

CHAPTER IV

RESEARCH FINDINGS AND INTERPRETATION

This chapter presents the data description of the research which consists of the score of pretest and posttest of the experimental and control classes, the data analysis and the discussion.

4.1 The Data Descriptions

The data description consists of three subtopics which are the data description of pre-test both in the experimental and control class, the data description of post-test and the percentage students' score improvement of passing grade. The pretest was administered to know the students' reading comprehension before the students were given the treatment and also the mean score of both classes that had relatively similar quality. However, the post-test was administered for both experimental and control class in order to see whether the POSSE strategy assisted with QR Codes is effective on students' reading comprehension or not.

4.1.1 The Data Descriptions of Pre-test Scores

The pre-test was conducted on the experimental and control group. The pre-test was done before the treatment that has been designed by the researcher. Table 4.1 and 4.2 show the information about the data of pre-test score of experimental and control classes.

Table 4.1 Pre-test scores of experimental class

No.	Students' Code Name	Gender	Pre-test Scores of Experimental Class
1.	Student 1	Female	55
2.	Student 2	Female	65
3.	Student 3	Female	75
4.	Student 4	Male	70
5.	Student 5	Male	65
6.	Student 6	Male	70
7.	Student 7	Male	50
8.	Student 8	Female	60
9.	Student 9	Male	55
10.	Student 10	Male	35
11.	Student 11	Male	40

12.	Student 12	Female	45
13.	Student 13	Male	45
14.	Student 14	Male	55
15.	Student 15	Male	35
16.	Student 16	Male	75
17.	Student 17	Female	55
18.	Student 18	Female	70
19.	Student 19	Male	50
20.	Student 20	Male	30
21.	Student 21	Female	65
22.	Student 22	Male	35
23.	Student 23	Female	55
24.	Student 24	Female	75
25.	Student 25	Female	45
Mean Score			55

Based on the table, the mean score pretest of experimental class was 55 from 25 students. Moreover, there were only three students who got 75; the highest score and complete the passing grade, five students got 55; the most frequent score appeared on the table, and one students who got 30; the lowest score.

Table 4.2 Pre-test of control class

No.	Students' Code Name	Gender	Pre-test Scores of Control Class
1.	Student 1	Female	50
2.	Student 2	Male	40
3.	Student 3	Female	40
4.	Student 4	Male	50
5.	Student 5	Male	75
6.	Student 6	Male	35
7.	Student 7	Female	70
8.	Student 8	Female	80
9.	Student 9	Female	55
10.	Student 10	Male	65
11.	Student 11	Female	55
12.	Student 12	Female	65
13.	Student 13	Female	55
14.	Student 14	Female	70
15.	Student 15	Male	60
16.	Student 16	Male	75
17.	Student 17	Female	50
18.	Student 18	Male	35
19.	Student 19	Male	60
20.	Student 20	Female	50
21.	Student 21	Male	40
22.	Student 22	Female	65
23.	Student 23	Male	35
24.	Student 24	Female	75

25.	Student 25	Male	65
Mean Score			56.6

Meanwhile, the mean score pretest of control class was 56.6 from 25 students. It was higher than the mean score of experimental class. In addition, there was one student who got 80; the highest score, three students got 35; the lowest score, the most frequent score of pre-test in control class was 50, and there were 4 students who complete the passing grade.

In brief, the pretest score in both classes showed that the 7C and 7D students of SMP Muhammadiyah 15 Surabaya still lack of comprehension in reading descriptive text. From the table 4.1 and 4.2, even the mean score of control class was higher than experimental class, it was proved that the students have to increase their reading comprehension of descriptive text.

4.1.2 The Data Descriptions of Posttest Scores

The posttest was administered for both classes after the treatment finished. The data of posttest of experimental and control class were presented in the table 4.3 and 4.4.

