

CHAPTER IV

FINDING AND DISCUSSION

A. Findings

The researcher did the research and got the complete data from all the research instrument including pre-test, post-test, observation and documentation to gain the objective of the research, the data was analyzed in order to get the conclusion about the objective of the study. The researcher concludes that there is a significant effectiveness of multimodal text for teaching reading comprehension. It can be seen that the students got the best score using this strategy. It can be seen when compared to the pre test scores (before using multimodal text) and post-test (after using multimodal text).

Based on the data from the control and experiment class between the average score and t observation, the researcher conclude that the use of multimodal text for teaching reading comprehension has a significant effectiveness on students' reading comprehension. Researcher has proven that multimodal text strategy can improve students' understanding when reading a story or reading text.

1. Description of the Data

In this chapter, the description of the data presented the data analysis. Based on the first question from this research, the researcher conducted observation with the seventh grade of SMP IT MAGS located in Menes, Pandeglang Regency, Banten

42262. The research started on April 7th, 2022. The researcher takes 32 students as the subject of this research, 16 students from KH. Mas Abdurrahman class as the experimental class and 16 students from the KH. Mustaghfiri class as a control class. Before the researcher do the treatment, it could be seen that the student interest in reading was lacking, and not enthusiastic, so that it had an impact on their lack of reading ability. The researcher used a pre test to know how their skill.

The data in this study were the scores of students takes Pre-test and Post-test both from the experiment class and the control class. Pre-test scores were taken before treatment, while Post-test scores were taken after treatment. The treatment was carried out after the Pre-test for 3 meetings in both classes.

The results of the research in pre test are to determine students' reading comprehension before receive the treatment, while the Post Test provides information on whether there is an increase in reading ability in achieving reading comprehension of multimodal texts after receiving treatment. In this study, the researcher gave treatment to the experiment class and the control class with reading story text. In the experiment class, the researcher applies picture stories as a strategy in teaching reading text by holding the control of the class. The researcher applies the conventional discussion technique. Conventional discussion technique is commonly used by teachers and students being asked to read texts, translate, answer questions and form groups to discuss and express opinions with each other.

Researchers measure the level of students' understanding by using tests on essay questions. Below are the Pre-Test and Post-Test data in the experiment and control class.

a. The Score of Pre-Test and Post Test of Experimental Class

Table 4.1

The Result Score of Pre-Test and Post Test in Experimental Class

NO	NAME	SCORE	
		PRE-TEST	POST TEST
1	RA	56	80
2	AZ	72	84
3	ARU	60	72
4	NH	52	68
5	NM	60	80
6	SAPR	56	76
7	TMAAR	64	70
8	TI	52	74
9	CQ	72	80
10	LMRE	72	73
11	YP	56	74
12	MFA	70	78
13	RHP	72	80
14	NPI	64	72

15	AF	52	70
16	RDAK	74	78
$\Sigma X1$		1116	1216
M1		69.75	76

Mean by formula:

$$\text{Pre-Test}$$

$$M_1 = \frac{\Sigma X1}{N_1}$$

$$M_1 = \frac{\Sigma 1116}{16}$$

$$= 69.75$$

Post Test

$$M_1 = \frac{\Sigma X1}{N_1}$$

$$M_1 = \frac{\Sigma 1216}{16}$$

$$= 76$$

Note:

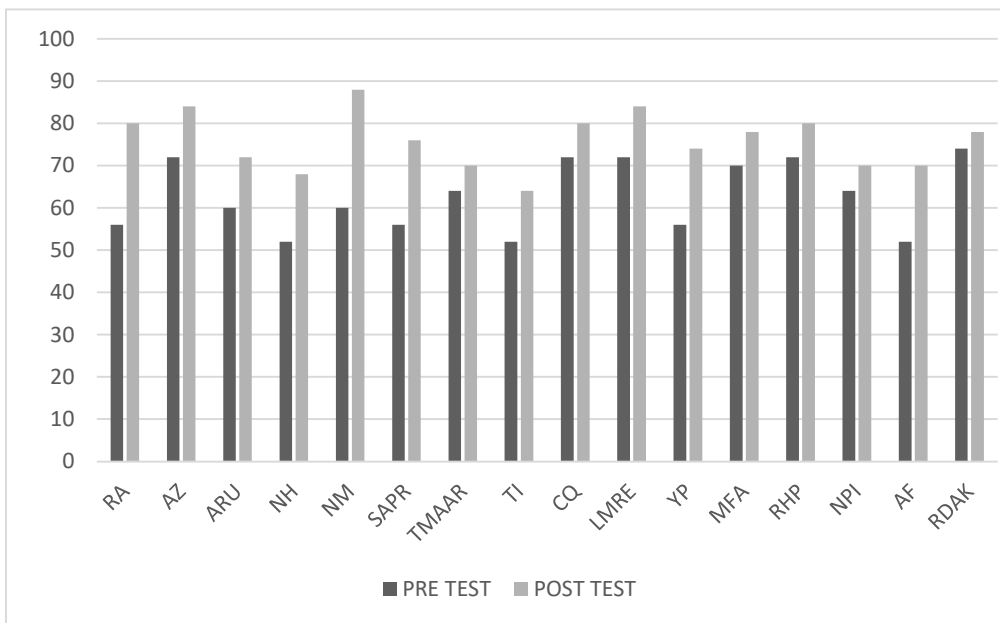
$\Sigma X1$ = Score of Pre-Test and Post Test experimental class

