

THE EFFECTIVENESS OF USING RECIPROCAL TEACHING STRATEGY TO IMPROVE READING COMPREHENSION OF THE TENTH GRADE STUDENTS OF SMA NEGERI 1 SOJOL

Faradila Enteding¹, Nur Sehang Thamrin², Wahyudin³, Sriati Usman⁴

^{1, 2, 3, 4} English Education Study Program, Teacher Training and Education
Faculty Tadulako University, Palu

Email: faradilaenteding9@gmail.com

Abstract

This research aims to determine whether using the Reciprocal Teaching strategy can improve reading comprehension of the tenth grade students of SMA Negeri 1 Sojol. The researcher applied a quasi-experimental design by using purposive sampling to get the sample. The instruments of data collection were pre-test and post-test. The pre-test was used to measure students' basic abilities and the post-test was used to measure the students' improvement in reading comprehension after the researcher applied the treatment. The t-test was analyzed to compare the mean scores of the experimental group (77.23) and the control group (74.71). The significance level was 0.05 with 60 degree of freedom ($df = 65$). The result of data analysis indicated that the t-counted (6.54) is higher than the t-table (1.659). Based on the results, the hypothesis of this research is accepted. It can be concluded that using Reciprocal Teaching strategy is effective to improve reading comprehension of the tenth grade students of SMA Negeri 1 Sojol.

Keywords: Reciprocal Teaching; Effectiveness; Reading Comprehension

INTRODUCTION

As one of the receptive skills, reading plays an important role to support language learners' communication skills. Communication skills are the skills of the 21st century that are required by the young generation in building networks worldwide and getting jobs (Brewer, 2013). The learners can communicate efficiently if they have ideas which are generated mostly through reading activities. Therefore, every country considers that reading skill or reading literacy is one of essential subject courses at school.

However, since the advanced science and technology disseminated in the English language, the ability to read texts written in English is essential nowadays. For Indonesian students, reading skills not only facilitate them to communicate in English, but also to access all information from around the world to improve their knowledge (The Head Foundation, 2017). Therefore, English is required as one of the subjects to be taught and students' reading skills should be prioritized by the teachers, besides other language skills.

Reading allows students to find various information contained in written text and strengthen their language acquisition. They can build their vocabulary and comprehend what the text is about or what authors intend to share. Reading is a receptive information process from the idea of the writer into our mind through our eyes. Sometimes, the writer's ideas information become a new knowledge for us. As Andres (2020) following statement that reading is one of the most important skills in any language class because it is not only a source of information and a pleasurable activity but also a means of consolidating and extending personal knowledge of the language. It means that the importance of reading can help students to develop their literacy.

Comprehension is the main aim of reading activity (Nurdianti, et al., 2019). Reading comprehension is the ability to comprehend or understand the text that has been read. By reading comprehension, students can get information and develop their ideas of the written text that they have read. Reading comprehension can be defined as a process of extracting information from a written text to create meaning using readers prior knowledge. To be able understand a text, readers must be competence, cognitive and intellectual (Mertasono, et al., 2020). In other words, reading comprehension is the ability to understand information in a text and interpret it appropriately. In short, reading comprehension is meant to get information stated explicitly and implicitly in a text.

The Merdeka curriculum mandates that the students are able to analyze the social function, text structure and linguistic elements in reading a text. In general, the aim of teaching reading is typically to enable students to read text effectively. In addition, the students are not only supposed to understand the structure but also comprehend the meaning of the text. Consequently, the students are able to understand the readings they have read.

However, the level of Indonesian students' reading comprehension still needs to be developed, albeit the level of Indonesia's literacy level is improved based on the PISA data 2022 (Kementerian Pendidikan dan Kebudayaan R.I., 2023). In addition, based on the researcher's preliminary

investigation, the curriculum expectation stated previously can hardly be met by grade tenth at SMA Negeri 1 Sojol. The researcher found some problems faced by the students in learning reading. First, some students got difficulty knowing the meaning of some words when they read a text because they did not have enough vocabulary and they need to use a dictionary. Second, some students are less interested in reading class. At the end, the students found it difficult to answer the question correctly based on the information given in the text. In addition, the teacher should have strategies that are suitable with the condition in the teaching learning process.