Table 4.3 Posttest scores of experimental class

No.	Students' Code Name	Gender	Post-test Scores of Experimental Class
1.	Student 1	Female	80
2.	Student 2	Female	85
3.	Student 3	Female	95
4.	Student 4	Male	90
5.	Student 5	Male	80
6.	Student 6	Male	90
7.	Student 7	Male	80
8.	Student 8	Female	75
9.	Student 9	Male	75
10.	Student 10	Male	65
11.	Student 11	Male	60
12.	Student 12	Female	70
13.	Student 13	Male	70
14.	Student 14	Male	75
15.	Student 15	Male	60
16.	Student 16	Male	85
17.	Student 17	Female	75
18.	Student 18	Female	85
19.	Student 19	Male	80
20.	Student 20	Male	70

21.	Student 21	Female	85
22.	Student 22	Male	65
23.	Student 23	Female	75
24.	Student 24	Female	90
25.	Student 25	Female	65
Mean Score			77

The table showed that the mean score of posttest experimental class was 77 from 25 students. Then, the lowest score was 60, the highest score was 95 and the most frequent score appeared was 75. On the other hand, the mean score posttest of control class was 71.2 from 25 students, the lowest score was 50, the highest score was 90 and the most frequent score appeared was 70. It was presented as the table 4.4 below:

Table 4.4 Posttest scores of control class

No.	Students' Code Name	Gender	Post-test Scores of Control Class
1.	Student 1	Female	65
2.	Student 2	Male	60
3.	Student 3	Female	65
4.	Student 4	Male	70
5.	Student 5	Male	85
6.	Student 6	Male	55
7.	Student 7	Female	80
8.	Student 8	Female	90
9.	Student 9	Female	70
10.	Student 10	Male	70
11.	Student 11	Female	75
12.	Student 12	Female	80
13.	Student 13	Female	75
14.	Student 14	Female	80
15.	Student 15	Male	75
16.	Student 16	Male	80
17.	Student 17	Female	60
18.	Student 18	Male	50
19.	Student 19	Male	70
20.	Student 20	Female	65
21.	Student 21	Male	65
22.	Student 22	Female	75
23.	Student 23	Male	70
24.	Student 24	Female	80
25.	Student 25	Male	70
Mean Score			71.2

4.1.3 The Percentage Students' Score Improvement of Passing Grade

The passing grade of English subject in SMP Muhammadiyah 15 Surabaya was 75. Table 4.5 and 4.6 describe the information of percentage of students' score improvement both in experimental and control class, in order to know how many students that can complete or surpass the passing grade.

Table 4.5 The number of students' complete the passing grade

Passing Grade	Students of Experimental Class		Percentage	
	Pre-test	Post-test	Pre-test	Post-test
Score ≥ 75	3	17	12%	68%

The table showed that there was improvement on the students' score who exceed the passing grade before the treatment and after the treatment. The percentage increased from 12% to 68%. The margin percentage from 12% to 68% was 56%. The increase of percentage the number of students who can achieve or exceed from the passing grade was significantly increase. Furthermore, there was the improvement on the student's score who surpass the passing grade in control class as well. Although, the margin percentage between the students' score improvement of passing grade on pretest and posttest in control class was more lower than the students' score improvement of passing grade on pretest and posttest in experimental class. The margin different was 28% from 16% to 44%. Table 4.6 showed the percentage improvement of students' which can complete or exceed the passing grade.

Table 4.6 The number of students' complete the passing grade

Passing Grade	Students of Control Class		Percentage	
	Pre-test	Post-test	Pre-test	Post-test
Score ≥ 75	4	11	16%	44%

4.2 The Analysis of the Data

To find out whether there was significant difference on the reading comprehension achievement that were taught using the POSSE strategy assisted with QR Codes and those who were taught without using it, the researcher used the analysis of *t-test* in SPSS Version 17. Before the test was operated, there were

prerequisite analysis tests needed to be completed; they were validity test, reliability test, normality test and homogeneity test.

4.2.1 Validity Test

In this study, the researcher conducted validity through expert judgment and also through SPSS program. The expert judgments were Ari Setyorini, SS, MA as the lecturer of reading and Eko Setiawan, S.Pd as the English teacher of SMP Muhammadiyah 15 Surabaya. Moreover, for the validity of item test the researcher conducted Corrected Item-Total Correlation through SPSS program. There were 20 items of questions in the form of multiple choices that arrange based on the core competences and basic competences. After the researcher tested the 20 question items and it was showed that all the items were valid. In order to have valid test, it required to have r -observe above 0.391. If it showed that r -observe was higher than r -table in the result of Corrected Item-Total Correlation, it meant that the test items were valid and could be used. There were 20 total test items tested with the total subject 25 students. The result explained that there were 20 test items valid and can be used for pretest and posttest. (See Appendix 1)

4.2.2 Reliability Test

After processed the validity of the test, then to prove the test if it was categorized reliable or not, the SPSS Computer Program Version 17 was used by the researcher to measure the value of reliability. The reliability value of the test was 0.911. If the reliability value was above than 0.90, it meant that the test was in the categorization of reliability “excellent” internal consistency.

