CHAPTER IV

RESEARCH FINDINGS AND DISCUSSIONS

4.1   Research Findings

This study was conducted at SMPN 13 Kota Serang from May 4th to May 30th, 2023. The purpose of this study was to determine whether or not pop-up cards had an effect on eighth-grade students' reading comprehension at SMPN 13 Kota Serang. This study's sample consisted of VIII C as the experimental group and VIII D as the control group. There were 30 students in each class.

The first meeting began on May 17th, 2023, with the experimental class being treated. The researcher had not used the media during the first meeting of the experimental class. Because the students had forgotten the material given, the researcher initially repeated the material concerning recount text. Students take notes on the material presented by the researcher. The researcher began employing pop-up cards in the experimental class during the second and third meetings. When the pop-up card media was handed out, the students were enthusiastic and eager to learn. The control group in the treatment used textbooks that were previously available at school to conduct conventional lessons.

The instrument used by the researcher was test. The test were divided into two types, pre-test and post-test. Before pre-test and post-test were given to the experimental and control class, the researcher gave try out to know the validity and

reliability of test that was used as research instrument. The try out test was given to the participant out from sample. The researcher took VIII A consisted of 30 students as Try Out class. After got the validity and reliability of the test, the researcher conducted the pre-test and post-test to experimental and control class.

4.2   Result of Validity and Reliability

4.2.1 Validity of the Try-Out Test

The researcher conducted the try-out test to find out the validity of the test. The researcher examined the validity of test aimed to find out which the items of try-out test that can be used for pre-test and post-test. The try out test was multiple choices consisted of 45 items that has four options consisted of A, B, C, and D. The researcher analyzed the validity of the test by used Pearson Product Moment formula. The value t_{table} is 0,361 the result can be seen on (appendix 4)

The item test was valid when $t_{count} \geq t_{table}$ and the item test was not valid when the $t_{count} \leq t_{table}$ (Riduwan, 2013:98). Based on the result of validity try out test, there were 40 items that valid and 5 items were not valid. The items of try-out test that valid were number 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 , 30, 31, 32, 33, 34, 37, 38, 39, 40, 41, 42. The items of try out test that not valid were number 35, 36, 43, 44, 45.

The researcher found out the result of try out test (see appendix 4) showed that the item of try out that valid were 40 items, it means that it can be used for pre-test and post-test in experimental and control class. After got the result of validity of the test, the researcher divided the items into 20 items for pre-test and post-test.

4.2.2 Reliability of the Test

To find out the reliability of the test, the researcher used Spearman Brown formula in SPSS 26 version program.

Table 4. 1

The Result of Reliability Test

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.793
		N of Items	20[a]
	Part 2	Value	.502
		N of Items	20[b]
	Total N of Items		40
Correlation Between Forms			.669
Spearman-Brown Coefficient	Equal Length		.802
	Unequal Length		.802
Guttman Split-Half Coefficient			.767

The item test that indicated reliable if r11 > r table (Riduwan, 2013:107). The value of r table is 0,361 (dk = 30-2 with α 0.05). Based on the result reliability of the test showed that 40 items of the try out were reliable with value r11 = 0,767 whereas r table = 0,361. It means the instrument of the test can be used because r11 > r table, 0,767 > 0,361 (See Appendix 4)

4.3   Result of Pre-Test and Post-Test

Table 4. 2

Descriptive Statistics of Pre-Test and Post-Test

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experimental	30	25	70	45.17	14.232
Post-Test Experimental	30	45	80	63.83	9.886
Pre-Test Control	30	30	75	56.83	13.739
Post-Test Control	30	40	80	57.33	11.577
Valid N (listwise)	30				

Based on the table above, the result of the pre-test and post-test score showed:

1. The minimum pre-test score in experimental class was 25 and the score maximum was 70. The researcher also got the mean score in that class was 45.17.

2. The minimum post-test score in experimental class was 45 and the score maximum was 80. The researcher also got the mean score in that class was 63.83.

3. The minimum pre-test score in control class was 30 and the score maximum was 75. The researcher also got the mean score in that class was 56.83.

4. The minimum pre-test score in control class was 40 and the score maximum was 80. The researcher also got the mean score in that class was 57.33.

