

## **CHAPTER IV**

### **RESEARCH FINDING AND DISCUSSION**

This chapter describes about research findings and discussion that include data of research findings, data analysis, hypothesis testing and discussion.

#### **A. Research Findings**

In this chapter, the researcher presented the data on student's reading comprehension before and after being taught by using TAS as technique in the process of teaching reading comprehension. In this presentations, the researcher presented and analyzed the data which had been collected through two kinds of tests, they are pre-test and post-test. It was conducted for thirty four students.

As mentioned before, the researcher used test as the instrument in collecting data. It was given to class VIII C students of MTsN Tulungagung.

The number of question given by researcher was 20 questions. It was consist of multiple choice test. There were 34 students as respondent or subject at the research. The data of the students' achievement before and after teaching reading comprehension by using TAS can be seen in the following table.

#### **Description of Students' Reading Comprehension Score Before and After being Taught by Small Group Discussion Technique**

In this section, the researcher presented the result of the pre-test and post-test that had been done before and after treatment. Pre-test was held on Wednesday, January 4, 2017 at 01.00 until 02.30 am. It's consisted of 20 items multiple choices. Post-test was administered on Friday, February 3 2017 at 07.00 – 08.30

pm. The list of students' score of reading comprehension can be seen in the table below:

**Table 4.1 Students Score Before and After Being Taught By Using Reading Think Aloud Strategy**

No.	Student	Pre-test (X)	Post-test(Y)	D (Y-X) Point Difference	D (Y-X) <sup>2</sup>
1	A	55	70	15	225
2	B	55	75	20	400
3	C	60	75	15	225
4	D	65	90	25	625
5	E	45	70	25	625
6	F	50	70	20	400
7	G	70	70	0	0
8	H	65	80	15	225
9	I	60	85	20	400
10	J	55	80	25	625
11	K	65	75	10	100
12	L	60	85	25	625
13	M	40	70	30	900
14	N	70	90	20	400
15	O	65	75	10	100
16	P	50	75	25	625
17	Q	55	75	20	400
18	R	55	75	20	400
19	S	45	70	25	625
20	T	60	80	20	400
21	U	55	70	15	225
22	V	65	85	20	400
23	W	70	100	30	900
24	X	60	65	5	25
25	Y	50	75	25	625
26	Z	40	80	40	1600
27	AA	50	75	25	625
28	BB	55	75	20	400
29	CC	55	75	20	400
30	DD	50	80	30	900
31	EE	70	100	30	900
32	FF	60	75	15	225
33	GG	55	75	20	400
34	HH	60	90	30	900

<b>N = 34</b>	<b><math>\sum X = 2055</math></b>	<b><math>\sum Y = 2655</math></b>	<b><math>\sum D = 710</math></b>	<b><math>\sum D^2 = 16850</math></b>
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Table 4.1 shows the increasing point of students' pre-test and post-test score there are: 1 student has increased 5 point (X), 2 students has increased 10 point (K and O), 5 students has increased 15 point (A, C, H, U and FF), 11 students has increased 20 point (B, F, I, N, Q, R, T, V, BB, CC and GG), 8 students has increased 25 point ( D, E, J, L, P, S, Y and AA), 5 students has increased 30 point (M, W, DD, EE and HH) and 1 student has increased 40 point (Z). So, it can be conclude that from 34 students there are 5 students got excellent score (90-100), 8 students got very good score (80-89), 20 students got good score (70-79), and 1 student got fair score.

Table 4.1 also shows some important points concerning with the result of the computation of  $M_x$ ,  $M_y$ ,  $MD$ , T-score, and degree of freedom, they are as follow:

a. Finding  $\bar{x}$  ( $M^x$ ) and  $\bar{y}$  ( $M^y$ )

