

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This chapter tells and discusses the statistical result based on the instruments that are used in conducting the research. The data is presented which are presentation of data, hypothesis testing and measurement of validity, reliability of the test and discussion of finding.

A. Presentation of Data

This research was conducted at MA AZ-Zubair's school, a new source of Pamekasan on October 27 to November 8, 2022. The research activities were conducted on MA AZ-Zubair students to obtain important data that could help in resolving research "improve the vocabulary English students using Guess Picture of 10th grade MA Az-Zubair Sumber Anyar Tlanakan Pamekasan". The researcher raised the title of this study based on the problem that appeared in the school. After collecting the data that the researcher needs, the next step is to present the data.

After calculating all the data during the research process as a result, the researcher must present the data to find out the comparison of the two variables containing the independent and dependent variables. Researchers used pre-test and post-test as instruments in collecting data. Data is described as data obtained by researchers during the research process.

1. The Presentation on Pre-Test Scores

The researcher got the data by distributing the test to students 10th MA Az-Zubair Tlanakan Pamekasan. The researcher was held on October, 27 2022, at 09.00 pmup to October 2022. The students test scores are displayed in the table below.

Tabel 4.1
Result of Pre-test Score

No.	Nama	Nilai
1.	Adhi Riyadi	70

2.	Adhi Ersyadi	35
3.	Imron	30
4.	Maulia Arwyatul Laili	65
5.	Moh. Ansori Syaied	30
6.	Moh. Sufyan al-Hasan	35
7.	Mufarrohah	40
8.	Nayla Nurul Hidayah	45
9.	Nurul Jihan	45
10.	Nurfia Afdilani Wailah	30
11.	Warda Mustika Ratu	60
12.	Zainal Arifin	35
SUM		510

Based on the table above, it can be known that there are twelve students. The first column is the number of the students, the second column is the table of pre test scores. It is found that the total t-test score of 490 scores. In this pre-test, the highest score of all items are 100 score, but the result of students answer of the pre-test is lower than 100. The highest score is 70 and the lowest score is a 30 of total members are 12 members.

2. The Presentation of Treatment

For the next meeting the research give a treatment implemented guess image twice meeting. The first meeting 27th of October 2022 at 09.00 pm and the second meeting is done on Wednesday November 9. The first treatment The steps that will be used by researchers in the Guessing Game to improve children's language development are:

- a. The teacher uses pictures according to the material
- b. The teacher shows the picture too the student in front of the class
- c. The teacher explains the listen the guess image
- d. The teacher direct student attention to a temporary image
- e. Ask student question one at a time
- f. The teacher gives assignments to student

3. The Presentation of Post-test

Following the researcher's treatment of mind mapping technique, the researcher conducted a post-test in writing essay testing to gather the score after treatment, which is shown in the table below:

Table 4.2
Result of Post-test Score

No.	Nama	Nilai
1.	Adhi Riyadi	40
2.	Adhi Ersyadi	25
3.	Imron	40
4.	Maulia Arwyatul Laili	50
5.	Moh. Ansori Syaied	25
6.	Moh. Sufyan al-Hasan	40
7.	Mufarrohah	55
8.	Nayla Nurul Hidayah	20
9.	Nurfia Afdilani Wailah	40
10.	Nurul Jihan	30
11.	Warda Mustika Ratu	30
12.	Zainal Arifin	45

SUM	530
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Based on the table above, it can be known that there are twelve students. The first columns is the number of the students. The second columns is the name of students, the third columns is the table of post-tset scores. It is found that the total t-test score of students is 530 scores after the researcher give a treatment. From the table above, there are many various scores of twelve stundents. Who get scores above 50 are 2 students, it is called good. And students who get scores under 50 are 10 students. It is called weak in vocabulary mastery.

Tabel 4.3
Results of Pre-test dan Post-test

No.	Nama	Pre-test	Post-test
1.	Adhi Riyadi	70	40
2.	Adhi Ersyadi	35	25
3.	Imron	30	40
4.	Maulia Arwyatul Laili	65	50
5.	Moh. Ansori Syaied	30	25
6.	Moh. Sufyan al-Hasan	35	40
7.	Mufarrohah	40	55
8.	Nayla Nurul Hidayah	45	20
9.	Nurfia Afdilani Wailah	30	40
10.	Nurul Jihan	45	30
11.	Warda Mustika Ratu	60	30
12.	Zainal Arifin	35	45

SUM	510	530
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4. Validity and Reliability

a. Validity

Validity is standart or basic measure that shows appropriateness, usefulness and validity which leads to the accuracy of the interpretation of an evaluation procedure in accordance with the purpose of its measurement. This researcher uses content validity, where the content validity is appropriate and relevant to the research objectives. In short the researcher creates test that contains vocabulary test. The vocabulary has been taught in the treatment.

