particular population or sample. Sampling techniques are generally done randomly, data collection is by using research instruments, and statistical data analysis is aimed to test hypotheses that have been set. Arikunto (2010: 9) the experimental method is a way to find a causal relationship between two factors that are deliberately caused by researchers by reducing or setting aside other interfering factors". In line with this Ary et al (1982: 50) states that experiment is a scientific inquiry that requires researchers to manipulate populations and control one or more independent variables and observe the dependent variables, to see differences in accordance with the manipulation of these independent variables" Furthermore, experimental research is divided into several types, namely pre-experimental and true-experimental or quasi-experimental.

The population in this study was all the fifth semester students of the Indonesian Language and Literature Study Program, there were 80 students. All these students were taken as the sample of the study. The instrument used to collect the data was by administering test. The form of the test was an essay test in the form of assigning the sample to write narrative paragraphs based on the type of graph presented to students.

### *Data analysis*

The steps of data analysis are as follows:

1. Calculating student scores (X1 and X2)
2. Calculating the final value of student variables X1 and variable X2 with the formula:

$$\frac{\text{correct answer}}{\text{total items}} \times 10$$

3. Finding and tabulating the scores of variables X1 and X2
4. Calculating the mean of variable X1 and the mean of variable X2 by using the formula:

$$\bar{x}_1 \left[ \frac{\sum fx_1}{N_1} \right] \text{ and } \bar{x}_2 \left[ \frac{\sum fx_2}{N_2} \right]$$

5. Finding the standard deviation of variable X1 and the standard deviation of X2 with the formula:

$$SD1 = \sqrt{\frac{\sum f(X - \bar{X}_1)^2}{N_1 - 1}}$$

and

$$SD2 = \sqrt{\frac{\sum f(X - \bar{X}_2)^2}{N_2 - 1}}$$

6. Calculating the standard error of variable X1 and standard error X2 with the formula:

$$Sex_1 = \frac{SD_1}{\sqrt{N_1 - 1}}$$

$$\text{And, } S_{x_2} = \frac{SD_2}{\sqrt{N_2 - 1}}$$

7. Looking for a standard error of the difference mean of variable X1 and mean of variable X2 with the formula

$$S_{x_1 - x_2} = \sqrt{SE_{x_1}^2 + SE_{x_2}^2}$$

8. Testing the hypothesis with "t" test with the formula

$$t_0 = \frac{x_1 - x_2}{SE_{x_1 - x_2}}$$

## FINDINGS AND DISCUSSION

### *The data of the students' ability to write narrative paragraph*

Based on the test results administered to the sample, it is obtained that the ability of the students to write narrative paragraphs using the inquiry learning method (X1) and the ability of students to write narrative paragraphs using lecture learning methods (X2) are as follows: the students' ability scores range from 50 to 95 with an average of 72.25 and the standard deviation is 13.67. While the students' ability to write narrative paragraphs has a range of values of 60-80 with an average of 70.5 and the standard deviation is 7.49.

### *The requirements analysis*

To find out whether the ability of the experimental class (X1) and control class (X2) is normal or not and the ability to write narrative paragraphs (Y), normality test was performed by using the Liliefors technique. From the calculation, the ability of experimental class is  $L_{count} = 0.1159$ , while the data of ability of the control class is  $L_{count} = 0.1020$ . Then compared with  $L_{table}$  at the significant level  $\alpha = 0.05$  with  $N = 40$ , then  $L_{table} = 0.1400$ . Thus  $L_{count} < L_{table}$  so it can be concluded that the data of the ability of experimental class and the ability of control class is normally distributed.

Based on the Normality Test table, it is obtained  $L_{count} = 0.1159$  and from the table the critical value of L for liliefors with  $N = 40$  at a significant level  $\alpha = 0.05$ ,  $L_{table} = \frac{0.886}{\sqrt{40}} = 0.1400$ . This shows that  $L_{count} < L_{table}$ , it can be

concluded that the sample is normally distributed. Based on the Normality Test Table for Students' Ability to Write Narrative Paragraphs (Y), it is obtained that  $L_{count} = 0.1020$  and from the table the critical value of L for liliefors with  $N = 40$  at a significant level  $\alpha = 0.05$ , the price of  $L_{table} = \frac{0.886}{\sqrt{40}}$

$= 0.1400$ . This shows that  $L_{count} < L_{table}$  concluded that the sample is normally distributed. Based on the homogeneity test, the calculation of the variance of the two variables obtained data as follows:

$S_{21} = 13.67$   $N = 40$   $S_{22} = 7.49$   $N = 40$  then:  $F = \frac{13.67}{7.49} F_{\text{count}} = 1.82$ . The F value of the F distribution test at the real level  $\alpha = 0.05$  is 2.11, so  $F_{\text{count}} < F_{\text{table}}$  ( $1.82 < 2.11$ ), so it can be concluded that the sample comes from a homogeneous group.