$$M_x = \frac{\sum x}{N} = \frac{1940}{34} = 57.06$$

$$M_y = \frac{\sum y}{N} = \frac{2655}{34} = 78.09$$

b. Finding MD

$$MD = \frac{\sum D}{N} = \frac{710}{34} = 20.88$$

c. Finding T-score

$$t = \frac{MD}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

$$\begin{aligned}
&= \frac{20.88}{\sqrt{\frac{16850 - \frac{(710)^2}{34}}{34(33)}}} \\
&= \frac{20.88}{\sqrt{\frac{16850 - 14826.4}{1122}}} \\
&= \frac{20.88}{\sqrt{\frac{2023.6}{1122}}} \\
&= \frac{20.88}{\sqrt{1.80}} \\
&= \frac{20.88}{1.34} \\
&= 15.58
\end{aligned}$$

d. Degree of freedom

$$\begin{aligned}
f &= N - 1 \\
&= 34 - 1 \\
&= 33
\end{aligned}$$

It can be seen that the mean of the students' pre-test and post-test score has significant difference scores where  $M_x = 57.06$  ,  $M_y = 78.09$ ,  $MD = 20.88$  ,  $T\text{-score} = 15.58$ , and degree of freedom = 33. It means that the mean of pre-test and post-test has increased from 57.06 to be 78.09 . So, it can be concluded that the think aloud strategy is effective and helpful the students to increase their achievement in reading comprehension.

To know the students' achievement that is good or not, the researcher give criteria as suggested by the English teacher of MTsN Tulungagung. This is as follows:

**Table 4.2 The Scores' Criteria**

<b>Grade</b>	<b>Interval Class</b>	<b>Criteria</b>
A <sup>+</sup>	90 – 100	Excellent
A	80 – 89	Very Good
B	70 – 79	Good
C	50 – 69	Fair
D	0 – 49	Poor

The scores' criteria above shows that A+ (90-100) means excellent score, A (80-89) means very good score, B (70-79) means good score, C (50-69) means fair score, and D (0-49) means poor score. So, it help and make easy to the researcher classified the students' score based on the score's criteria.

From the data of the students pre-test and post-test score, the researcher arrange the frequency and the percentage of the students' score that can be seen as in the following table.

**Table 4.3 Frequency of Students' Score**

<b>No</b>	<b>Score</b>	<b>F<sub>x</sub></b>	<b>F<sub>y</sub></b>
1	90 – 100	0	5
2	80 – 89	0	8
3	70 – 79	4	20
4	50 – 69	26	1
5	0 – 49	4	0
		X <sub>1</sub> = 34	X <sub>2</sub> = 34

It shows that in pre-test there were no one of student got (90-100) excellent score, no one of students got (80 – 89) very good score, four students got (70 – 79) good score, twenty six students got (50 – 69) fair score, and four students got (0 – 49 ) poor score. While, in post-test there were five students got (90-100) excellent score, eight students got (80 – 89) very good score, twenty students got (70 – 79) good score and one student got fair score. So, it can be concluded that before and after they were taught *think aloud strategy* has increased score from 0 to be 5 students got (90-100) excellent score, 0 to be 8 students got (80 – 89) very good score, 4 to be 20 students got (70 – 79) good score, has decreased from 26 students to be 1 got (50 – 69) fair score, and has decreased from 4 students to be 0 got (0 – 49 ) poor score.

The percentage of the students pre-test and post-test' score can be found by using this formula:

$$P = \frac{F}{N} \times 100\%$$

Where:

$P$  : percentage

$F$  : frequency

$N$  : total of students

**Table 4.4 Percentage of the Students' Pre-test**

Grade	Criteria Score	Fx	%
A <sup>+</sup>	90 – 100	0	0%
A	80 – 89	0	0%

B	70 – 79	4	11.76 %
C	50 – 69	26	76.48 %
D	0 – 49	4	11.76 %
		N = 34	P = 34

From the data percentage of the students' pre-test score, it can be seen that from 100% percentage no one student got grade A<sup>+</sup> score, no one students got grade A score, 4 students ( 11.76 %) got grade B means good score, 26 students (76.48 %) got C means fair score and 4 students ( 11.76 %) got D means poor score.

**Table 4.5 Percentage of the Students' Post-test**

Grade	Criteria Score	Fy	%
A <sup>+</sup>	90 – 100	5	14.71 %
A	80 – 89	8	23.52 %
B	70 – 79	20	58.82 %
C	50 – 69	1	2.94 %
D	0 – 49	0	0
		N = 34	P = 34

From the data percentage of the students' post-test score, it can be seen that from 100% percentage, 5 students (14.71%) got grade A<sup>+</sup> means excellent score, 8 students ( 23.52% ) got grade A means very good score, 20 students ( 58.82% ) got grade B means good score, and 1 student ( 2.94% ) got C means fair score.

