

CHAPTER IV
RESEARCH FINDING AND ANALYSIS

This chapter is related to the analysis of data collection from the research finding and discussion. This research was intended to find out the degree of the effectiveness of using Graphic Organizer in teaching writing descriptive text.

A. Description of Research Finding

Finding of this research described that there were different result between experimental class which was taught by using Graphic Organizer and control class which was taught using non-Graphic Organizer or Direct Method in teaching writing descriptive text. The research was conducted in MAN 02 Semarang with the tenth grade in the academic year 2016/2017.

Table 4.1
Schedule of the research

No	Activity	Month/ Date								
		November								
		2 nd	3 rd	5 th	7 th	8 th	9 th	10 th	12 th	13 th
1	Pre-test									
	a. Experimental Class	✓								
	b. Control Class		✓							
2	Treatment in experimental class			✓		✓	✓			
3	Conventional teaching in control class				✓	✓		✓		
4	Post-Test									
	a. Control Class								✓	
	b. Experimental Class									✓

The researcher gave pre-test on 2nd of November 2016 in experimental class and control class on 3rd of November 2016. After giving pre-test, the researcher determined the materials and lesson plans of learning activities. Pre-test was conducted to both classes to know that two classes were normal and homogeneous.

Before the activities were conducted, the researcher prepared lesson plan and material to learning activity. The researcher conducted conventional teaching in control class on 7th until 10th of November 2016. Control class was taught by using conventional method, without giving variation on special treatment in learning process.

The treatment for experimental class conducted on 5th until 9th of November 2016 by using Graphic Organizer .

After giving in experimental class and conventional teaching in control class, the researcher gave post-test which approximately finished on 30 minutes. The researcher gave post-test on 11th of November 2016 in control class and experimental class on 13th of November 2016.

B. Data Analysis

1. First phase analysis

It was done to know the normality and homogeneity of the initial data in the experimental class and control class.

a. Normality Test

Normality test is used to know whether the data is normally distributed or not. To find out the distribution data is used normality test with Chi square.

Ho : the data distributed normally

Ha : the data does not distribute normally

With the criteria:

Ho accepted if $\chi^2_{count} < \chi^2_{table}$

Ho rejected if $\chi^2_{count} > \chi^2_{table}$

With $\alpha = 5\%$ and $df = k-1$.

Table 4.2

The normality result pre-test in experimental class and control class.

Class	χ^2_{count}	χ^2_{table}	Criteria
Experimental	8.86	11,07	Normal
Control	8.44	11,07	Normal

Based on analysis above, it can be seen that χ^2_{count} of both classes is lower than χ^2_{table} ($\chi^2_{count} < \chi^2_{table}$), so Ho accepted. The conclusion is distribution data of experimental class and control class are normal.

b. Homogeneity test

Homogeneity test is used to know whether the group sample that is taken from population is homogeneous or not.

$$Ho : \sigma_1^2 = \sigma_2^2$$

$$Ha : \sigma_1^2 \neq \sigma_2^2$$

Table 4.3
The homogeneity result of pre-test in experimental
and control class

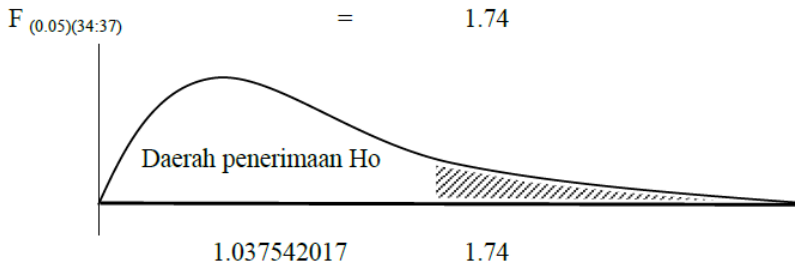
Class	Variance (S ²)	N	Df	F _{count}	F _{table}	Criteria
Experimental	68.723	38	37	1.038	1.74	Homogeneous
Control	71.303	35	34			

According to the formula above, it is obtained that:

$$F = \frac{vb}{vk}$$

$$F = \frac{71.303}{68.723}$$

$$= 1.038$$



Karena F berada pada daerah penerimaan Ho, maka dapat disimpulkan bahwa kedua kelas homogen

Based on the computation above it is obtained that F_{count} is lower than F_{table} so H_0 accepted. It can be conclude that data of pre-test from experimental class and control class have the same variance or homogeneous.