M_1 = Mean of Pre-Test and Post Test experimental class

N_1 = Numbers of students of experimental class

Graphic 4.1

The Score of Pre-Test and Post Test of Experimental Class



Based on the graph above, it can be concluded that the treatment applied in the experimental class has a significant effect. It can be conclude from average score of post-test is better than pre-test that $76 > 69.75$. It means, using Multimodal text is effective to improve reading comprehension in a picture text.

b. The Score of Pre-Test and Post Test of Control Class

Table 4.2
The Result of Pre-Test and Post Test in Control Class

NO	NAME	SCORE	
		PRE-TEST	POST TEST
1	UT	64	68
2	PID	60	64
3	FDR	72	68
4	MDA	72	70
5	MR	52	60
6	PBS	80	74
7	ASA	70	70
8	MSJ	56	64
9	HSC	66	68
10	TAZ	80	76
11	CRY	56	60
12	RCAP	60	64
13	BA	60	68
14	RAK	56	66
15	ECI	64	64
16	GM	68	68
ΣX^2		1036	1072

M2	64.75	67
----	-------	----

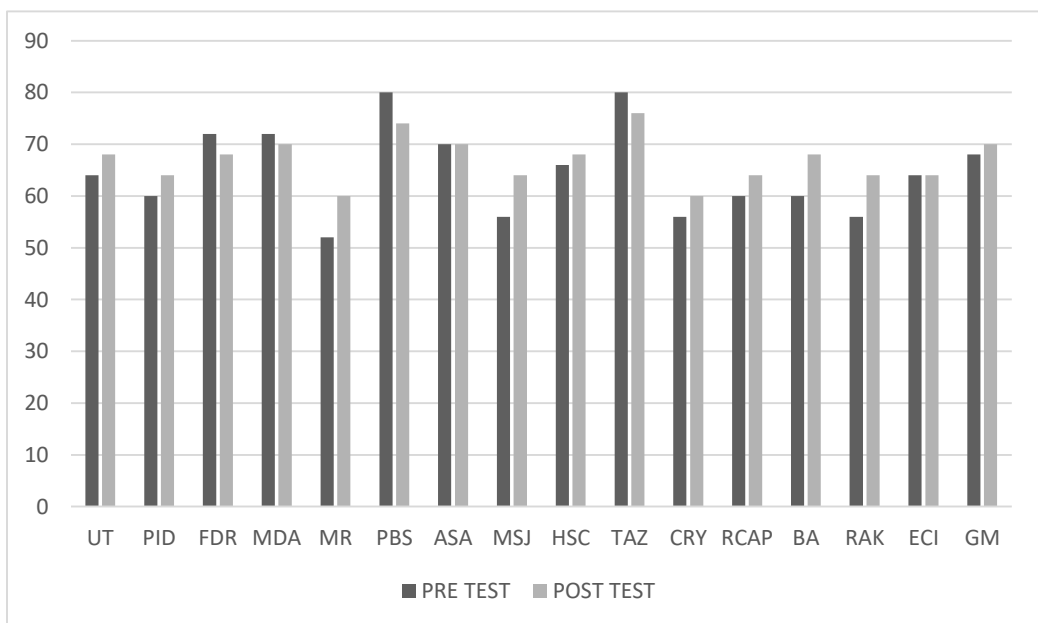
Mean by formula:

$$\begin{aligned} \text{Pre-Test} \\ M_2 &= \frac{\sum X^2}{N_2} \\ M_2 &= \frac{\sum 1036}{16} \\ &= 64.75 \end{aligned}$$

$$\begin{aligned} \text{Post Test} \\ M_2 &= \frac{\sum X^2}{N_2} \\ M_2 &= \frac{\sum 1072}{16} \\ &= 67 \end{aligned}$$

Graphic 4.2

The Score of Pre-Test and Post Test in Control Class



Based on the graph above, it can be concluded that the score from the control class does not have a significant score, it can be seen from the pre-test and post-test scores that do not have an overall increase in score with an average of $67 > 64.75$. This class has increased but lower than experimental class.