So, it can be concluded that the students' pre-test and post-test score in the percentage and criteria was different. After using *reading think aloud strategy* in teaching and learning on the table 4.4 and 4.5 shows that criteria score of A<sup>+</sup> grade

has increased ( 0 % to be 14.71 %), A grade has increased ( 0 % to be 23.52 %), B grade has increased ( 11.76 % to be 58.82 %), C grade has decreased ( 76.48 % to be 2.94 %), and D grade has equal percentage ( 11.76 % to be 0% ). In conclusion, it shows that after using think aloud strategy as a technique to teach reading comprehension had increased students reading skill.

## **B. DATA ANALYSIS**

Data analysis was done to know the different score of the students' achievement in reading comprehension before and after being taught by using *reading think aloud strategy*. Referring to the data in the form of students' score gained from pre-test and post-test as stated above, the next step was analyzing those data by computing it by using T - test.

To find out whether there is different of students' achievement in reading comprehension before and after being taught by using *reading think aloud strategy*, the researcher used percentage formula and divided the test result into five criteria; those are excellent, very good, good, fair and poor. It means that if the students can understand the reading comprehension well so they get excellent score, when the students still confused about reading comprehension, they get very good and good score, fair and poor score is got by the students when they just understand little reading comprehension test.

The result of data analysis is from students' score of pre-test and post-test as in the following table.

### **Table 4.6 Correlations**



		Pretest	Posttest
Pretest	Pearson Correlation	1	.548**
	Sig. (2-tailed)		.001
	N	34	34
Posttest	Pearson Correlation	.548**	1
	Sig. (2-tailed)	.001	
	N	34	34

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on the table above, *output paired samples correlations* shows the large correlation between both samples, where can be seen numeral both correlation is (0.548) and numeral significance (0.001). For interpretation of decision based on the result of probability achievement, that is:

- a) If the probability  $>0.05$  then the null hypothesis accepted
- b) If the probability  $<0.05$  then the null hypothesis rejected

The large of numeral significant (0.001) lower than (0.050). It means that the hypothesis clarify there is no significant different score using *think aloud strategy* toward students reading comprehension at the eighth grade of MTsN Tulungagung. The other word, Think Aloud Strategy is effective to teaching reading comprehension.

**Table 4.7 Paired Samples Statistic**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	57.06	34	8.176	1.402

**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Pretest	57.06	34	8.176	1.402
Posttest	78.09	34	8.350	1.432

Based on the table 4.9 above, shows *Mean* of pre-test score ( 57.06 ) and post-test score ( 78.09 ), while *N* for cell there are 34, *Standard Deviation* for pre-test ( 8.176 ) and post-test ( 8.350 ), *Standard Error Mean* for pre-test ( 1.402 ) and post-test ( 1.432 ).

**Table 4.8 Paired Samples Correlations****Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 pretest & posttest	34	.548	.001

Based on the table 4.10 above, shows the correlations between two scores of pre-test and post-test where it seen that the correlation scores of pre-test and post-test= 0.548 and sig= 0.001. For interpretation of decision based on the result of probability achievement, that is:

- a) If the sig >0.05, means  $H_0$  is accepted
- b) If the sig <0.05, means  $H_0$  is rejected

It shows that sig= 0.001 is lower than 0.05 means that  $H_0$  is rejected and  $H_a$  is accepted. So, it can be concludes that there is significant correlation between pre – test and post – test score.

**Table 4.9 Paired samples T – test****Paired Samples Test**

	Paired Differences					T	Df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 pretest – posttest	21.029	7.860	1.348	-23.772	-18.287	15.600	33	.000

Based on the table 4.8, *output paired samples test* shows the result of compare analysis with using T test. *Output shows mean* pre-test and post-test (21.029), standard deviation (7.860), mean standard error (1.348). The lower different (23.772), while upper different (18.287). The result test  $t=(15.600)$  with  $df=33$  and significance (0.000).