- c. Testing the similarity of average of the initial data between experimental class and control class.

To test the similarity of average, used t-test.

$$H_0 : \mu_1 = \mu_2$$

$$H_a : \mu_1 \neq \mu_2$$

Where:

μ_1 : average data of experimental class

μ_2 : average data of control class

Table 4.4
The average similarity test of pre-test in
experimental class and control class

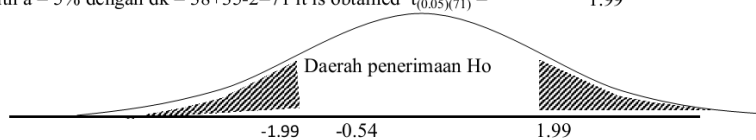
Variation source	Experimental	Control	Criteria
Sum	1865	1755	Ho accepted
N	38	35	
Average (X)	49.079	50.142	
Variance (S ²)	68.723	71.303	
Standard of deviation (S)	8.290	8.444	

According to the formula above, it is obtained that:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$t_{\text{count}} = \frac{49.079 - 50.142}{8.36 \sqrt{\frac{1}{38} + \frac{1}{35}}} = -0.542$$

with $\alpha = 5\%$ dengan $dk = 38+35-2=71$ it is obtained $t_{(0.05)(71)} = 1.99$



Karena t berada pada daerah penerimaan H_0 , maka dapat disimpulkan bahwa ada persamaan rata-rata dari kedua kelompok.

With $\alpha = 5\%$ and $df = 38+35-2= 71$, obtained $t_{table} = 1.99$. From the result of calculation t -test, $t_{count} = -0.542$. if compared between t_{count} and t_{table} , $t_{count} < t_{table}$ ($-0.542 < 1.99$) So H_0 is accepted.

2. End Phase Analysis

It was done to answer hypothesis of this research. The data used are the result of post-test of both classes. The final analysis contains of normality test, homogeneity test and the hypothesis test.

a. Normality test

H_0 : the data distributes normally

H_a : the data does not distribute normally

With the criteria:

H_0 accepted if $\chi^2_{count} < \chi^2_{table}$

H_0 rejected if $\chi^2_{count} > \chi^2_{table}$

With $\alpha = 5\%$ and $df = k-1$.

Table 4.5

The normality result of post-test in experimental and control class

Class	χ^2_{count}	χ^2_{table}	Criteria
Experimental	7.35	11.07	Normal
Control	8.53	11.07	Normal

Based on analysis above, it can be seen that χ^2_{count} of both classes is lower than χ^2_{table} ($\chi^2_{count} < \chi^2_{table}$) so H_0 accepted. The conclusion is the distribution data of experimental and control classes are normal.

b. Homogeneity test

The homogeneity test is used to know whether the group sample that is taken from population is homogeneous or not.

$$H_0 : \sigma_1^2 = \sigma_2^2$$

$$H_a : \sigma_1^2 \neq \sigma_2^2$$

Table 4.6

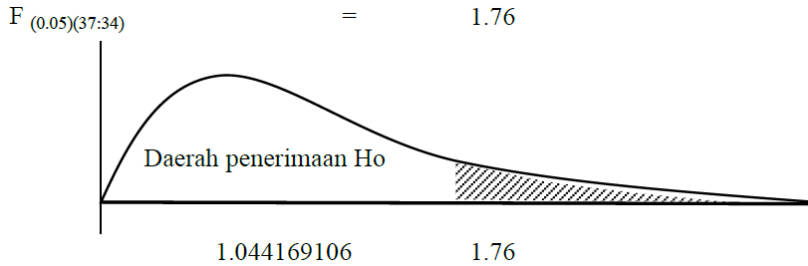
The homogeneity result of post-test in experimental class and control class

Class	Variance (S^2)	N	df	F_{count}	F_{table}	Criteria
Experimental	76.689	38	37	1.044	1.76	Homogeneous
Control	73.445	35	34			

According to the formula above, it is obtained that:

$$F = \frac{vb}{vk}$$

$$F = \frac{76.689}{73.445} = 1.044$$



Karena F berada pada daerah penerimaan H_0 , maka dapat disimpulkan bahwa kedua kelas homogen

Based on computation above it obtained that F_{count} is lower than F_{table} so H_0 accepted. It can be concluded that data of post-test from experimental class and control class have the same variance or homogeneous.

c. Hypothesis test

Hypothesis test is used to know whether there is a difference on post-test of experimental class and control class. The data which is used to test the hypothesis is score post-test both of class. To test the difference of average used t-test.