Table 4.7 The Result of Reliability Test

Case Processing Summary			
		N	%
Cases	Valid	25	100.0
	Excluded ^a	0	.0
	Total	25	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.911	20

4.2.3 Normality Test

The researcher used SPSS Program Version 17 to analyze the normality test of pretest and posttest in both experimental and control class. The result was presented as the tables below:

Table 4.8 The result of normality test of pretest in experimental and control class

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest_Experimental	.125	25	.200*	.943	25	.175
Pretest_Control	.127	25	.200*	.942	25	.163

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Table 4.9 The result of normality test of posttest in experimental and control class

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Posttest_Experimental	.113	25	.200*	.961	25	.433
Posttest_Control	.129	25	.200*	.972	25	.702

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

The normality test above was analyzed in order to check whether or not the data was distributed normally. Based on the criteria of normality hypotheses, if the significance level or probability value was higher than the degree of significance ($\alpha = 0.05$), then the data was normally distributed.

The result explained that the significance level or probability value (p) of pretest score in the experimental class was 0.175 and in the control class was 0.163. Furthermore, the significance level or probability value (p) of posttest score in experimental class was 0.433 and in the control class was 0.702.

Thus, the result of normality test prove that the significance level or the probability value (p) was higher than the degree of significance ($\alpha = 0.05$). It

indicated that the data of pretest and posttest of experimental and control class were distributed normally.

4.2.4 Homogeneity Test

Homogeneity test was also required as one of prerequisite analysis tests. It used to analyze the similarity of the sample in which it was taken from the population. To calculate the homogeneity test, the writer used *Levene* Statistic Test from SPSS Program Version 17. The result was presented in the table 4.8.

Table 4.10 The result of homogeneity pretest and posttest in experimental and control class

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Pretest	.048	1	48	.828
Posttest	.227	1	48	.636

From the table, it displayed that the significance level or probability value (p) from both pretest and posttest in experimental and control class were 0.828 and 0.636. It meant that the significance level or probability value (p) of the data was higher than the degree of significance ($\alpha = 0.05$).

4.2.5 T-Test

After the researcher conducted the prerequisite analysis test, then the researcher conducted the hypothesis testing to see whether or not there was significant difference in the result of post-test after the treatment was given. The data of post-test in experimental and control classes were calculated by using SPSS version 17.

The hypotheses formulation:

H_0 : There was not any significance difference between the mean score of post-test in experimental class and control classes. It also indicated that POSSE strategy assisted with QR codes was not effective on students' reading comprehension achievement.

H_1 : There was significant difference between the mean score of post-test in experimental and control classes. It also indicated that POSSE strategy assisted with QR codes was effective on students' reading comprehension achievement.

The criteria of decision-making:

If sig. (2-tailed) or (p) value $>$ alpha ($\alpha = 0.05$), then H_0 was accepted and H_1 was rejected

If sig. (2-tailed) or (p) value $<$ alpha ($\alpha = 0.05$), then H_0 was rejected and H_1 was accepted

Or

If t-observe $<$ t-table, it meant that H_0 was accepted and H_1 was rejected

If t-observe $>$ t-table, it meant that H_0 was rejected and H_1 was accepted

Table 4.11 The statistical result of posttest in experimental and control classes

Group Statistics					
Group		N	Mean	Std. Deviation	Std. Error Mean
Posttest	Experimental	25	77.0000	9.78945	1.95789
	Control	25	71.2000	9.38527	1.87705

Table 4.12 The result of independent t-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
										95% Confidence Interval of the Difference
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Posttest	Equal variances assumed	.227	.636	2.138	48	.038	5.80000	2.71232	.34652	11.25348
	Equal variances not assumed			2.138	47.915	.038	5.80000	2.71232	.34627	11.25373

From the table 4.9, it can be analyzed that the mean score of students in experimental class was 77 and the mean score of students in control class was 71.2. It showed that there was significant difference between experimental and control class.

In the second table, it showed that t-observe was 2.138. *df* (Degree of Freedom) was taken from total number of students minus (-) 2, so *df* was 48 because the total number of students was 50. Furthermore, the t-table for *df* 48 was 2.011. According to the criteria of decision-making, if t-observe was higher than t-table, it meant that there was significance different between experimental which was given a treatment and control class which was not given a treatment. The t-observe was 2.138 is more higher (>) than t-table which was 2.011 with *df* 48.

