

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

In this chapter, the researcher presents about research findings and discussion that include data of research findings, data analysis, the result of normality and homogeneity testing, 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 team word-webbing toward student's reading comprehension in news item text at the tenth grade. The researcher presented and analyzed the data which had been collected through two kinds of test, they are pre-test and post-test. It was conducted for thirty five students.

As mentioned before, the researcher used test as the instrument in collecting data. It was given to class X students of MA Terpadu Al-Anwar. The number of question given by researcher was 20 questions. It was consist of multiple choice test. There were 37 students as respondent or subject at the research. The data of the students' achievement before and after teaching reading comprehension by using team word-webbing technique can be seen in the following table.

Table 4.1. Students Score Before They were Taught using Team Word-webbing.

No	Subject	Pre-test Score (x)
1	A	80
2	B	70
3	C	50
4	D	70
5	E	70
6	F	65
7	G	55
8	H	55
9	I	70
10	J	50
11	K	60
12	L	55
13	M	50
14	N	55
15	O	50
16	P	55
17	Q	50
18	R	60
19	S	60
20	T	60
21	U	65
22	V	50
23	W	80
24	X	50
25	Y	70
26	Z	60
27	AA	55
28	BB	65
29	CC	65
30	DD	60
31	EE	95
32	FF	50
33	GG	65
34	HH	70
35	II	65
36	JJ	60
37	KK	70
	N=37	$\Sigma X=2285$

From the data pre test above, the students who got the score 95 is one student, who got 80 score are two students, who got 70 score are seven students, who got 65 are six students, who got 60 score seven students, who got 55 are six students and who got 50 score are eight students.

Table 4.2. Students Score post test after They were Taught using Team Word-webbing.

No	Subject	Post-test Score (y)
1	A	95
2	B	90
3	C	75
4	D	90
5	E	85
6	F	90
7	G	90
8	H	75
9	I	95
10	J	75
11	K	85
12	L	75
13	M	80
14	N	80
15	O	85
16	P	85
17	Q	75
18	R	85
19	S	80
20	T	80
21	U	90
22	V	85
23	W	85
24	X	85
25	Y	75
26	Z	95
27	AA	85
28	BB	90
29	CC	75
30	DD	85
31	EE	100

32	FF	80
33	GG	75
34	HH	80
35	II	75
36	JJ	85
37	KK	80
	N=37	$\Sigma Y=3095$

From the data of post test above, the students who got the score 100 is one student, who got 95 score are three students, who got 90 score are six students, who got 85 score are eleven students, who got 80 score seven students, and who got 75 score are nine students.

Table 4.3 Point Difference students of pre test and post test.

No	Point Difference (D)	D²
1	15	225
2	20	400
3	25	625
4	20	400
5	15	225
6	25	625
7	35	1225
8	20	400
9	25	625
10	25	625
11	25	625
12	20	400
13	30	900
14	25	625
15	35	1225
16	30	900
17	25	625
18	25	625
19	20	400
20	20	400
21	25	625
22	35	1225
23	5	25

24	35	1225
25	5	25
26	35	1225
27	30	900
28	25	625
29	10	100
30	25	625
31	5	25
32	30	900
33	10	100
34	10	100
35	10	100
36	25	625
37	10	100
	$\Sigma D=810$	$\Sigma D^2=20650$

The table above shows the increasing point of students' pre-test and post-test score there are 3 students has increased 5 point (W, Y, and EE), 4 students has increased 10 point (CC, GG, HH, II, KK), 2 students has increased 15 point (A and E), 6 students has increased 20 point (B, D, H, L, S, and I), 11 students has increased 25 point (C, F, I, J, K, H, Q, R, U, BB, DD and JJ), 4 students has increased 30 point (M, P, AA, and FF), and 5 students has increased 35 point (G, O, V, X, and Z). So, it can be concluded that from 37 students there are 10 students got excellent score (90-100), 18 students got very good score (80-89), and 9 students good score (70-79).

The table above also shows some important points concerning with the result of the computation of Mx , My , MD , T-score, and degree of freedom, they are as follow:

a. Finding Mx and My

$$Mx = \frac{\sum x}{N} = \frac{2285}{37} = 61.76$$

$$My = \frac{\sum y}{N} = \frac{3095}{37} = 83.65$$

b. Finding MD

$$MD = \frac{\sum D}{N} = \frac{810}{37} = 21.89$$

c. Finding T-score

$$\begin{aligned} t &= \frac{MD}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}} \\ &= \frac{21.89}{\sqrt{\frac{20650 - \frac{(810)^2}{37}}{37(36)}}} \\ &= \frac{21.89}{\sqrt{\frac{20650 - 17732.4}{1332}}} \\ &= \frac{21.89}{\sqrt{\frac{2917.6}{1332}}} \\ &= \frac{21.89}{\sqrt{2.19}} \\ &= \frac{21.89}{1.48} \\ &= 14.80 \end{aligned}$$

d. Degree of freedom

$$f = N - 1$$

$$= 37 - 1$$

$$= 36$$

It can be seen that the mean of the students' pre-test and post-test score has significant difference scores where $M_x = 61.76$, $M_y = 83.65$, $MD = 21.89$, T-score = 14.80, and degree of freedom = 36. This means that the mean of pre-test and post-test has increased from 61.76 to be 83.65. So, it can be concluded that using Team word-webbing is 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 MA Terpadu Al-Anwar Trenggalek. This is as follows:

Table 4.4 Frequency of Students' Score

No	Score	F _x	F _y
1	90 – 100	1	10
2	80 – 89	2	18
3	70 – 79	6	9
4	50 – 69	28	0
5	0 – 49	0	0
		$X_1 = 37$	$X_2 = 37$

It shows that in pre-test there were one student who got excellent score (90-100), two students got very good score (80 – 89), six students got good score (70 – 79), and twenty eight students got fair score (50 – 69). While, in post-test there were ten students got excellent score (90-100), eighteen students got very good score (80 – 89), and nine students got good score (70 –

79). So, it can be concluded that the students score before and after they were taught using Team word-webbing has increased score from 1 to be 10 students got excellent score (90-100), 2 to be 18 students got very good score (80 – 89), 6 to be 9 students got good score (70 – 79), and has decreased from 28 to be 0 students got fair score (50 – 69).

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 4.5 Percentage of the Students' Pre-test

Grade	Criteria Score	Fx	%
A ⁺	90 – 100	1	2.70%
A	80 – 89	2	5.40%
B	70 – 79	6	16.22%
C	50 – 69	28	75.68%
D	0 – 49	0	0
		N = 37	P = 100%

From the data percentage of the students' pre-test score, it can be seen that from 100% percentage one student (2.70%) got grade A+ means excellent score, two students (5.40%) got grade A means very good score, five students (16.22%) got grade B means good score, and twenty seven students (75.68%) got C means fair score.

Table 4.6 Percentage of the Students' Post-test

Grade	Criteria Score	Fy	%
A ⁺	90 – 100	10	27.03%
A	80 – 89	18	48.65%
B	70 – 79	9	24.32%
C	50 – 69	0	0
D	0 – 49	0	0
		N = 37	P = 100%

From the data percentage of the students' post-test score, it can be seen that from 100% percentage ten students (27.03%) got grade A⁺ means excellent score, eighteen students (48.65%) got grade A means very good score, and nine students (24.32%) got grade B means good score.

So, it can be concluded that the students' pre-test and post-test score in the percentage and criteria was different. After using Team word-webbing in teaching and learning the table 4.4 and 4.5 show that criteria score of A⁺ grade has increased from 2.70% to 27.03%, A grade has increased from 5.40% to 48.65%, B grade has increased from 16.22% to 24.32%, C grade has decreased from 75.68% to 0%, and D grade has equal percentage from 0% to 0%. In conclusion, it shows that after using Team word-webbing as a technique to teach reading comprehension had increased than before using Team word-webbing technique.

The significant differences between pre test and post test are the mean in pre test before giving treatment 61.76 and in pos test after giving treatment 83.65. So, it can be concluded that using Team word-webbing is helpful the students to increase their achievement in reading comprehension.

B. Data Analysis

Data analysis was done to know the different score of the students' achievement in reading comprehension before and after being taught using Team word-webbing technique. 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 using Team word-webbing technique, 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.

To know the correlations between the students' score of pre-test and post-test is described in the following table:

Table 4.7 Correlations

Correlations		Pretest	Posttest
Pretest	Pearson Correlation	1	.495**
	Sig. (2-tailed)		.002
	N	37	37
Posttest	Pearson Correlation	.495**	1
	Sig. (2-tailed)	.002	
	N	37	37

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

Based on the table above, *output correlations* shows the large correlation between both samples, where can be seen numeral both correlation is (0.495) and numeral significance (0.002). 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 (0.002) lower than (0.050). It means that the hypothesis clarify there is no significant different score using Team word-webbing toward students reading comprehension at the first grade of MA Terpadu Al-Anwar Trenggalek. The other word, Team word-webbing is effective to teaching reading comprehension.

To know whether there is difference mean of students' pretest and posttest, it can be seen as follow:

Table 4.8 Paired Samples Statistic

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	61.76	37	10.153	1.669
	Posttest	83.65	37	6.836	1.124

Based on the table 4.7 above, shows *Mean* of pre-test score (61.76) and post-test score (83.65), while *N* for cell there are 37, *Standard Deviation* for pre-test (10.153) and post-test (6.836), *Standard Error Mean* for pre-test (1.669) and post-test (1.124).

