

CHAPTER IV

RESEARCH FINDING AND ANALYSIS

A. Description of The Result Research

To find out the difference between the students who are taught by using comic stories and students who are taught without comic stories in vocabulary mastery, especially in MTs NU Ungaran, the researcher did an analysis of quantitative data. The data is obtained by giving test to the experimental class and control class after giving a different learning both classes.

The subjects of this research were divided into two classes. They are experimental class (VIII E) and control class (VIII A). Test was given before and after the students follow the learning process that was provided by the researcher. Researcher took test for pre-test and post-test was from the test that has been successfully tested by previous researchers who have found the method using comic stories as English teaching material. Therefore, in this study did not use a try-out test.

Before the activities are conducted, the researcher determined the materials and lesson plan of learning. Learning in the experiment class used comic stories, while the control class without used comic stories.

After the data were collected, the researcher analyzed it. The first analysis data is from beginning of control class and experimental class that is taken from the pre test value. It is the normality test and homogeneity test. It is used to know that two groups are normal and have same variant. Another analysis data is from the ending of control class and experimental class. It is used to prove the truth of hypothesis that has been planned.

B. Research Result

1. The result of Pre-test Value of the Control Class and the Experimental Class

1) Mean of the Control Class

Table 1

The Value of the Pre test of the Control Class

No.	Code	Control G
1	C-3	75
2	C-2	75
3	C-13	70
4	C-9	70
5	C-5	70
6	C-26	70
7	C-19	70
8	C-24	70
9	C-29	65
10	C-1	65
11	C-12	65
12	C-15	65
13	C-4	65
14	C-23	60
15	C-17	60
16	C-6	60
17	C-10	60
18	C-6	60
19	C-8	60
20	C-22	60
21	C-7	60
22	C-32	60
23	C-28	60

24	C-14	60
25	C-35	60
26	C-27	55
27	C-33	55
28	C-19	55
29	C-18	55
30	C-16	55
31	C-34	55
32	C-32	55
33	C-31	55
34	C-21	50
35	C-25	50
Σ		2155
N		35
X		61,57
S^2		43,78
S		6,62

Based on the table above, the researcher shows the mean of the experimental and control classes. In order to know the significant difference of the experiment could be seen through the difference of two means.

The formula:

$$Me = \frac{\Sigma xe}{n}$$

$$Mc = \frac{\Sigma xc}{n}$$

Where:

Me = the mean score of the experimental group

Σxe = the sum of all score of the experimental group

n = the number of subject sample

$$Me = \frac{\sum xe}{n} = \frac{2260}{35} = 64.57$$

2) Mean of the Experimental Class

Table 2

The Value of the Pre test of the Experimental Class

No.	Code	Experimental G
1	E-23	75
2	E-19	75
3	E-2	70
4	E-31	70
5	E-20	70
6	E-11	70
7	E-9	70
8	E-21	70
9	E-3	70
10	E-7	70
11	E-17	70
12	E-25	65
13	E-1	65
14	E-22	65
15	E-30	65
16	E-12	65
17	E-13	65
18	E-4	65
19	E-26	65
20	E-29	65
21	E-8	65
22	E-14	65
23	E-9	65

24	E-6	60
25	E-32	60
26	E-28	60
27	E-5	60
28	E-20	60
29	E-33	60
30	E-35	60
31	E-34	60
32	E-10	55
33	E-15	55
34	E-18	55
35	E-16	55
Σ		2260
N		35
X		64,57
S^2		29,96
S		5,47

Where:

Mc = the mean score of the control group

Σxc = the sum of all score the control group

n = the number of subject sample

$$Mc = \frac{\Sigma xc}{n} = \frac{2155}{35} = 61.57$$

3) Variance

The formula:

$$S^2 = \frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1}$$

a. Experimental class

The data of the research:

$$\Sigma x = 2260$$

$$n = 35$$

$$S^2 = \frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1} = \frac{2260 - \frac{2260}{35}}{35-1} = 29.96$$

b. Control Class

The data of the research:

$$\Sigma x = 2155$$

$$n = 35$$

$$S^2 = \frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1} = \frac{2155 - \frac{2155}{35}}{35-1} = 43.78$$

4) Standard Deviation

Experimental Class

$$S^2 = \sqrt{\frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1}} = \sqrt{\frac{2260 - \frac{2260}{35}}{35-1}} = 5.47$$

Control Class

$$S^2 = \sqrt{\frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1}} = \sqrt{\frac{2155 - \frac{2155}{35}}{35-1}} = 6.62$$

