



## The Effect of Team Word-Webbing Toward Students' Reading Comprehension at Tenth Grade of MAN Koto Baru, Dharmasraya

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**Abstract.** This study investigates the effect of the Team Word-Webbing technique on reading comprehension among tenth-grade students at MAN Koto Baru, Dharmasraya. Reading comprehension is critical for language acquisition and academic success, as it encompasses the ability to extract and interpret meaning from text. Despite its importance, many students struggle with reading comprehension due to various factors including limited vocabulary and insufficient engagement. To address these issues, the study employed a quantitative experimental design, using a quasi-experimental approach with an experimental group and a control group. The research involved a pre-test and post-test assessment to measure reading comprehension levels before and after the implementation of the Team Word-Webbing technique. The experimental group was taught using this technique, which involves organizing ideas visually to enhance understanding, while the control group received traditional instruction. The sample consisted of two classes selected through purposive sampling, with data analyzed using t-tests to compare outcomes. Results indicated that the Team Word-Webbing technique significantly improved reading comprehension compared to conventional methods. The experimental group demonstrated higher post-test scores, with statistical analysis revealing a significant difference ( $p < 0.05$ ). This suggests that Team Word-Webbing enhances students' ability to understand and retain reading material by facilitating better organization of ideas and active engagement. In conclusion, the study supports the effectiveness of Team Word-Webbing as an instructional strategy to improve reading comprehension. This technique not only aids in comprehension but also promotes active learning and student interaction, making it a valuable tool for educators aiming to enhance reading skills in the classroom.

**Keywords:** Team Word-Webbing, Reading Comprehension, Reading Skills.

### 1. INTRODUCTION

Reading is one of the most important skills in language learning that must be learned because it can affect other language skills. According to Nunan, reading is a set of skills that involves making sense and deriving meaning from the printed word. It means reading is a skill to gain an understanding of the meaning of word. Silberstein also stated that reading is an active process. The students worked intensively, interacting with the text in order to create meaningful discourse (Sandra Silberstein, 1994). It means that the reader do interactive process with the text to know meaning of the text. Thus, reading is an activity of communication between the readers with the author. The writer shows their idea through printed word and the reader gets it by reading. Then, reading is a process to get the meaning from the text. The reader can understand information from a text.

According to Wolley, making sense of a text is the process of reading comprehension (G. Woolley, 2011). As a result, understanding what is described in the text as a whole is preferred over deriving meaning from individual words or sentences. Klingner also stated that reading

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comprehension involves much more than readers' responses to text. It is a multicomponent, highly complex process that involves many interactions between readers and what they bring to the text (previous knowledge, strategy use) as well as variables related to the text itself (interest in text, understanding of text types) (Jannete K. Klinger, 2007). So, reading comprehension also affects the reader more respond when read a text.

Reading comprehension has several aspects. According to Nuttal in Wastawan, there are five aspects of reading which the students should understand to comprehend a text well; they are determining main idea, finding specific information, reference, inference, and vocabulary (Komang Wastawan, 2013). So, reading comprehension will make the reader able to determine the essence of the sentence or texts.

If the students have mastered the aspects of reading, it will assist them and they will get many benefit of reading. There are several benefits of reading. According to Aliponga, reading enables the students to understand the main idea and important details of the reading materials and enable them to think critically (Jonathan Aliponga, 2013). Reading helps the students to find out information and knowledge. Reading also helps the students to increase their vocabulary. Moreover, reading also improves their concentration and memory to increases their imagination and creativity. Thus, reading gives many benefits to the reader.

There are some difficulties in reading comprehension. According to Hidayati, students mostly got difficulties in understanding vocabulary, poor mastery of grammar, the difficulty in understanding long sentence, lack of media learning, less support from the family, and lack of knowledge of strategy (Dasrul, 2018). These difficulties may come from the lack of the students' knowledge. Based on these cases, teacher needs to use communicative approach in teaching reading, like a cooperative learning.

Cooperative learning is one of methods which used in teaching reading comprehension. According to Jacobs and Hannah, cooperative learning is also known as collaborative learning, a method that helps to maximize the benefits of cooperation among students. It means this technique can assist the learning process to increase the students' skill. Moreover, as Singh and Agrawal reported that cooperative learning is the process where the students learn in a group and they can help each other. Thus, this technique gives advantage for students to encourage their solidarity work in group.