2. Analysis of Data

After getting the data from Pre-Test and Post Test score of two classes. Then the researcher analyzed the score by using t-test formula with the degree of significant 5% and 1%, the researcher used step as follows:

Table 4.3

The Score of Distribution Frequency

NO	SCORE		X_1	X_2	X_1^2	X_2^2
	X1	X2	$(X_1 - M_1)$	$(X_2 - M_2)$		
1	80	68	4	1	16	1
2	84	64	8	-3	64	9
3	72	68	-4	1	16	1
4	68	70	-8	3	64	9
5	88	60	12	-7	144	49
6	76	74	0	7	0	49
7	70	70	-6	3	36	9
8	64	64	-12	-3	144	9

9	80	68	4	1	16	1
10	84	76	8	9	64	81
11	74	60	-2	-7	4	49
12	78	64	2	-3	4	9
13	80	68	4	1	16	1
14	70	66	-6	-1	36	1
15	70	64	-6	-3	36	9
16	78	68	2	1	4	1
Σ	1216	1072			664	288
AVERAGE	76	67				

Note:

X_1 = Score Post Test (Experimental Class)

X_2 = Score Post Test (Control Class)

X_1 = $X_1 - M_1$ (Mean X_1)

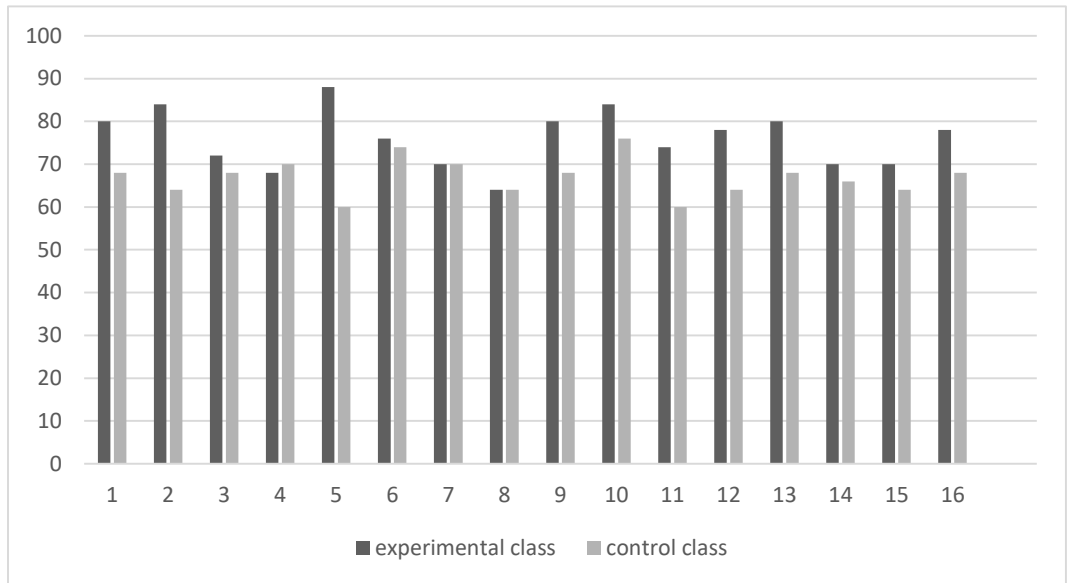
X_2 = $X_2 - M_2$ (Mean X_2)

X_1^2 = The squared value of X_1

X_2^2 = The squared value of X_2

Graphic 4.3

The Score of Distribution Frequency



Based on the graph above, the experiment class = 1216 means that it is higher than the control class = 1072 and had a different value, the experimental class get a higher value than the control class.

From the table above, researcher got data $\sum X_1 = 1216$, $\sum X_2 = 1072$, $\sum X_1^2 = 664$, and $\sum X_2^2 = 288$, whereas $N_1 = 16$ and $N_2 = 16$.

After getting the data from the pre-test and post-test results, the researcher then analyzed with the statistical calculation of the t-test formula with a degree of significance of 5% and 1% with the following formula:

1. Determine mean of variable X1 and X2

Variable X1	Variable X2
-------------	-------------

$$M_1 = \frac{\sum X1}{N_1}$$

$$M_1 = \frac{\sum 1216}{16}$$

$$= 76$$

$$M_2 = \frac{\sum X2}{N_2}$$

$$M_2 = \frac{\sum 1072}{16}$$

$$= 67$$

2. Determine t-test

$$t = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2}\right) \left(\frac{N_1 + N_2}{N_1 \cdot N_2}\right)}}$$

$$t = \frac{76 - 67}{\sqrt{\left(\frac{664 + 228}{16 + 16 - 2}\right) \left(\frac{16 + 16}{16 \cdot 16}\right)}}$$

$$t = \frac{9}{\sqrt{\left(\frac{892}{30}\right) \left(\frac{32}{256}\right)}}$$

$$t = \frac{9}{\sqrt{(29.73) (0.125)}}$$

$$t = \frac{9}{\sqrt{3.71}}$$

$$t = \frac{9}{1.92}$$

$$t = 4.68$$

Notes:

M_1 = Mean score of the experiment class (Mean X1)

M_2 = Mean score of the control class (Mean X2)

$\sum x_1^2$ = Sum of square deviation score in experimental class

$\sum x_2^2$ = Sum of square deviation score in control class

N_1 = Number of students of experimental class

N_2 = Number of students of control class

2 = Constant number

3. Degree of Freedom

$$\begin{aligned} df &= N_1 + N_2 - 2 \\ &= 16 + 16 - 2 \\ &= 30 \end{aligned}$$

Based on the formula of t-test above, it can be seen that the value of t_o or $t_{observation}$ was 4.68 and for the df was 30.

3. Statistical Hypothesis

Based on the statistic hypothesis, it is obtained that the value of the degree of freedom =30, the value of t_o =4.68, in the degree of significance 1% =2.45, and in the degree of significance 5% =1.69. After that the researcher compared the data with t_t (t table) both in degree of significance 1% and 5%. Therefore $t_o: t_t = 4.68 > 2.45$ in degree of significance 1% and $t_o: t_t = 4.68 > 1.69$ in degree of significance 5%. The data from the experiment is calculated by using t-test formula with assumption as follow:

If $t_{observation} > t_{table}$: The alternative hypothesis is accepted. It means there is a significant effectiveness of multimodal text for teaching reading comprehension.

If $t_{observation} < t_{table}$: The alternative hypothesis is rejected. It means there is no significant effectiveness of multimodal text for teaching reading comprehension.

There is effect of multimodal text for teaching reading comprehension, because the statistical hypothesis showed that t_o is higher than t_t .

B. Discussion

Multimodal texts are important to use in the learning process which aims to develop students into knowledgeable readers by drawing attention to various sources in making meaning in the text and being able to fulfill the desired communicative goals. Key knowledge can be identified when clarifying visuals as a strategy for constructing non-verbal representations of texts namely internal visualization (referring to visual information) and external (physical representations as generated by the reader).¹⁵ Therefore, internal and external visualization is closely related to the approach through multimodal text because it can support various sides of supporters so that reading can produce diverse knowledge. This research has a difference with previous research which makes this study more focused on real evidence that is carried out in the classroom through

¹⁵ David N. Rapp and Christopher A. Kurby, "The 'Ins' and 'Outs' of Learning: Internal Representations and External Visualizations," *Visualization: Theory and Practice in Science Education*, 2008, 29–52.

direct tests with students in the learning process, the results before and after implementing the strategy are much different. The use of multimodal texts is favored by students as they are actively involved in it, so this study obtained significant results in changing learning patterns for the better. This study refers to previous research but there are some differences that have been explained using the theory above that previous researchers did not prioritize external visualization aspects, the previous researchers focused on how to approach multimodal text in terms of internal visualization only, such as how an image affects understanding of text without representing it in real terms how it affects students.

As is well known, the aim of this research is to find out the effectiveness of multimodal text for teaching reading comprehension. According to the results of the pre test and post test in the experiment class, the researcher concluded that the lowest score in the pre test was 52 and the highest score in the pre test was 74. After the researcher carried out the treatment of multimodal text for teaching reading comprehension and also did the post test, the lowest score was found in the post test, which is 68 and the highest score in the post test, which is 84.

Based on the results, there is an effectiveness of multimodal text for teaching reading comprehension and it is proven by a significant result. It could be seen that the students got the best score using the strategy. This can be seen when compared to the pre test scores (before using multimodal text) and post test (after using multimodal text). The control and experimental class between the average score,

and t observation, the use of multimodal text for teaching reading comprehension has a significant effectiveness on students' reading comprehension.

Reading strategy using multimodal text provides visual content that they fill in the answers easily. The ability to read the contents of the story or the flow of their reading is also trained and also makes them more enthusiastic and cheerful when learning. Their reading comprehension improved based on the post test results and scores previously mentioned. In applying this strategy, the researcher felt that students really enjoyed the learning process actively and enthusiastically because they could express their creativity and imagination make it easier for students to read the reading line or story line. Therefore, students were given treatment in 3 times, they could be easy to read the text using pictures. When the students are accustomed to using visual reading and understand what can make their reading easier, when given the post test they can easily guess and understanding the text.