5) The Homogeneity Pre-test of the Experiment Class

The hypotheses in homogeneity test are:

Ho : homogeny Variant = $\sigma_{1,2} = \sigma_{2,2}$

Ha : non homogeny Variant = $\sigma_{1,2} \neq \sigma_{2,2}$

The formula is:

$$F = \frac{V_b}{V_k}$$

The data of the research:

$$V_b = 43.78$$

$$V_k = 29.96$$

$$F = \frac{V_b}{V_k} = \frac{43,78}{29,96} = 1.216$$

With $\alpha = 5\%$ and $dk = (35-1 = 34) : (35-1 = 34)$, obtained $F_{table} = 1.71$. Because F_{count} is lower than F_{table} ($1.216 < 1.71$). So, H_0 is accepted and the two groups have the same variant / **homogeneous**.

b. The Result Value of Post-test score in Control Class and Experimental Class

- 1) Mean of the Control Class

Table 3

The Value of Post-test of the Control Class

No.	Code	Control G
1	C-19	90
2	C-7	90
3	C-33	90
4	C-12	90
5	C-24	85
6	C-16	85
7	C-33	85

8	C-27	85
9	C-22	85
10	C-34	80
11	C-10	80
12	C-1	80
13	C-29	80
14	C-20	80
15	C-8	75
16	C-9	75
17	C-21	75
18	C-30	75
19	C-25	75
20	C-28	75
21	C-11	70
22	C-17	70
23	C-23	70
24	C-13	70
25	C-14	70
26	C-31	70
27	C-26	65
28	C-16	65
29	C-15	65
30	C-18	60
31	C-6	60
32	C-5	60
33	C-4	60
34	C-3	60
35	C-2	60
Σ		2610
N		35
X		74,57
S^2		97,61
S		9,88

The formula:

$$Me = \frac{\sum xe}{n}$$

Where:

Me = the mean score of the experimental group

$\sum xe$ = the sum of all score of the experimental grup

n = the number of subject sample

$$Me = \frac{\sum xe}{n} = \frac{2785}{35} = 79.57$$

2) Mean of the Experimental Class

Table 4

The Value of the Post test of the Experimental Class

No.	Code	Experimental G
1	E-25	90
2	E-1	90
3	E-10	90
4	E-22	90
5	E-30	90
6	E-19	90
7	E-13	85
8	E-15	85
9	E-23	85
10	E-3	85
11	E-14	85
12	E-9	85
13	E-8	85
14	E-24	85
15	E-27	80
16	E-34	80
17	E-16	80

18	E-34	80
19	E-8	80
20	E-29	80
21	E-12	80
22	E-7	80
23	E-6	75
24	E-18	75
25	E-20	75
26	E-21	75
27	E-30	75
28	E-32	75
29	E-5	75
30	E-2	70
31	E-30	70
32	E-33	70
33	E-11	70
34	E-35	60
35	E-17	60
Σ		2785
N		35
X		79,57
S^2		63,78
S		7,99

The formula:

$$M_c = \frac{\Sigma xc}{n}$$

Where:

M_c = the mean score of the control group

Σxc = the sum of all score the control group

n = the number of subject sample

$$M_c = \frac{\Sigma xc}{n} = \frac{2610}{35} = 74.57$$

3) Variance

The formula:

$$S^2 = \frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1}$$

a. Experimental class

The data of the research:

$$\Sigma x = 2785$$

$$n = 35$$

$$S^2 = \frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1} = \frac{2785 - \frac{2785}{35}}{35-1} = 63.78$$

b. Control Class

The data of the research:

$$\Sigma x = 2610$$

$$n = 35$$

$$S^2 = \frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1} = \frac{2610 - \frac{2610}{35}}{35-1} = 97.61$$

a. Standard Deviation

Experimental Class

$$S^2 = \sqrt{\frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1}} = \frac{2785 - \frac{2785}{35}}{35-1} = 7.99$$

Control Class

$$S^2 = \sqrt{\frac{\Sigma x^2 - \frac{\Sigma x^2}{n}}{n-1}} = \frac{2610 - \frac{2610}{35}}{35-1} = 9.88$$

b. The Homogeneity Post-test of the Experimental Class

The hypotheses in homogeneity test are:

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

Ha : non homogeny Variant = $\sigma_1^2 \neq \sigma_2^2$

The formula is:

$$F = \frac{V_b}{V_k}$$

The data of the research:

$$V_b = 97.61$$

$$V_k = 63.78$$

$$F = \frac{V_b}{V_k} = \frac{97.61}{63.78} = 1.527$$

With $\alpha = 5\%$ and $dk = (35-1 = 34) : (35-1 = 34)$, obtained $F_{table} = 1,71$. Because F_{count} is lower than F_{table} ($1.527 < 1.71$). So, H_0 is accepted and the two groups have the same variant / **homogeneous**.