4.4   Data Analysis

4.4.1 Normality Test

The researcher tested normality test after got score of the students in pre-test and post-test used SPSS version 26. The researcher used Shapiro-Wilk technique to measure the data distributed normal or not. The test criteria is as follows:

If Significance > 0.05 = data is normal distributed.

If Significance < 0.05 = data is not normal distributed

Table 4. 3 Test of Normality

Tests of Normality

	Class	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
The Result	Pre-test Experimental	.162	30	.042	.934	30	.063
	Post-test Control	.120	30	.200[*]	.951	30	.179
	Pre-test Control	.124	30	.200[*]	.934	30	.065
	Post-test Control	.137	30	.159	.949	30	.163

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

a. Lilliefors Significance Correction

From the table above, the result of pre-test and post-test scores can be shown:

1. The sig. value of pre-test in experimental class showed 0.063, it means that 0.063 > 0.05 was normally distributed.

2. The sig. value of post-test in experimental class showed 0.179, it means that 0.179 > 0.05 was normally distributed.

3. The sig. value of pre-test in control class showed 0.065, it means that 0.065 > 0.05 was normally distributed.

4. The sig. value of post-test in control class showed 0.163, it means that 0.163 > 0.05 was normally distributed.

4.4. 2 Homogeneity Test

The researcher tested homogeneity test after got the score of students' pre-test and post-test by using SPSS 26 version program. It is compared with

the sig. value and p. value then specify whether the data homogeneous or not with the following criteria:

1. Significant level of = 0,05

2. If sig. value > 0.05 then the data homogeneous.

3. If sig.value < 0.05 then the data is not homogeneous.

Table 4. 4

The Result of Homogeneity of Variance Pre-Test

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
The Result	Based on Mean	.064	1	58	.801
	Based on Median	.104	1	58	.748
	Based on Median and with adjusted df	.104	1	57.458	.748
	Based on trimmed mean	.066	1	58	.798

Table 4. 5

The Result of Homogeneity of Variance Post-test

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
The Result	Based on Mean	1.011	1	58	.319
	Based on Median	.792	1	58	.377
	Based on Median and with adjusted df	.792	1	56.501	.377
	Based on trimmed mean	.990	1	58	.324

From the data above, the homogeneity of pre-test was 0.801. It means that 0.801 > 0.05, so the data was homogeneous. Meanwhile, post-test sig. value was 0.319. It means 0.319 > 0.05, so the data was also homogeneous.

4.4.3 Hypothesis Test

The researcher used T-test formula to know whether the treatment influence or not in reading comprehension by using SPSS version 26. The T-test formula are:

Ho : There is no significant impact of using pop-up card on students' reading comprehension at the eighth grade of SMPN 13 Kota Serang.

Ha : There is significant impact of using pop-up card on students' reading comprehension at the eighth grade of SMPN 13 Kota Serang.

The criteria of accepted or rejected of the hypothesis for hypothetical test are:

Ho is accepted is Sig. (Pvalue) > α = 0.05

Ha is accepted is Sig. (Pvalue) < α = 0.05

Table 4. 6

Independent Samples 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
The Result	Equal variances assumed	1.011	.319	2.339	58	.023	6.500	2.779	.936	12.064
	Equal variances not assumed			2.339	56.612	.023	6.500	2.779	.934	12.066

Based on the table above, the value of significant generated Sig. (P-value) was 0.023 < α was 0.05. It means, Ha is accepted and Ho is rejected. Based on the computation, it can be concluded that there was significant impact of using pop-up card on students' reading comprehension at the eighth grade of SMPN 13 Kota Serang.

4.4.4 Effect Size

The effect size of independent sample t-test calculated to find out how strongly the independent variable influences the dependent variable. The researcher calculated effect size by using this formula as is follows:

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

Where:

  r   : effect size

  t^2 : t count from the calculation of t test

  d.f   : degree of freedom

$$r = \sqrt{\frac{2.339^2}{2.339^2 + 28}}$$

$$= \sqrt{\frac{5.470}{33.4709}}$$

$$= 0.404$$

Table 4.7

Effect Size

Effect Size	r count
Small	0.100
Medium	0.234
Large	0.371

Then, the researcher interpreted the result of effect size above by seeing the scale of effect size. The value of 0.404 was at large level. The researcher concluded that pop-up cards made an impact on students' reading comprehension.