With the guideline of  $T_{count}$  and  $T_{table}$  where  $df= 33$  got from  $T_{table}= 1.69$ . So,  $T_{count}$  (15.600) >  $T_{table}$  (1.69) means that  $H_0$  is rejected and  $H_a$  is accepted. Therefore, it

concluded that there is the significant differences between pre-test and post-test score where mean of post-test ( 57.06 ) higher than mean of pre-test ( 78.09 ) means that teaching reading comprehension through using *reading think aloud strategy* is effective.

### C. Normality and Homogeneity Testing

#### 1. Normality Testing

Normality tests are used to determine whether a data set is well-modeled by a normal distribution or not, or to compute how likely an underlying random variable is to be normally distributed. Normality test is intended to show that the sample data come from a normally distributed population. To know the normality, the researcher used *kolmogorov-smirnov test* with SPSS.16. *Kolmogorov-smirnov test* is a test of normality for large samples. A normal distribution is rejected. Simply put a value less than 0.05 indicates that the data are non-normal.

The result can be seen in the table below:

**Table 3.5 Normality Testing**

One-Sample Kolmogorov-Smirnov Test				
		Pretest	posttest	Unstandardized Residual
N		34	34	34
Normal Parameters <sup>a</sup>	Mean	57.06	78.09	.0000000
	Std. Deviation	8.176	8.350	6.84064370
Most Extreme Differences	Absolute	.136	.262	.132
	Positive	.129	.262	.105
	Negative	-.136	-.137	-.132
Kolmogorov-Smirnov Z		.792	1.527	.769

Asymp. Sig. (2-tailed)	.557	.019	.595
a. Test distribution is Normal.			

The hypothesis for testing normality are:

- a.  $H_0$ : Data is in normal distribution
- b.  $H_1$ : Data is not in normal distribution.

Critic area is in which  $H_0$  is rejected when the significance value is lower than 0.05 ( $\alpha = 5\%$ ). The analysis is as follows:

Based on the output from SPSS above is known that the significance value from pre-test is 0.557 and from the post test is 0.019. Both value from pre-test and post-test are bigger than 0.05. The sig/p value on pre-test is 0.813 and it is lower 0.05 ( $0.557 > 0.05$ ). It means that  $H_0$  is accepted and  $H_a$  is rejected and the data is in normal distribution. Then, for post-test score the value of sig/p is 0.890 and that is bigger than 0.05 ( $0.019 > 0.05$ ). It also means that  $H_0$  is accepted and  $H_a$  is rejected and the data is in normal distribution. So, it can be interpreted that both of data (pre-test and post-test score) are in normal distribution.

## 2. Homogeneity Testing

Homogeneity testing is intended to make sure that the collected manipulation data in analysis is truly taken from population which is too different each other. Especially in a correlative study which is predictive, the model which is used must be appropriate with the composition and its distribution. To know the homogeneity, the researcher used Test of Homogeneity of Variances with SPSS.16. The result can be seen below:

**Table 3.6 Homogeneity Testing****Test of Homogeneity of Variances**

Levene Statistic	df1	df2	Sig.
Pretest 1.895	5	27	.128

The hypothesis for testing normality are:

- a.  $H_0$ : Data is homogeny
- b.  $H_1$ : Data is not homogeny

Critic area is in which  $H_0$  is rejected when the significance value is lower than 0.05 ( $\alpha = 5\%$ ). The analysis is as follows:

Based on the output from SPSS above is known that the test called homogeny if the significant score more than 0.05. Based on the table above, the test is homogeneity because  $0.128 > 0.05$  and it means that  $H_0$  is accepted and  $H_1$  is rejected. So, it can be concluded that students of VIII - C has homogeny of variances.

**D. Hypothesis Testing**

From the data analysis it could be identify that:

1. When the value of  $T_{count} > T_{table}$  in  $df = 33$  with the significant level 0.05. The alternative hypothesis ( $H_a$ ) is accepted and the null hypothesis ( $H_0$ ) is rejected. It means that there is significant

different score of reading achievement to the second grade students of MTsN Tulungagung before and after being taught by using Reading Think Aloud Strategy.