b. Reliability

In checking the realibility of the instrument used at this research, the researcher uses KR.21. If the result of coefficient reliability shows the positive significance, the instrument is reliable. The table below is the result of reliability of the test:

Table 4.4
Analysis of reliability of pre-test score

NO	SCORE OF EACH ITEM																				XI	X2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	1	1	0	1	1	1	0	0	1	0	1	1	1	1	1	0	0	1	1	1	14	196
2	1	1	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	0	1	7	49
3	1	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	6	39
4	1	1	1	1	0	1	0	0	1	1	1	1	1	0	1	0	0	1	1	0	13	169
5	1	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	6	36
6	0	1	0	0	1	0	0	1	0	0	1	0	0	0	1	1	0	0	1	0	6	36
7	1	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	1	1	0	0	8	64
8	0	0	0	1	0	0	0	1	0	1	0	1	0	0	1	1	1	1	1	1	9	81
9	0	1	0	0	0	1	1	0	1	0	0	1	0	1	0	0	0	0	0	0	6	36
10	0	0	0	1	0	0	0	1	0	1	0	1	0	1	1	0	0	1	1	1	9	81
11	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	1	12	144
12	1	0	1	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	1	7	49
Σ																					10	977

$$\begin{aligned}
 M &= \frac{\sum X}{n} \\
 &= \frac{103}{20} \\
 &= 5,15
 \end{aligned}$$

$$\begin{aligned}
 r_{11} &= \left(\frac{k}{k-1} \right) \left(1 - \frac{M(k-M)}{kv_t} \right) \\
 &= \left(\frac{20}{20-1} \right) \left(1 - \frac{5,15(20-5,15)}{20 \cdot 8,44} \right) \\
 &= \left(\frac{20}{19} \right) \left(1 - \frac{5,15(20-5,15)}{168,8} \right) \\
 &= 2,58
 \end{aligned}$$

After comparing between R11, which is 2.58 with R Table, which is 0.553, the pre-test can be concluded that the researcher made it reliable.

Table 4.5
Analysis of reliability of post-test score

NO	SCORE OF EACH ITEM																				XI	X2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	0	1	1	0	0	1	0	0	0	0	0	1	1	0	0	0	1	1	0	1	8	64
2	0	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	5	25
3	1	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	1	8	64
4	1	1	1	0	1	0	0	1	0	0	0	0	0	1	1	0	1	1	1	0	10	100
5	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	5	25
6	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	0	1	1	0	0	7	49
7	0	1	1	0	0	1	0	1	1	1	0	1	1	0	0	0	0	1	1	1	11	121
8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	4	16
9	0	1	1	0	0	1	0	0	1	1	0	0	1	0	0	0	0	1	0	1	8	64
10	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1	1	0	6	36
11	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	6	36
12	0	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	0	1	9	81
Σ																					87	681

$$\begin{aligned}
 M &= \frac{\sum X}{n} \\
 &= \frac{87}{20} \\
 &= 4,35
 \end{aligned}$$

$$\begin{aligned}
 r_{11} &= \left(\frac{k}{k-1} \right) \left(1 - \frac{M(k-M)}{k v_t} \right) \\
 &= \left(\frac{20}{20-1} \right) \left(1 - \frac{4,35(20-4,35)}{20 \cdot 4,57} \right) \\
 &= \left(\frac{20}{19} \right) \left(1 - \frac{4,35(15,65)}{91,4} \right) \\
 &= 0,231
 \end{aligned}$$

After comparing between R11, which is 0,231 with R Table, which is 0.684, the pre-test can be concluded that the researcher made it reliable.

B. Data Analysis

Researcher needs to analyze the score to get the statistical form because this study are pre-test and post-test. The researchers would then wish to assess the data before testing hypotheses in order to determine the outcome of this study. The data was analyzed using a paired sample t-test, which included two test instrument outcomes, namely pre-test and post-test. Calculation of dependent t-test is formed by considering the table as follow:

Table 4.6
The Calculation of Paired Sample t-test (Pre-test and Posttest)

NO.	NAME	WRITING ESSAY		D =	D ² =
		Pre-test	Post-test	(X-Y)	(X - Y) ²
1.	Adhi riyadi	70	40	-30	900
2.	Adhi ersyadi	35	25	-10	100