4.5   Discussion

The purpose of this study was to determine the impact of using pop-up cards on eighth-grade students' reading comprehension. The pop-up card has been described as one of the effective media that may be used in the teaching-learning process. The usage of a pop-up card was beneficial for teaching reading comprehension concerning recount text, according to the discussion of this research.

Based on the data analysis above, it showed that there was a different students' reading comprehension before and after being taught by pop-up card. The mean score of reading comprehension before being taught using pop-up card was 45.17. After getting treatment, the mean score of post-test was higher than the mean score of pre-test. It indicated that after being given treatment using pop-up card, students had better score and the researcher had known that in applying the treatment, students' attention is focused on learning and students' interest in reading increases so that they easily understand the text. This is related to Ma & Wei (2015) by stimulating students' imagination and creativity as well as their cognitive and visual abilities, pop-up card help encourage interactive learning and increase reading interest. In addition, according to Mayer in Marshall (2002, cited in Wardah, et. al, 2017:3) the pictures presented in the Pop Up make the learners' comprehension improved.

According on the research method in chapter III, the researcher conducted the quasi-experimental research design. In this research, the first step was administering of pre-test on May 16th 2023 by giving multiple choice test. The form of test is multiple

choice which consisted of 20 questions. Pre-test was given to the 30 students of experimental and control group to measure their ability before being given a treatment. The test was given to know basic competence and to know their earlier knowledge before they got treatment.

After getting the result of pre-test, the two groups were given a different treatment. The first meeting began on May 17th, 2023 by giving treatment to the experimental class. At the first meeting in the experimental class, the researcher had not used the media. The researcher repeated the material about recount text first because the students had forgotten the material presented. When giving material about recount text, students take notes on the material given by the researcher. In the second and third meeting, the researcher had started using pop-up card in the experimental class. The students were very excited and interested in learning when the pop-up card media was given. As for the control class in the treatment did not use the media, only conducted conventional learning using textbooks that were already provided at school. After conducted the treatment in the experimental class and control class, the researcher gave a post-test on May 30th, 2023. The form of the test is multiple choice which contained 20 questions. The time allocation was 60 minutes. The post-test was given to 30 students from the experimental and control classes to find out their abilities after being given treatment.

After getting all of the test result, the researcher calculated and analyzed the t-test by using independent sample test. The researcher found there was progress on

students' reading comprehension. It could be seen from the result of pre-test and post-test. Then the result of t test showed that the value of significant generated Sig. (Pvalue) was $0.023 < \alpha$ was 0.05 or $2.339 > t_{table}$ was 1.701. It means, Ha was accepted and Ho was refused. It can be concluded that there was significant impact of using pop-up card toward students' reading comprehension at the eighth grade of SMPN 13 Kota Serang.

This research approved the previous studies conducted by Arifin (2019) from the University of Jember and Dewani *et. al* (2020) from University of Surabaya. Based on the calculation of data analysis, it was proven that the use of pop-up books affected significantly on the eighth grade students' reading comprehension achievement. Then, Dewani *et. al* even create their own pop-up card and the media pop-up card folklore was concluded to effectively increase critical reading skills by a percentage of 90% with outstanding categories.

Although pop-up card media had an impact on improving students' reading comprehension, it was not without drawbacks. This is because pop-up card media requires a fairly expensive cost compared to other media, even so pop-up media has interesting content in it so it does not make students feel bored when reading text. According to Dzuanda (2019) pop-up card is a card with three-dimensional elements that can appear when opened and display stories in a more interesting way.

To sum up, the researcher concluded that the implementation of using pop-up card was successful. Pop-up card make students more eager to read English texts because, with pop-up cards students do not easily feel bored and can understand the

contents of the text more easily. As a significant factor in the learning process, pop-up card media motivates students to be more enthusiastic in reading English text, especially recount text. Thus, it can be concluded that using pop-up card media on reading comprehension of eighth grade students at SMPN 13 Kota Serang has a significant impact.