Table 4.9 Paired Samples Correlations

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pretest & Posttest	35	.495	.002

Based on the table 4.8 above, it shows that the correlations between two scores of pre-test and post-test = 0.495 and sig = 0.002. 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= 0.002 is lower than 0.05 means that H_0 is rejected and H_a is accepted. So, it concluded that there is significant correlation between pre-test and post-test scores.

Table 4.10 Paired Samples 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	-21.892	9.002	1.480	-24.893	-18.890	-14.792	36	.000

Based on the table 4.13, *output paired samples test* shows the result of compare analysis with using T test. *Output shows mean* pre-test and post-test is 21.892, standard deviation is 9.002, mean standard error is 1.480. The lower

different is 24.893 and upper different is 18.890. The result test $t = 14.792$ with $df = 36$ and significance is 0.000.

Therefore, it concluded that there is the significant differences between pre-test and post-test score where mean of post-test is 83.65 higher than mean of pre-test is 61.76 means that teaching reading comprehension through using Team word-webbing is effective.

C. Hypothesis Testing

From the data analysis it could be identify that:

1. When the value of $T_{\text{count}} > T_{\text{table}}$ in $df = 36$ with the significant level 0.05.

The alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected. It means that there is significant different score of reading comprehension achievement to tenth grade students at MA Terpadu Al-Anwar Trenggalek before and after being taught using Team word-webbing.

2. When the value of $T_{\text{count}} < T_{\text{table}}$ in $df = 36$ with the significant level 0.05.

The null hypothesis (H_o) is accepted and the alternative hypothesis (H_a) is rejected. It means that there is no significant different score of reading comprehension achievement to tenth grade students at MA Terpadu Al-Anwar Trenggalek before and after being taught using Team word-webbing.

The mean of total reading comprehension test score of 37 students before being taught using Team word-webbing is (61.76). After getting treatment, the means score of students' reading is (83.65). It means that the students' score is improved.

Based on the statistical calculation using t-test, the researcher gives interpretation to t_{count} . First, she considered the *d.f.* with the *d.f.* ($37-1=36$). He checked to the score of “t” at the significant level of 0,05. In fact, with the *d.f.* of (36) and the critical value 0,05.

By comparing the “t” that she got in calculation $t_{\text{count}} = (14.792)$ and the value of “t” on the , it is known that t_{count} is bigger than $\text{sig} = 14.792 > 0.000$

Because the t_{count} is bigger than t_{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 tenth grade students of MA Terpadu Al-Anwar Trenggalek before and after being taught by Team word-webbing.

D. 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 Team word-webbing. The material is about news item text. After the student got treatment, they were more 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 Samples Statistics* shows mean of pre-test is 61.76 and post-test is 83.65 has

increased and if compared the differences both of value is 21.89. It was found that the students' reading comprehension achievement after being taught by Team Word-Webbing had better than the students' reading comprehension achievement before being taught by Team Word-Webbing. 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 Team Word-Webbing discussion technique is effective.

The standard deviation is to measure how much the variance of the sample. The standard deviation of pre-test is $10.153 < 61.76$ and post-test is $6.836 < 83.65$ 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 $1.669 < 61.76$ and post-test is $1.124 < 83.65$ 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 Samples Test* it was found that $t_{\text{count}} = 14.792$ and $_{\text{sig}} = 0.000$ and if compared the differences both of value is 12.838. From this comparison, $t_{\text{count}} = 14.792$ is bigger than $_{\text{sig}} = 0.000$ which means the alternative hypothesis (H_a) is accepted, while the null hypothesis (H_o) is rejected. Therefore, it can be concluded that there is significance different score of the reading comprehension of the tenth grade students of MA Terpadu Al-Anwar Trenggalek in academic year 2017/2018 before and after being taught using Team Word-Webbing.

Based on the result of research findings and explanation above, it can be concluded that using Team Word-Webbing is effective in teaching reading comprehension at senior high school especially for the tenth grade students of MA Terpadu Al-Anwar Trenggalek. It proved that Team Word-Webbing has significant effect to the students' reading comprehension achievement. Team Word-Webbing is one of the essential or important technique to improve student's creativity to solve problem, especially to conduct their reading comprehension (Buzan, 2005:1).

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 Team Word-Webbing as a way in teaching reading comprehension. In this technique students study reading news item text. It makes them more responsible in their study. The teacher is not only keep silent and sitting on the chair during teaching and learning, but he has to

control the students activity by going around the students. This technique is done to make the use of Team Word-Webbing in teaching and learning process.

After the researcher did the research in teaching reading comprehension to tenth grade students at MA Terpadu Al-Anwar Trenggalek, team word-webbing 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 news item text. Team Word-Webbing technique surely showed the real effectiveness in teaching reading comprehension because it can help the students to improve their reading comprehension achievement, especially of tenth grade students at MA Terpadu Al-Anwar Trenggalek.