3.	Imron	30	40	-10	100
4.	Maulia arwiyatul L.	65	50	-15	225
5.	Moh. ansori S.	30	25	-5	25
6.	Moh. sufyan al.	35	40	5	25
7.	Mufarrohah	40	55	15	225
8.	Nayla nurul H.	45	20	-25	625
9.	Nurfia afdilani W.	30	40	-10	100
10.	Nurul jihan	45	30	-15	225
11.	Warda mustika r.	60	30	-30	900
12.	Zainal arifin	35	45	10	100
	N= 12	$\sum X_1 =$ 510	$\sum X_2 =$ 530	$\sum D =$ -180	$\sum D^2 =$ 3550

Based on the results above, the computation dependent t-test is administrated as follow:

$$N = 12$$

$$\sum D = -180$$

$$\sum D^2 = 3550$$

$$\sum X_1 = 510$$

$$\sum X_2 = 530$$

The counting steps t-test are as follow:

- a. Looking for the mean from the difference of pre-test and post-test (MD), by formula:

$$M_D = \frac{\sum D}{N}$$

$$MD = \frac{-180}{12}$$

$$= -15$$

- b. Determining Standard Deviation form D by formula:

$$SD_D = \sqrt{\frac{\sum D^2}{N} - \left(\frac{\sum D}{N}\right)^2}$$

$$= \sqrt{\frac{3550}{12} - \left(\frac{-180}{12}\right)^2}$$

$$= \sqrt{295,8 - (-15)^2}$$

$$= \sqrt{295,8 - 225}$$

$$= \sqrt{70,8}$$

$$= 8,4143$$

- c. Determining *Mean of Difference* by formula:

$$SE m_d = \frac{SD_D}{\sqrt{N-1}}$$

$$= \frac{8,4143}{\sqrt{12-1}}$$

$$= \frac{8,4143}{\sqrt{11}}$$

$$= \frac{8,4143}{3,3166}$$

$$= 2,5370$$

d. Determining t_0 by formula:

$$\begin{aligned} t_0 &= \frac{M_D}{SE M_D} \\ &= \frac{-15}{2,5370} \\ &= -5,9124 \end{aligned}$$

The researcher discovers $t_0 = -5,9124 (> 2,201)$, based on the dependent t-test calculation above. To know if the null hypothesis is rejected or accepted. The hypothesis testing method must be completed by the researcher.

C. Hypothesis Testing

After finishing the analysis the data, we need to know whether H_a or H_0 is accepted. Hypotheses are quantitative research statements where the researcher predicts the result of a relationship between traits or features. Two types of hypotheses exist, null hypotheses, and alternative hypotheses. Hypothesis is an important thing in quantitative research because hypotheses make the result of the research and determine whether the hypothesis is null hypothesis or alternative hypothesis. If there is a correlation between dependent variable and independent variable or not. The test of the significance of correlation between two variables following the criteria :

1. If the result of this research $> 2,201$ it means not significant, alternative hypothesis is rejected and null hypothesis will be accepted.
2. If the result of this research $< 2,201$ it means significant, alternative hypothesis is accepted and null hypothesis will be rejected.

The researcher can conclude that the value of this statistical significant is $-5,9124 > 2,201$. It means that the alternative hypothesis is accepted and null hypothesis is rejected. So that researchers know that there is a difference in the 10th grade vocabulary mastery after using guess images in MA Az-Zubair Sumber Anyar Tlanakan Pamekasan.

D. Discussion

This section contains the discussion of research. This research was conducted on students at MA Az-Zubair. This research was conducted in grade 10. This class consisted of 12 students. The material taught for this research is vocabulary mastery using guess image. The pretest was given at the first meeting and the posttest was given at the last meeting. The researcher also gave treatment in the second week twice before the post-test was given. The goal, the researchers wanted to know the development of students before and after using the guess image technique in effectiveness students' English vocabulary.

In this section, the researcher tries to describe the students' progress towards the technique using guess image. Based on data exposure and hypothesis testing, there is no difference between before and after using guess image. Researchers can see from the students' scores between the pre-test and post-test. In the pre-test the highest score was 70 and the lowest score was 30. Meanwhile, in the post-test the highest score was 55 and the lowest score was 20, which were obtained by only two students. They found it difficult to memorize vocabulary. This researcher used guess image to help enhancing students' English vocabulary.

In this section, researcher will explain the result of finding to explanation about there is no difference in students use guess image with those who do not guess image. Reseachers use t value to get value statistical significance -5,912 and that value more than 2,201. It means that the interpretation of this research is there is difference.

According to Dian Ratna the picture guessing game is a universal game, which is carried out by a group of people where one member of the group becomes the draftsman and the other members guess the picture from the card shown by the instructor. Guess image is not just playing, but in this game student can also learn, that direct practical learning with experimental media gives the impression of children's enthusiasm to learn while playing fun. So that this picture guessing game can shape the character aspects of language development in increasing student vocabulary.

