

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

In this chapter, the writer presented the data which had been collected from the research. The data were obtained from the students' scores in writing descriptive text in the experiment group who is taught using interactive video media and the data obtained of the students' scores in writing descriptive text in control group who is taught without using interactive video media.

A. Research Findings

1. The Result of The Post Test in Control Group

In this section, it was described the obtained data of improvement the students' writing scores after taught without using interactive video media.. The post test was taken at Tuesday, November 26 ,2013 at 06.30 – 08.00 in class X Multimedia ². They were 25 students who followed this test.

a. Distribution of Post Test Scores in Control Group

The post test scores of the control group were presented in table 4.1.

Table 4.1 The Description of Post Test Scores of the Data Achieved by the Students in Control Group

Students' Code	Rater 1	Rater 2	Final Score
C01	50	50	50
C02	74	70	72
C03	73	77	75
C04	60	64	62
C05	49	45	47
C06	66	70	68
C07	54	58	56
C08	81	79	80

C09	62	66	64
C10	60	64	62
C11	63	67	65
C12	70	70	70
C13	71	69	70
C14	63	67	65
C15	77	73	75
C16	67	63	65
C17	61	65	63
C18	79	81	80
C19	64	60	62
C20	59	61	60
C21	54	58	56
C22	60	64	62
C23	65	61	63
C24	62	66	64
C25	60	60	60

Table above described the score of each student and show the student who passed and failed the test. It showed, there were nineteen students who passed the test or about 76 % and there were six students who failed the test or about 24 % .

Based on the data above, it can be seen that the students' highest score was 80 and the student's lowest score was 47. However, based on the Evaluation Standard of English Subject, there were fourteen students who passed since they got more than 62. It meant that, there were six students did not master about writing especially descriptive text because there were six students were still got under 62.

The distribution of students' post test scores can also be seen in the following figure.

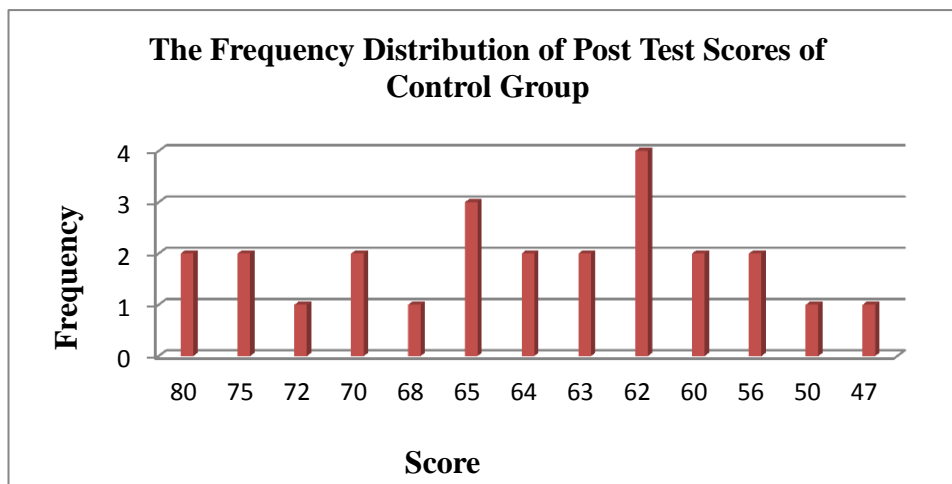


Figure 4.1 Histogram of Frequency Distribution of Post Test Scores for Control Group

The figure showed the post test score of students in control group. It can be seen that there was one student who got score 47. There was one student who got score 50. There were two students who got score 56. There were two students who got score 60. There were four students who got score 62. There were three students who got 63. There were two students who got score 64. There were three students who got 65. There was two students who got score 68. There were two students who got score 70. There one student who got score 72. There were two students who got score 75. There were two students who got score 80. In this case, six students got score under 62.

The scores of mean, median, mode, standard deviation, and standard error of mean of Post Test in control group was described in Table 4.2.

Table 4.2 The Table of Calculation of Mean, Standard Deviation, and Standard Error of Mean of Post Test Scores in Control Group Using SPSS 18.0 Program

Statistics

Nilai

N	Valid	25
	Missing	0
Mean		64,64
Std. Error of Mean		1,613
Median		64,00
Mode		62
Std. Deviation		8,067
Range		33
Minimum		47
Maximum		80
Sum		1616

The table showed the mean was 64.64. The standard deviation was 8.067 and the standard error was 1.613.