C. The Data Analysis

1. The similarity of Pre-test

Hypothesis:

$$H_0 = \mu_1 = \mu_2$$

$$H_a = \mu_1 > \mu_2$$

Test of hypothesis:

Based on the computation of the homogeneity test, the experimental class and control class have same variant. So, the t-test formula:

$$t = \frac{\overline{x_1 - x_2}}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

The data of the research:

$$\overline{x_1} = 64.57 \quad \overline{x_2} = 61.57$$

$$n_1 = 35 \quad n_2 = 35$$

$$s_1^2 = 43.7815 \quad s_2^2 = 29.9580$$

$$s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

$$s^2 = \frac{(35 - 1)43.7815 + (35 - 1)29.9580}{35 + 35 - 2} = 6.07205$$

So, the computation t-test:

$$t = \frac{\overline{x_1 - x_2}}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$t = \frac{64.57 - 61.57}{6.07205 \sqrt{\frac{1}{35} + \frac{1}{35}}} = 2.067$$

With $\alpha = 5\%$ and $dk = 35+35-2 = 68$, obtained $t_{table} = 1.99$. Because t_{count} is lower than t_{table} ($2.067 > 1.99$). So, H_0 is not accepted and there is difference of the pre-test average value from both groups.

2. The Significant Difference of Post-test

In this research, because $\sigma_1^2 = \sigma_2^2$ (has same variant), the t-test formula is as follows:

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

The data of the research:

$$\overline{x_1} = 79.57 \quad \overline{x_2} = 74.57$$

$$n_1 = 35 \quad n_2 = 35$$

$$s_1^2 = 63.7815 \quad s_2^2 = 97.6050$$

$$s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

$$s^2 = \frac{(35 - 1)63.7815 + (35 - 1)97.6050}{35 + 35 - 2} = 8.98294$$

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} = \frac{79.57 - 74.57}{8.98294 \sqrt{\frac{1}{35} + \frac{1}{35}}} = 2.328$$

D. Discussion of Research Finding

The result of the research shows that the experimental class (the students who are taught by using comic stories) has the mean value 79.57. Meanwhile, the control class (the students who are taught without comic stories) has the mean value 74.57. It can be said that the vocabulary achievement score of experiment class is higher than the control class.

On other hand, the test of hypothesis using t-test formula shows the value of the t-test is higher than the critical value in $t_{s0.05}$ is 1.66. It means that there is a significant difference the vocabulary achievement score between students who are taught by using comic stories and the students who are taught without comic stories. In this case, the use of comic stories is necessary needed in teaching vocabulary.

Comic stories have some positive influence for the students in improving vocabulary. There are some reasons why the students can improve their vocabulary by using comic stories. They are as follows:

1. By using comic stories, the students will have encouragement and curiosity to find out the meaning of unfamiliar words. It is caused by the picture design, character and setting that are presented in comic stories that incite the reader imagination. The students will try to look up the dictionary or guessing meaning.
2. The use of comic stories in young learners' classroom would seem to offer similar rich of opportunities for learning vocabulary from context indirectly. So, students not only understand, but also they can use it.
3. By using comic stories, the students can learn vocabulary relaxes and enjoy.

In contrast, not all students have good English vocabulary. Those are caused by some factors that influence the students in learning English. They are as follows:

1. The perception that English is difficult lesson in school.

2. A poor motivation from the students to learn English seriously.
3. The difficulties in memorizing the new words influenced by the culture, pronunciation and grammar.
4. There is no big willingness to learn English.

In this research, the writer used the comic stories to improve students' vocabulary in MTs Nu Ungaran. So, the research findings are only representative in that school. The writer hopes that more researches will be done by the others to prove this method in improving students' vocabulary and to find out other methods in learning and teaching English.

E. 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 are:

1. Relative short time of research makes this research could not be done maximum.
2. The research is limited at MTs NU Ungaran. So that when the same research will be gone in other schools, it is still possible to get different result.
3. The implementation of the research process was less perfect. Because short time of this research, so the assessment was conducted not only based on the material given in the class but also the assignments or exercises given to the students' homework on word synonyms.