$H_0: \mu_1 \leq \mu_2$: it means there is no significant difference between the writing skill improvement of students who were taught by using Graphic Organizer and who were taught by using non-Graphic Organizer.

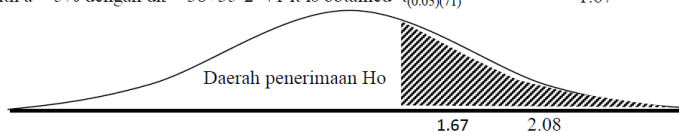
$H_a: \mu_1 \geq \mu_2$: it means there is significant difference between the writing skill improvement

of students who were taught by using Graphic Organizer and who were taught by using non-Graphic Organizer.

Table 4.7
The result of computation T-test

Class	N	Average (X)	Variance (S ²)	Standard deviation (S)	t _{table}	t _{count}	Criteria
Experimental	38	62.5	76.689	8.75	2.077	1.67	Ha accepted
Control	35	58.28	73.445	8.57			

with $\alpha = 5\%$ dengan $dk = 38+35-2=71$ it is obtained $t_{(0.05)(71)} = 1.67$



Karena t berada pada daerah penerimaan H_a , maka dapat disimpulkan bahwa ada perbedaan rata-rata dari kedua kelompok.

Based on the computation above, it is obtained that the average of post-test of the experimental class who are taught by using Graphic Organizer is 62.5 and standard deviation (s) is 8.75. While the average of post-test of the control class who are taught by using non-Graphic Organizer is 58.28 and standard deviation (s) is 8.57. With $df = 38+35-2 = 71$ by $\alpha = 5\%$, so obtained $t_{table} = 1.67$. From the result of calculation t-test $t_{count} = 2.077$. If compared

between t_{table} and t_{count} , $t_{count} > t_{table}$. So H_a is accepted and H_o is rejected. It means that there is a significant difference between the writing skill improvement of students who were taught by using Graphic Organizer and who were taught by using non-Graphic Organizer.

C. Discussion of the Research Findings

After getting the result of the research, the researcher discussed the data. Based on the teaching learning processed, it could be seen that Graphic Organizer was able to answer the statement of the problem.

1. Graphic Organizers was effective in teaching writing of descriptive text.

The different effect of experimental and control class was on the media. The students of experimental class was taught by using Graphic Organizer, while the students of control class was taught by using non- Graphic Organizer or direct method.

Graphic Organizers are a medium that can be used to encourage students to plan and brainstorm their topic before beginning to write. Students need constructive feedback to help them improve their skills and the power of their words. It help students to be able to organize and get information in taking note and creating a text.

2. The progress between pre-test and post-test of experimental class and control class was not significance or homogeneous.

The researcher gave recommendation that the teacher must give further media to the students. So, average students score in experimental class could higher than before.

Then based on the researcher's observation, by using Graphic Organizer, the teacher could create an interesting teaching learning process in the classroom because the students can present what they know and understand in a Graphic Organizer. It also makes students enthusiastic in writing text, especially in writing descriptive text.

Using Graphic Organizers they were started to learn independently. Students can find more vocabularies and apply vocabularies into sentences then into paragraph. In other words, graphic organizers are beneficial to students learning descriptive text writing. Students to be able to organize and get information in taking note and creating a text.

When the students have studied about the material, of course they have understood about the material well. It means that after knowing a media Graphic Organizer students can understand about how to compose descriptive text as well. So, it is possible that they will get higher score than before.

3. The result of experimental class is higher than control class.

It was affected to the students average score of post-test was 62.5 while the average score of pre-test in writing skill was 49.079 meanwhile, the progress of learning process in control class was steady, because the teacher taught using

non-Graphic Organizer, it can be seen on the students' average score of post-test was 58.286 while the average score of pre-test was 50.142.

D. Limitation of the Research

The researcher realizes that this research had not been done optimally. There were constraints and obstacles faced during the research process. Some limitations of this research were:

1. The research was limited at MAN 02Semarang in the academic year of 2016/ 2017.
2. Lack of experience and knowledge of the researcher, makes implementation process of this research was less perfection. But the researcher tried as possible to do this research.