2. The Result of The Post Test in Experimental Group

In this section, it was described the obtained data of improvement the students' writing scores after taught by using interactive video media. The post test was taken at Wednesday, November 20, 2013 at 08.00 – 09.30 in class X Multimedia¹. They were 25 students who followed this test.

a. Distribution of Post Test Scores in Experimental Group

The post test scores of the experimental group were presented in Table 4.3.

Table 4.3 The Description of Post Test Scores the Data Achieved by the Students in Experimental Group

Students' Code	Rater 1	Rater 2	Final Score
E01	88	84	86
E02	73	77	75
E03	64	60	62
E04	66	70	68
E05	76	80	78
E06	85	81	83

E07	80	76	78
E08	75	75	75
E09	73	77	75
E10	80	80	80
E11	77	81	79
E12	84	88	86
E13	66	70	68
E14	61	59	60
E15	85	81	83
E16	60	60	60
E17	66	70	68
E18	75	75	75
E19	73	77	75
E20	61	59	60
E21	73	77	75
E22	77	73	75
E23	75	69	72
E24	69	71	70
E25	73	77	75

Table above was described the score of each student and show the student who passed and failed the test. It showed, there were twenty two students who passed the test or about 88 % and there were three students who failed the test or about 12.0 % .

Based on the data above, it can be seen that the students' highest score was 86 and the student's lowest score was 60. However, based on the Evaluation Standard of English Subject, there were twenty two students who passed since they got more than 62. It meant that, there were most students master about writing especially descriptive text and there were only three students were still not master about writing especially descriptive text.

The distribution of students' Post Test scores can also be seen in the following figure:

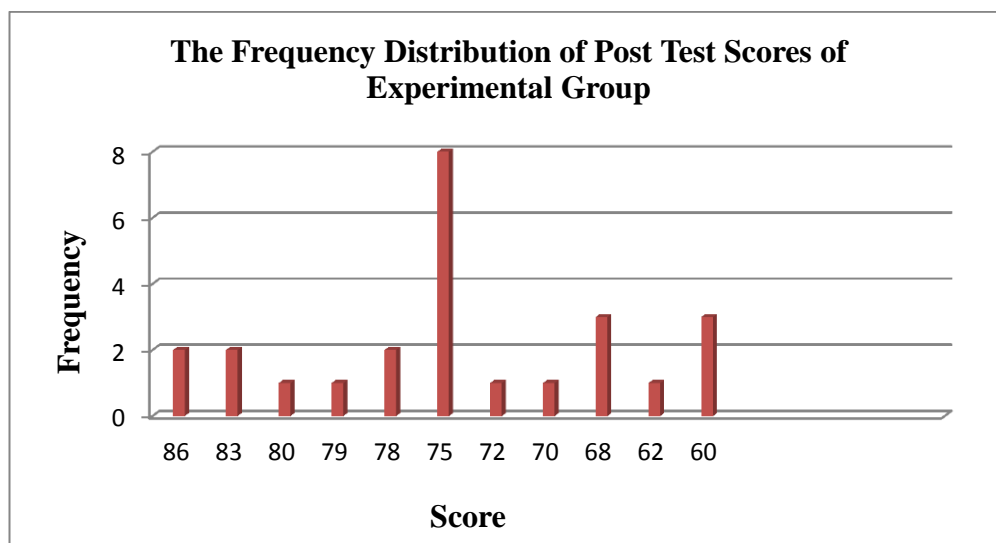


Figure 4.2 Histogram of Frequency Distribution of Post Test Scores for Experimental Group

The figure above showed the post test score of students in Experiment group. It could be seen that there were three students who got score 60. There was one student who got score 62. There were three students who got score 68 . There was one student who got score 70. There was one student who got score 72. There were tenth students who got score 75. There were two students who got score 78. There was one student who got score 75. There were three students who got score 76. There was one student who got score 79. There was one student who got score 80. There were two students who got score 83. There were two students who got score 86. In this case, many students got score upper 62.

The next step, the writer calculated the scores of mean, median, mode, standard deviation, and standard error of mean of Post Test in experimental group was described in Table 4.4.