2. When the value of  $T_{\text{count}} < T_{\text{table}}$  in  $df=33$  with the significant level 0.05. The null hypothesis ( $H_0$ ) is accepted and the alternative hypothesis ( $H_a$ ) is rejected. It means that there is no significant different score of reading achievement to the second grade students of MTsN Tulungagung before and after being taught by using Reading Think Aloud Strategy.

The mean of total reading comprehension test score of 34 students before being taught by using think aloud strategy is ( 57.06 ). After getting treatment, the mean score of students' reading is ( 78.09 ). It means that the students' score is improved.

Based on the statistical calculation using t-test, the researcher gives interpretation to  $t_{\text{count}}$ . First, she considered the *d.f.* with the *d.f.* (34-1=33). She checked to the score of "t" at the significant level of 0,05. In fact, with the *d.f.* of (33) and the critical value 0,05 significant  $t_{\text{table}}$  was (1.69).

By comparing the "t" that she got in calculation  $t_{\text{count}} = (15.600)$  and the value of "t" on the  $t_{\text{table}} = t_{0,05} = (1.69)$ , it is known that  $t_{\text{count}}$  is bigger than  $t_{\text{table}} = 15.600 > 1.69$ .

Because the  $t_{\text{count}}$  is bigger than  $t_{\text{table}}$  , the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted. It means that there is significant different score of students reading comprehension achievement of the eighth grade students

of MTsN Tulungagung before and after being taught by using think aloud strategy.

## **E. DISCUSSION**

From the research method in chapter III in this research, teaching and learning process is divided into three steps. First step is the researcher administrated pre-test by giving reading comprehension test. It is used to know the students' earlier reading comprehension before they get treatment.

The second is given treatment to the students. The treatment here is teaching reading comprehension by using reading think aloud strategy. The material is about descriptive text, recount text and report text. After the student got treatment, they were more enjoy and enthusiastic to learn reading comprehension. The last step was giving post-test to the students after they got treatment.

From the research finding in chapter IV, the output data of paired sample statistics shows mean of pre-test is 57.06 and post-test is 78.09 has increased. If compared the differences both of value is 20.88. Therefore, from both mean it can concluded that there is significant differences in the students' achievement of reading comprehension means that teaching reading comprehension through think aloud strategy is effective.

The standard deviation is to measure how much the variance of the sample. The standard deviation of pre-test is  $8.176 < 57.06$  and post-test is  $8.350 < 78.09$  where if the standard deviation is getting higher than the mean it means that the mean is not homogeny and if the standard deviation is getting smaller than the



mean it means that the mean is homogeny. So, it can be concluded that standard deviation of pre-test and post-test was homogeny means that the sample of this research almost has the same mean.

The standard error mean is to measure the accuracy with which a sample represents a population. The standard error mean of pre-test is  $1.402 < 57.06$  and post-test is  $1.432 < 78.09$ , where if the standard error mean is getting higher than the mean it means that the sample is not representative and if the standard error mean is getting smaller than the mean it means that the sample is representative. So, it can be concluded that the sample of this research indicated good sample or representative from population.

Based on the output data of paired sample test, It also known that  $t_{\text{count}} = 15.600$  and  $t_{\text{table}} = 1.69$  If compared the differences of both value is 13.910. So,  $t_{\text{count}} = 15.600$  is bigger than  $t_{\text{table}} = 1.69$ . So, the alternative hypothesis ( $H_a$ ) is accepted, while the null hypothesis ( $H_0$ ) is rejected. It means that there is significance different score of the reading comprehension achievement of the eighth grade students of MTsN Tulungagung in academic year 2016/2017 before and after being taught by using reading think aloud strategy.

From the finding, it is know that  $t_{\text{count}}$  bigger than  $t_{\text{table}}$  and  $H_a$  is accepted while  $H_0$  is rejected. It means that there is significant effect before and after being taught using think aloud strategy toward students reading achievement of descriptive text, report text and and recount text.