There are so many types of cooperative learning; one of them is team word webbing technique. Zarei, stated that team word webbing is a technique of graphic organizer that provides a visual of how ideas connect to the topic (Zarei. A.A, 2003). It means team word webbing is a link between ideas and topic contained in each word or sentence in a text. Starko

also stated that team word webbing is often used to organize such as idea and information on a topic (Alane J. Starko, 2010). This technique encourages students to be active, and creative in presenting their ideas with all components of the problems and links between them. It will be interesting for both of students or teacher.

Based on preliminary research conducting interview and the observation with an English teacher and some students at class tenth grade of MAN Koto Baru Dharmasraya, the researcher found several problems.

First, students' reading comprehension ability was still low when the teacher asked them to comprehend the text in the classroom. Some of the students were still confused to understand the meaning of the text, and they did not do the task well. Therefore, they had low reading comprehension which is below the KKM (Minimum Standard Criteria). The KKM is 74.

Second, the students had lack of vocabulary. There were many words that they still did not know in English. Some students were still confused in interpreting the meaning of a word that they had just heard, it made students difficult to comprehend the text that they read.

Third, students did not have motivation in the classroom during reading activities. They were busy with themselves and not interested in learning because they felt bored. So that, the students did not focus and they were only rely on the results of their friends. This allows students to cheat without doing an effort by themselves.

Other way, cooperative learning informs of team word-webbing technique is believed to be able to help improving students' reading comprehension. This technique encourages students to be active, creative in presenting their ideas with all components of the problems and links between them.

Based on the problems stated previously, the researcher was interested to conduct a research entitled "The Effect of Team Word-Webbing Toward Students' Reading Comprehension at Tenth Grade of MAN Koto Baru, Dharmasraya".

## **2. RESEARCH METHOD**

This study employed a quantitative research approach, specifically an experimental design, to evaluate the impact of the Team Word-Webbing Technique on students' reading comprehension. According to Sugiyono, quantitative research is characterized by the collection and statistical analysis of numerical data. The study follows an experimental research design as defined by Cohen, where the researcher controls and manipulates variables to measure their effects on specific outcomes. In this case, the primary objective was to assess whether the Team Word-Webbing Technique influences reading comprehension compared to conventional

methods. Following Gay's classification, experimental research is apt for testing hypotheses and establishing cause-and-effect relationships. A quasi-experimental design was utilized, involving two classes: one experimental group that received the Team Word-Webbing treatment and one control group that did not. Each class underwent a pre-test to gauge initial reading comprehension levels, followed by a treatment phase and a post-test to assess the impact of the intervention. This setup allowed for a clear comparison between the experimental and control groups, with a total of five sessions per class—one for the pre-test, three for the treatment, and one for the post-test.

The population for this research comprised tenth-grade students at MAN Koto Baru Dharmasraya, totaling 105 students distributed across four classes (IPA, IPK, IPS 1, IPS 2). From this population, purposive sampling was employed to select two classes—X IPS 1 as the experimental group and X IPS 2 as the control group—based on criteria such as homogeneity and normality of reading ability. The sampling process included normality and homogeneity tests using SPSS 20, with results guiding the selection of classes that exhibited comparable reading capabilities. The instrumentation for the study involved a reading comprehension test administered as both a pre-test and a post-test. The pre-test assessed initial reading comprehension, while the post-test measured any changes following the intervention. Validity was ensured through content and expert review, while reliability was confirmed using the Alpha Cronbach method, yielding a high reliability score of 0.85.

Data collection involved administering reading comprehension tests to both the experimental and control groups at the beginning and end of the treatment period. The experimental group was taught using the Team Word-Webbing Technique, whereas the control group received traditional instruction. Following the treatment, post-tests were conducted to evaluate changes in reading comprehension. Data analysis utilized the t-test formula to determine the significance of differences between the experimental and control groups. This analysis included calculating means, standard deviations, and sums of squares for both groups, with the results compared to the t-table values at a significance level of 0.05. The comparison allowed for the assessment of the hypothesis regarding the effectiveness of the Team Word-Webbing Technique in enhancing students' reading comprehension.

### **3. FINDING AND DISCUSSIONS**

Before knowing the result of data analysis by using independent sample t-test, firstly there were two assumptions that must be done and known. They were normality and homogeneity test.