Table 4.4 The Table of Calculation of Mean, Standard Deviation, and Standard Error of Mean of Post Test Scores in Experimental Group Using SPSS 18.0 Program

Statistics

Nilai		
N	Valid	25
	Missing	0
Mean		73,64
Std. Error of Mean		1,532
Median		75,00
Mode		75
Std. Deviation		7,659
Range		26
Minimum		60
Maximum		86
Sum		1841

The table showed the mean was 73.64. The standard deviation was 7.659 and the standard error was 1.532.

3. The Comparison Between Control Group and Experimental Group.

Based on the data above, it can be seen the comparison in Table 4.5.

Table 4.5 The Comparison of Final Scores Between Control Group and Experimental Group

Control Group	Experimental Group
50	86
72	75
75	62
62	68
47	78
68	83
56	78
80	75
64	75
62	80
65	79
70	86
70	68
65	60

75	83
65	60
63a	68
80	75
62	75
60	60
56	75
62	75
63	72
64	70
60	75

Table 4.6 The Comparison Between Control Group and Experimental Group in Statistic.

Control Group			Experimental Group		
N	Valid	25	N	Valid	25
	Missing	0		Missing	0
	Mean	64,64		Mean	73,64
	Std. Error of Mean	1,613		Std. Error of Mean	1,532
	Median	64,00		Median	75,00
	Mode	62		Mode	75
	Std. Deviation	8,067		Std. Deviation	7,659
	Range	33		Range	26
	Minimum	47		Minimum	60
	Maximum	80		Maximum	86
	Sum	1616		Sum	1841

4. Testing of Normality and Homogeneity

a. Testing of Normality

Normality test are used to determine if a data set is well- modeled by a normal distribution and to compute how likely it is for random variable underlying the data set to be normally distributed.⁶³

One of the requirements in experimental design was the test of normality assumption. Because of that, the writer used SPSS 18.0 to measure the normality of the data. Test Normality of Pre Test and Post Test Scores was described in Table 4.7.

Table 4.7 Test of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
pretest	,143	50	,012	,965	50	,145
posttest	,142	50	,013	,972	50	,276

a. Lilliefors Significance Correction

The criteria of the normality test Pre Test and Post Test is if the value of r (probability value/critical value) is higher than or equal to the level of significance alpha defined ($r \geq \alpha = 0.05$), it means that, the distribution is normal. Based on the calculation using SPSS 18.0 above, the value of r (probably value/critical value) from Pre test and Post test of the control group and experimental group in Shapiro-Wilk table was higher than level of significance alpha used or $r = 0.145 > 0.05$ (Pre Test) and $r = 0.276 > 0.05$ (Post Test) so that the distributions are normal. It meant that the students' scores of in Pre Test and Post Test had a normal distribution.

Where:

⁶³ Anderson, Real Statistics, *Normality of Variance*, (Online), (<http://en. Normality of variance definition and meaning.htm>, accessed on november 20, 2013).

- If respondent > 50 , so we used the Kolmogorov-Smirnov
- If respondent ≤ 50 , so we used the Shapiro-Wilk

b. Testing of Homogeneity

The definition of Homogeneity of Variance is when all the variables in statistical data have the same finite or limited variance. When homogeneity of variance is equal for a statistical model, a simpler computation approach to analyzing the data can be used due to a low level of uncertainty in the data. This equality is homogeneity or homoscedasticity.⁶⁴ Because of that, the writer used SPSS 18.0 to measure the normality of the data.

Table 4.8 Test of Homogeneity of Variances

Writing Understanding

Levene Statistic	df1	df2	Sig.
1,779	13	33	,090

ANOVA

Writing Understanding

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1627,380	16	101,711	3,635	,001
Within Groups	923,500	33	27,985		
Total	2550,880	49			

From the table output above can be known the significance about 0.090. Because the value of significance higher than 0.05 so can be concluded that the data of both group have the same variance or homogene.

⁶⁴ Anderson, Real Statistics, *Homogeneity of Variance*, (Online), (<http://en.homogeneityofvariance.com/definition-and-meaning.htm>, accessed on november 20, 2013).

5. Data Analysis

Based on the result above, it could be stated the data fulfilled and the requirement to be tested using t test.

a. Testing Hypothesis Using t_{test}

The writer chose the level of significance in 5%, it mean that the level of significance of the refusal null hypothesis in 5%. The writer decided the level of significance at 5% due to the hypothesis type stated on non-directional (two-tailed test). It meant that the hypothesis cannot directly the prediction of alternative hypothesis. To test the hypothesis of the study, the writer used t-test statistical calculation. First, the writer calculated the standard deviation and the standard error of X_1 and X_2 . It was found the standard deviation and the standard error of Post Test of X_1 and X_2 at the previous data presentation. It was described in Table 4.9.