Based on the result, it can be concluded that think aloud strategy as effect in teaching reading comprehension at Junior High School especially at eight grade

students of MTsN Tulungagung. It also could be seen in the treatment process, the students more interested when the researcher applied the technique. Think Aloud Strategy is an instructional approach. This strategy helped readers to comprehend more easily what was being read by them to achieve a mutual goal. TAS is one of the transactional strategies because it is a joint process of teachers and students working together to construct understandings of text as they interact with it. Through the interactions that think aloud promotes, a better understanding of the texts may emerge in the classroom. TAS is also a process in which readers report their thoughts while reading. It helps students to reflect upon their own reading process.

Based on the explanation above, it can be concluded that the teacher must not only focus on presenting materials for the students but the most important one must be considered that is how to presents the materials. In this research, the researcher uses TAS as a way in teaching reading comprehension. In this technique students study reading descriptive text, recount text and report text. Three variances of the text hopefully will help students to more understand about kind of text in English and student would easily distinguish the differences of the text, especially using think aloud strategy . The teacher is not only keep silent and sitting on the chair during teaching and learning, but she have to control the students activity by going around. This technique is done to make the use of think aloud strategy in teaching and learning process.

After the researcher did the research in teaching reading comprehension of the eighth grade students of MTsN Tulungagung, reading think aloud strategy is not

only motivate the students to learning reading comprehension but also help the students comprehend the text easily. So, they can learn to develop their ability in reading comprehension, especially of descriptive text, recount text and report text. TAS has been proved can help the students to improve their reading comprehension achievement, can help the students to builds comprehension, slow down the process of reading to allow students time to understand material, give a good example of what thought process should be during reading. As the comparison of this research, here are some researchers of The Effect of Think Aloud Strategies Toward Students Reading Skill. The first is Cardenas ( 2009 ) with title “The Impact Of The Think-Aloud Strategy In The English Reading Comprehension Of English Foreign Language of 10<sup>th</sup> Grade, Ni'mah (2014) with title “The Effectiveness of Using Think Aloud Strategy Toward Student's Reading Achievement in Narrative Text Study At 7<sup>th</sup> Grade SMP ISLAM DURENAN Trenggalek”, and Alaraj (2015) with title “Using Think Aloud Strategy To Improve English Reading Comprehension For 12<sup>th</sup> Grade Students In Saudi Arabia.”

For the first researcher, Cardenas (2009), he found that the studies increased their engagement in the activities because of think aloud strategy they could interact and construct meaning from the texts at once when they developed the reading task.

In a similar way, for the second researcher Ni'mah (2014), she found that think aloud strategy can increase student's spirit in reading narrative text, and the last researcher Alaraj (2015), he declare that think aloud strategy very useful to

implement for 12<sup>th</sup> Grade Students In Saudi Arabia, because students can verbalizing all their thought in order to create understanding of reading texts.

The study above has both the similarities and the differences with the researcher's study. The similarities are having same technique ( reading think aloud ) and using test as the instrument and choosing various text as the materials.

The differences are on the place, sampling technique and the use of observation as the collecting data technique of the study. The main different from the research is have positive impact of the think-aloud strategy according to the researcher, which students of MTsN Tulungagung constantly mentioned that they had an enhancement in some specific aspects of English language such as: pronunciation, vocabulary, and listening skill.

From the result of researcher finding, think aloud strategy as teaching strategy is surely shows the real effectiveness, because this strategy is easy and interesting to apply in teaching reading comprehension, then the students more enjoy and won't be easy to feel boring when they are study reading and this strategy can give spirit in teaching learning process for the eight grade of MTsN Tulungagung.

Based on the result, it can be concluded that reading think aloud strategy is effective in teaching reading comprehension at Junior High School especially for the eighth grade students at MTsN Tulungagung. Think Aloud Strategy is one of the essential or important to model for students how skilled readers construct meaning from a text. The think-aloud strategy asks students to say out loud what they are thinking about when reading, solving math problems, or simply responding to questions posed by teachers or other students. Evenmore, teachers

also have to make students realize that the teachers' role only as a guide, students then are the main protagonist of reading process. Reading think aloud strategy surely showed the real effectiveness in teaching reading comprehension because it especially of the eighth grade students of MTsN Tulungagung.