## The Normality Test

In this discussion, the researcher did this normality to know whether the data had normal distribution or not. The hypothesis for the normality test is formulated as follows:

Ho= the data are normally distributed

Ha= the data are not normally distributed

While the criteria for the normality test are as follows:

Ho is accepted if Sig. (pvalue)  $\geq \alpha = 0.05$

Ha is accepted if Sig. (pvalue)  $< \alpha = 0.05$

**Table 1. The result of Normality Pre-test Experimental Class and Control Class**

Tests of Normality							
	KELAS	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
PRETEST	KELAS X IPS 1	.182	21	.069	.929	21	.131
	KELAS X IPS 2	.151	20	.200*	.924	20	.116

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

a. Lilliefors Significance Correction

Based on the result of normality test, it can be seen that Sig. (pvalue) for experimental class was 0.131 and Sig.(pvalue) for control class was 0.116 and  $\alpha = 0.05$ . It means that Sig. (Pvalue)

**Table 2. The result of Normality Post-test Experimental Class and Control Class**

Tests of Normality							
	KELAS	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
POSTTEST	KELAS X IPS 1	.139	21	.200*	.921	21	.092
	KELAS X IPS 2	.123	20	.200*	.962	20	.591

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

a. Lilliefors Significance Correction

Based on the result of normality test, it can be seen that Sig. (pvalue) for experimental class was 0.092 and Sig. (pvalue) for control class was 0.591 and  $\alpha = 0.05$ . It means that both classes are normal and the data was normally distributed.

## The Result of Homogeneity test

**Table 3. The Result of Homogeneity Pre-test Class Control and Experimental**

Test of Homogeneity of Variances			
PRETEST			
Levene Statistic	df1	df2	Sig.
.396	1	39	.533

Based on the result obtained in the test of homogeneity of variances in the table 3 it could be seen that Sig. (Pvalue) was  $0.533 > \alpha$  was 0.05. It means that  $H_0$  as accepted because Sig. (Pvalue)  $> \alpha$  was 0.05. It means that the variance of the data were homogeneous.

**Table 4. The Result of Homogeneity Post-test Experimental Class and Control Class**

Test of Homogeneity of Variances			
POSTTEST			
Levene Statistic	df1	df2	Sig.
.271	1	39	.605

Based on the result obtained in the test of homogeneity of variances in the table 4, it could be seen that Sig. (Pvalue) was  $0.605 > \alpha$  was 0.05. It means that  $H_0$  as accepted because Sig. (Pvalue)  $> \alpha$  was 0.05. It means that the variance of the data were homogeneous.

## The Result of Hypothesis test

### a. The First Hypothesis

The first hypothesis result in this research stated that there was a significant effect of team word-webbing toward students' reading comprehension at tenth grade of MAN Koto Baru, Dharmasraya in Academic Year 2020/2021 ( $H_a$  :  $t$ -calculated  $>$   $t$ -table). The researcher used  $t$ -test formula to test the hypothesis. It was found that  $t$ -calculated was higher than  $t$ -table. It means  $H_a$  was accepted and  $H_0$  was rejected. The conclusion could be seen below:

**Table 5. The Calculation of First Hypothesis Testing in Experimental Classes**

Category	Value
Degree of Freedom (Df)	(N-1) $21-1 = 20$
Level of Significant ( $\alpha$ )	0,05
T-Calculated	9,146
T-Table	2.085
T-Calculated $>$ T-Table ( $9,146 > 2,085$ )	

Based on the data above, it was shown that the degree of freedom (df) was 20, the level of significance was 0,05 and the  $t$ -calculated was 2,085.  $T$ -table at of 40 (the close df) was 2.021. So,  $t$ -calculated was bigger than  $t$ -table ( $9,146 > 2.085$ ). In

conclusion, the alternative hypothesis ( $H_a$ ) was accepted and the null hypothesis ( $H_0$ ) was rejected.

b. The Second Hypothesis

In second hypothesis, there was significant differences between students' who were taught by using team word-webbing than the students' reading comprehension who were not taught by team word-webbing technique. ( $H_a$ :  $t\text{-calculated} > t\text{-table}$ ).