Table 4.9 The Standard Deviation and Standard Error of X_1 and X_2

Variable	The Standard Deviation	The Standard Error
X_1	7.504	1.532
X_2	7.904	1.613

Where :

X_1 = Experimental Group

X_2 = Control Group

The table showed the result of the standard deviation calculation of X_1 was 7.504 and the result of the standard error mean calculation was 1.532. The result of the standard deviation calculation of X_2 was 7.904 and the result of the standard error calculation was 1.613.

The next step, the writer calculated the standard error of the differences mean between X_1 and X_2 as follows:

Standard Error of the Difference Mean scores between Variable I and Variable II:

$$\begin{aligned} SE_{M1} - SE_{M2} &= \sqrt{SE_{M1}^2 + SE_{M2}^2} \\ SE_{M1} - SE_{M2} &= \sqrt{1.532^2 + 1.613^2} \\ SE_{M1} - SE_{M2} &= \sqrt{2.347024 + 2.601769} \\ SE_{M1} - SE_{M2} &= \sqrt{4.948793} \\ SE_{M1} - SE_{M2} &= 2.22458828 = 2.224 \end{aligned}$$

The calculation above showed the standard error of the differences mean between X_1 and X_2 was 2.224. Then, it was inserted the t_o formula to get the value of $t_{observed}$ as follows:

$$\begin{aligned} t_o &= \frac{M1 - M2}{SE_{M1} - SE_{M2}} \\ t_o &= \frac{73.64 - 64.64}{2.224} \\ t_o &= \frac{9}{2.224} \\ t_o &= 4.046 \end{aligned}$$

With the criteria:

If $t_{test} (t_{observed}) \geq t_{table}$, H_a is accepted and H_o is rejected.

If $t_{test} (t_{observed}) < t_{table}$, H_a is rejected and H_o is accepted.

Then, the writer interpreted the result of t_{test} . Previously, the writer accounted the degree of freedom (df) with the formula:

$$\begin{aligned} Df &= (N_1 + N_2) - 2 \\ &= (25 + 25) - 2 = 48 \end{aligned}$$

t_{table} at df 48/50 at 5% the level of significant = 2.01

The writer chose the level of significance in 5%; it means that the level of significance of the refusal null hypothesis in 5%. The writer decided the level of significance at 5% due to the hypothesis typed stated on non-directional (two-tailed test). It meant that the hypothesis cannot direct the prediction of alternative hypothesis.

The calculation above showed the result of t_{test} calculation as in the Table 4.10.

Table 4.10 The Result of t_{test}

Variable	t_{observed}	t_{table}		Df/db
		5%	1%	
X1-X2	4.046	2.01	2.68	48

Where:

X1	= Experimental Group
X2	= Control Group
t_{observed}	= The Calculated Value
t_{table}	= The Distribution of t value
Df/db	= Degree of Freedom

Based on the result of hypothesis test calculation, it was found that the value of t_{observed} was greater than the value of t_{table} at the level of significance in 5% or 1% that was $2.01 < 4.046 > 2.68$ It meant H_a was accepted and H_0 was rejected.

It could be interpreted based on the result of calculation that H_a stating that using of audiovisual media increases the tenth-grade students' writing scores at SMKN 4 Palangka Raya was accepted and H_0 stating that using interactive video media does not increases the tenth grade students' writing scores at SMKN 4 Palangka Raya was rejected. It meant that teaching

Score Equal variances assumes	,002	,964	4,406	48	,000	2,225	4,527	4,527	13,473
Equal variances not assumes			4,046	47,871	,000	2,225	4,527	4,527	13,473

The table showed the result of t_{test} calculation using SPSS 18.0 program. Since the result of Test test between experimental and control group had difference scores of variance, it found that the result of $t_{observed}$ was 4.046.

To examine the truth or the false of null hypothesis stating that using interactive video media does not increases the tenth grade students' writing scores, the result of t_{test} was interpreted on the result of degree of freedom to get the t_{table} . The result of degree of freedom (df) was 48, it found from the total number of the students in both group minus 2. The following table was the result of $t_{observed}$ and t_{table} from 48 df at 5% and 1% the level of significance.