Based on the results of the calculation of the variance homogeneity test of the two data variables, it is obtained that  $F_{\text{count}} = 1.82$  while  $F_{\text{table}} = 2.11$  at a significant level  $\alpha = 0.05$  with  $N = 40$ , so  $F_{\text{count}} < F_{\text{table}}$ . Thus it can be concluded that the sample comes from homogeneous groups.

### ***The product moment correlation calculation***

Based on the results obtained from the test, the ability of experimental class (X1) and the ability of control class (X2) and the ability of students to write narrative paragraphs (Y) with normal distribution, it is known:

$$\begin{aligned}\Sigma X &= 2890 \\ \Sigma X^2 &= 216100 \\ \Sigma XY &= 205950 \\ \Sigma Y &= 2820 \\ \Sigma Y^2 &= 201000 \\ N &= 40\end{aligned}$$

so that:

$$\begin{aligned}r_{xy} &= \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N \Sigma X^2 - (\Sigma X)^2\} \{N \Sigma Y^2 - (\Sigma Y)^2\}}} \\ &= \frac{(40)(205950) - (2890)(2820)}{\sqrt{\{(40)(216100) - (2890)^2\} \{(40)(201000) - (2820)^2\}}} \\ &= \frac{8238000 - 8149800}{\sqrt{(8644000 - 8352100)(8040000 - 7952400)}} \\ &= \frac{88200}{\sqrt{(291900)(87600)}} \\ &= \frac{88200}{\sqrt{25570440000}} \\ &= \frac{88200}{159907,5983} \\ r_{xy} &= 0.551\end{aligned}$$

Based on the above calculation,  $r_{\text{count}} = 0.551$ , while  $r_{\text{table}}$  at a significant level  $\alpha = 0.05$  for  $N = 40$  it is obtained 0.312. Thus  $r_{\text{count}} > r_{\text{table}}$  ( $0.551 > 0.312$ ).

### ***Hypothesis testing***

To test the Significant correlation among the ability of experimental class (X1) and the ability of control class (X2) and the ability of students to write narrative paragraphs (Y) t-test calculations is used with the formula:

$$t = \frac{r \sqrt{N-2}}{\sqrt{1-r^2}}$$

Based on the calculation of the product moment correlation it is obtained that rcount = 0.551 then:

$$\begin{aligned} t &= \frac{0,551\sqrt{40-2}}{\sqrt{1-0,551^2}} \\ &= \frac{(0,551) (6,164)}{\sqrt{1-0.303601}} \\ &= \frac{3.396364}{0.834505} \end{aligned}$$

$$t = 4.06$$

Furthermore, the t-count value is compared with t-table with df = n-2 (40-2) = 38) at a significant level  $\alpha = 0.05$ . As the value of table with N = 38 is not in the table list, so interpolation is sought with the following calculation:

$$\begin{aligned} \frac{a}{b} &= \frac{c}{d} \\ t_{38} &= \frac{38-30}{40-30} \\ &= \frac{x-1.697}{1.671-1.697} \\ t_{38} &= \frac{8}{10} = \frac{x-1.671}{-0.026} \\ t_{38} &= 10x - 16.71 = -0.208 \\ 10x &= -0.208 + 16.71 \\ t_{38} &= 1.65 \end{aligned}$$

Because tcount > ttable that is 4.06 > 1.65, this shows that Ho was rejected and Ha is accepted. Thus, the results of this study can be concluded that:

Ha: the development and application of graphic media has a positive and significant effect on the students' ability to write narrative text by fifth semester students of the Indonesian Language and Literature

Ho is rejected: the development and application of graphic media has no positive and significant effect on the students' ability to write narrative by fifth semester students of the Indonesian Language and Literature.

## DISCUSSION

Based on the results of the study obtained through the testing of students' ability to write narrative paragraphs in the experimental class, it is obtained that the average is 72,25. While the ability to write narrative paragraphs in the control class is in the average of 70.5. It concludes that the students' ability to write narrative paragraphs in the experimental class is higher than the control class, in which, the average grade of the fifth semester students of the Indonesian Language and Literature Study Program in writing narrative

paragraphs is in the category of good and more effective in the experimental class. From the results of hypothesis testing, it was obtained that  $t\text{-count} > t\text{-table}$  ( $4.06 > 1.65$ ) thus the alternative hypothesis proposed was accepted, meaning that the development and application of media graphic has a positive and significant effect on the students' writing ability.

## CONCLUSION

Based on the data analysis, the following conclusions are drawn: (1) The students' ability to write narrative paragraphs by the fifth semester students of the Indonesian Language and Literature Study Program is categorized good with the average score is 72.25. (2) The results of hypothesis testing conducted concluded that  $t\text{-count} > t\text{-table}$  ( $4.06 > 1.65$ ) therefore, the development and application of graphic media has a positive and significant effect on the students' ability to write narrative text by the fifth semester students of the Indonesian Language and Literature.

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