While the criteria of acceptance and rejection of the hypothesis are:

$H_0$  is accepted if  $\text{Sig. (pvalue)} \geq \alpha = 0.05$

$H_a$  is accepted if  $\text{Sig. (pvalue)} < \alpha = 0.05$

**Table 6. Independent Samples Test**

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
POSTT EST	Equal variances assumed	.271	.605	4.243	39	.000	15.68429	3.69631	8.20779	23.16078
	Equal variances not assumed			4.258	38.687	.000	15.68429	3.68343	8.23192	23.13665

Based on the results obtained in the independent sample t-test in table 6, the value of significant generated Sig. (pvalue) or Sig.(2-tailed) of the equal variance assumed = 0.000 and  $\alpha$  was 0.05 It means that  $H_0$  is rejected and  $H_a$  is accepted. Based on the data, it can be concluded that there was any significant influence of using team word-webbing technique toward students reading comprehension at tenth grade of MAN Koto Baru, Dharmasraya. Then, there was a significant difference between students who are taught with using team word webbing and those who are taught by Conventional technique.

c. The Third Hypothesis

The data shows that reading comprehension of students who are taught with using team word webbing technique was better than using by conventional technique.

Reading is one of the important skills that should be mastered by the students. They should master reading because the teaching learning process starts with reading. The students will not be able to comprehend the learning material without reading.

Reading also relate to comprehension, because reading without comprehension is useless. Students should have reading comprehension skill in order to understand the learning material, so that the learning objective can be achieved. For this reason, the teacher should find some effective technique to improve students' reading comprehension. One of the techniques that might be used to improve students reading comprehension is by using team word-webbing technique.

In this research, the researcher had found the effect of team word-webbing toward students' reading comprehension. The students become more active and also easy to understand about the material when they do activity with their partner in small group. As Jacob and Hannah said that cooperative learning believed that help students in learning. It can be concluded that the cooperative learning give positive impact to students' reading comprehension.

Based on the analyzed data, the result of both tests were gained would be calculated by comparing the score and using t-test. It was found that there was significant effect of using team word-webbing technique toward students' reading comprehension. Based on the result of students' post-test, the mean score of students' post-test in control class was 60.6300 and mean score of students' post-test in experimental class was 76.3143. Based on the result, the scores of experimental class was higher than student' scores in control class. It means that the students who are taught by using Team Word-Webbing technique got better result than the students who were taught by using Conventional Technique.

Based on the data calculation, Sig. (2-tailed) of the equal variance assumed in the independent sample t-test was 0.000 it is lower than  $\alpha = 0,005$ . It means that null hypothesis ( $H_0$ ) is refused and alternative hypothesis ( $H_a$ ) is accepted. It can be concluded that there was any significant influence of using team word-webbing technique toward students' reading comprehension in recount text at tenth grade of MAN Koto Baru, Dharmasraya in the academic year of 2021/2022.

Based on the result of the data above, it can be interpreted that after the researcher teaching reading by using team word webbing technique in three times, the researcher found that the students who were taught by using team word-webbing technique gave significant influence on their reading comprehension. It is because this technique helps the students in comprehending the content of the text by organize main point in the text, so the students has clear purpose in reading. The technique is very effective in improving students' comprehension of what they read because the students



knew main idea and information of the text before they read and can give prediction for students in learning process. It was supported by Cooper, Team Word-Webbing technique is a simple graphic that can help students to see the main ideas in the book, chapter or article and represent it in some sort of visual display such as tree diagram, circles or line connecting (James, 2011). It means that this technique can help the students to see graphically the relationship between point of the topic, whether they have included some relevant ideas or summited some relevant ideas. According to Starko, Team Word-Webbing is a diagram that helps students to see how words are related to one another (Alane J. Starko, 2010). It means that team word webbing is a simple map that helps the students to see information related to the reading about what they will read.

In conclusion, the researcher concluded that team word-webbing was more helpful to be used for the students to help them to build reading comprehension than using conventional technique. It was influenced because team word-webbing was not only done individually but also in group, so the students would be more confident when they read and comprehend the text. The finding of this research is relevant with some previous studies.

#### **4. CONCLUSION**

Based on the researcher that was carried out in MAN Koto Baru, Dharmasraya in the academic year of 2021/2022, the researcher might draw conclusions as follows: In the previous chapter the researcher had analyzed the data statistically. Based on the statistically analysis, there was significant effect of using team word-webbing towards students reading comprehension on recount text at tenth grade of MAN Koto Baru, Dharmasraya in the Academic year of 2021/2022. The significant effect can be seen from Sig.(2-tailed) of the equal variance assumed in the independent sample test table where the Sig.(2-tailed) is 0.000. It is lower than  $\alpha = 0.05$  and it means that  $H_0$  is rejected and  $H_a$  is accepted. Furthermore, there was significant difference reading comprehension between the students who taught by using team word-webbing technique and who are those taught by using conventional technique. Thus, students' reading comprehension who taught by using team word webbing technique was better than who taught by using conventional technique.

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