Table 4.13 The Result of $t_{observed}$ and t_{table} / t_{test}

Variable	$t_{observed}$	t_{table}		Df/db
		5%	1%	
X1-X2	4.046	2.01	2.68	48

The interpretation of the result of t_{test} using SPSS 18.0 Program, it was found the $t_{observed}$ was greater than the t_{table} at 1% and 5% the level significance or

$2.01 < 4.046 > 2.68$. It could be interpreted based on the result of calculation that H_a stated that Interactive Video media increased the students' writing scores was accepted and H_o stated that Interactive Video media does not increase the students' writing scores was rejected. It meant that teaching writing using interactive video media increased the tenth grade students' writing scores at SMKN 4 Palangka Raya.

B. Discussions

The result of the data analysis showed that the Interactive Video media gave significance effect on the students' writing scores for the tenth grade students at SMKN 4 Palangka Raya. The students who were taught using the interactive video media got higher scores than students who were taught without using interactive video media. It was proved by the mean scores of the students who were taught using the interactive video media was 73.64 and the students who were taught without using the audiovisual media was 64.64. Based on the result of hypothesis test calculation, it was found that the value of t_{observed} was greater than the value of t_{table} at 5% and at 1% the level of significance or $2.01 < 4.046 > 2.68$. It meant that H_a was accepted and H_o was rejected.

In addition, the result of t_{test} calculation using SPSS 18.0 found that the interactive video media also gave significance effect on the students' writing scores. It proved by the value of t_{observed} was greater than t_{table} both at 1% and 5% the level of significance or $2.01 < 4.046 > 2.68$.

The finding of the study interpreted that the alternative hypothesis state that the interactive video media increases the students' writing scores for the

tenth grade students at SMKN 4 Palangka Raya was accepted and the null hypothesis state that the interactive video media does not increases the students' writing scores for the tenth grade students at SMKN 4 Palangka Raya was rejected. The most component that got effect from using interactive video media was the content. Because the students can be seen and can be heard the story from interactive video showed by the writer, so they easier to rewrite the content of the story in descriptive text.

Based on the result findings of the study, it was shown that the interactive video media gave significant effect in increasing the students' writing achievement during the instructional process. Interactive video media implemented in this study consists of some steps. Those are; 1) deciding on the school syllabus and material, 2) organizing the group of the students, 3) providing the situation to be interactive video media played, 4) teaching the example of descriptive text, 5) guiding the students to draft the descriptive text based on the media played, 6) guiding the students to write the descriptive text based on the media played, and 7) guiding the students to rewrite the descriptive text based on the students own word.

There were some possible reasons why the interactive video media was effective in teaching writing at the tenth grade students of SMKN 4 Palangka Raya. First reason was when the writer taught English using the interactive video media, indirectly gave the students some experience practice, where the students unconsciously remember the descriptive text in the learning material that have learned in their school. Second reason was when the writer taught English using the interactive video media, the students gave their attention to the media played.

Third reason was when teaching English; the writer taught English using the interactive video media based on their learning material which suitable with their environment or contextual learning. It made students could comprehend the material easier.

These findings were suitable with the theories as stated in chapter II. First, interactive video media can be very interesting media for learners for using English in real life situations and express it in writing ability. When the students interest with their class they would be motivated to learn. Second, interactive v

ideo media demonstrated the description and how description can be happen. The students not only knew what the English vocabulary is and how to spell it, but also they could rewrite it in a paragraph.

Third, interactive video media was the media that used in the education to help the students to improve their ability. It was as tools to help the teachers to give a visual experience to the learners in order to support, make clear, and easy the complex concept and abstract concept to the simple concept, concrete concept, and easy to understand. Because of that, interactive video media can be used to increase applicability and retention of the learners toward the lesson.

Fourth, interactive video media as a teaching resource and as a tool to improve the teaching of curriculum content is almost always in the hands of the teacher and tends to be the first step to integrating this medium into curriculum development at learning centres. As a technology tool it has the capacity to capture learners' interest and connect school life with everyday world.

Although based on statistical calculation interpreted that the alternative hypothesis state that the interactive video media increased the students' writing

scores for the tenth grade students at SMKN 4 Palangka Raya was accepted, but there were some students still classify as fair in writing. The reason of this fact is the increasing of students scores mostly taken place in content and organization, but in grammar, vocabulary and punctuation they still have many difficulties. Based on statement above interactive video media was appropriated because the interactive video media facilitated the students what and how something is done.