Based on table 4.10 the (*p*) value or sig. (2-tailed) of both classes were 0.038. According to the criteria of decision-making, if (*p*) value or sig. (2-tailed) was smaller than 0.05 ($0.038 < 0.05$), it indicated that H_0 was rejected and H_1 was accepted. It meant that there was significant difference between the mean score of

posttest in experimental and control classes and also the POSSE strategy assisted with QR codes was effective on students' reading comprehension achievement.

4.2.6 Interpretation of Questionnaire

Concerning the effective of strategy in teaching and learning process, the researcher not only looking on the result of the achievement or the mean score before and after the treatment, but also from the students' response of the strategy by using questionnaire. There were 10 questions that can reveal the students opinion about the treatment. There were 25 respondents from 7C class who was given the treatment. The table below was the result of questionnaire tabulation.

Table 4.13 The Result of Questionnaire

Questions	Response		Questions	Response	
	Yes	No		Yes	No
1	100%	0%	6	84%	16%
2	92%	8%	7	80%	20%
3	88%	12%	8	80%	20%
4	84%	16%	9	100%	0%
5	76%	24%	10	88%	12%

Based on the students' response from the questionnaire, it showed that students was excited with the implementation of POSSE strategy assisted with QR codes in the teaching and learning of descriptive text. They feel that POSSE strategy make them more active in the teaching and learning process. They have an opportunity to have group activity. They loved that the POSSE strategy was used by their teacher in the teaching reading comprehension of descriptive text.

To sum up, from the opinion of students toward the POSSE strategy assisted with QR codes, the students think that the POSSE strategy was effective to use in the teaching and learning activity, because the percentage of yes response was higher than no response in the questionnaire. In the question number 1, yes response got 100% and no response got 0%, the following number also exposed that yes response got more percentage than no response. It meant that POSSE strategy assisted with QR codes had positive response from the students and effective if it used in the teaching and learning process.

4.3 Discussion

The result of the research revealed that POSSE strategy assisted with QR codes was effective toward students' reading comprehension achievement especially in descriptive text at SMP Muhammadiyah 15 Surabaya. It could be seen starting from the mean score of posttest in experimental and control class, the outcome of t-test analyzing, the percentage of students score improvement of passing grade, and percentage from the questionnaire.

First, the mean score of posttest in experimental class was 77 while the mean score of posttest in control class was 71.2. The mean score of posttest in experimental class was upper than the mean score of posttest in control class. Additionally, there was increasing points of the mean score in experimental class. The mean score of experimental class increased 22 points from 55 to 77.

Second, in calculating t-test, if the value of $t_{\text{observe}} > t_{\text{table}}$, it meant that H_0 was rejected and H_1 was accepted. The researcher found that the result showed that t_{observe} was 2.138 was upper than t_{table} that was 2.011. It indicated there was significance difference between students who were taught using POSSE strategy assisted with QR codes and students who were not taught using POSSE strategy assisted with QR codes.

Third, the numbers of student who can surpass or complete the passing grade in the experimental class in the pretest were 3 students and in the posttest were 17 students. The percentage of experimental class which can achieve or exceed the passing grade was raised 56 points from 12% to 68%. The percentages of student who can pass or fulfill the passing grade in the experimental class was increased.

Last, the percentage of students' response toward the treatment of POSSE strategy assisted with QR codes in the questionnaire reveal that the percentage of yes response in the all items questions was higher than no response was indicate positive response. The researcher considered that the use of graphic and picture in the POSSE strategy sheet may build up the better ability in organize the idea. The use of QR Codes created the students interest to read. It could be seen from the

questionnaire of students' response that the students loved to learn descriptive text using POSSE strategy assisted with QR codes.

The finding of the research is in line with the statement of Aprilia (2015) that POSSE strategy could be the one of attractive strategies in which it made the students interesting to learn reading comprehension on descriptive text. She also stated that the POSSE strategy can stimulate the students' background of knowledge or schemata. The students schemata can be stimulate after the students predict the picture. The picture can show up after the students scanned the QR codes using their smart- phone. Therefore, the engagement between POSSE strategy and QR codes is a new research.

In conclusion, the students who had read or learnt descriptive text by using POSSE strategy assisted with QR codes had better comprehension, had better achievement, and had better ability to recall the information in the text. The POSSE strategy assisted with QR codes can be the one of strategies which made the students had better ability in comprehend the descriptive text, as the result the students can have the better reading comprehension achievement in the class.