Regarding the above problems, the researcher intends to do an experiment by applying Reciprocal Teaching strategy to determine whether or not it affects students' reading comprehension. Reciprocal Teaching strategy is one of the learning strategies to improve students reading comprehension. Brown & Palincsar (1985) are the main proponent of this strategy to improve reading comprehension through Reciprocal Teaching. Reciprocal Teaching strategy is described as dynamic interaction or dialogue between the readers and the text in the readers attempt to construct the meaning from the text (Islam, 2020). This strategy can encourage students to think about their thought process during reading and allow students to become the teachers in a small group. Furthermore, this strategy certainly can motivate students to read and especially can improve students' reading comprehension, because the students play an active role in the learning process. In short, Reciprocal Teaching strategy is designed to provide a simple introduction to group discussion strategies aimed at understanding and remembering text content.

According to Rawengwan and Yawiloeng (2020) following statement that Reciprocal Teaching consist of four reading stages, as follows:

1. **Predicting:** is a smart guess to hypothesize about concerns in writing that incorporates the students background knowledge and new knowledge to confirm or correct predictions using headlines, titles, and images.
2. **Clarifying:** is the strategy where the students used to identify the unfamiliar or difficult-to-find vocabulary.
3. **Questioning:** is the strategy where the students can ask relevant question from the material.
4. **Summarizing:** is the process of identify important information, such as main idea, supporting details and to help students to reveal the main idea and facts of the material by using their own language.

Based on the description above, the hypothesis are formulated as follows:

- (1) Alternative Hypothesis H_a : Using Reciprocal Teaching strategy is effective to improve reading comprehension of the tenth grade students of SMA Negeri 1 Sojol.
- (2) Null Hypothesis H_0 : Using Reciprocal Teaching strategy is not effective to improve reading comprehension of the tenth grade students of SMA Negeri 1 Sojol.

METHOD

In this study, the researcher implemented quantitative approach by using quasi-experimental design which consists of experimental group and control group. According to White & Sabarwal (2014) stated that quasi-experimental design identify a comparison group that is similar as similar as possible to the treatment group in terms of baseline characteristic. Both groups would given pre-test and post-test. The experimental group are taught by using Reciprocal Teaching strategy while control group are taught without strategy. It means that the treatment was given only to the experimental group. The researchers use written test as the research instrument to collect or obtained data, those are pre-test and post-test. However, both groups are received the same assessment on the tests. The following is the design of the research as suggested by Cohen, et al., (2007:283):

Experimental	O1	X	O2
Control	O3		O4

Notations:

O1: Pre-test for experimental group

O2: Post-test for experimental group

X: Treatment

O3: Pre-test for control group

O4: Post-test for control group

The population of this research is all of the tenth-grade students of SMA Negeri 1 Sojol. It consisted of 5 classes which are, X MIPA 1, X MIPA 2, X MIPA 3, X IIS 1, & X IIS 2.

Table 1. Distribution of Population

No.	Class	Number of Students
1	X MIPA 1	33
2	X MIPA 2	33
3	X MIPA 3	34
4	X IIS 1	32
5	X IIS 2	33
Total		165

The samples are taken from the populations. In choosing the samples, the researcher used purposive sampling. The researcher chose class X MIPA 2 which consists of 33 students as an experimental group while X MIPA 3 which consists of 34 students as a control group.

This study provided two variables that are based on the topic. The first variable, in this case the Reciprocal Teaching strategy as the independent variable. The second variable is the dependent

variable, or reading comprehension.

RESULTS AND DISCUSSION

Results

This research was conducted on 20th January 2024 until 03rd February 2024 in SMA Negeri 1 Sojol. The pre-test was conducted on both classes before the students received the treatment on 20th January 2024, and the post-test was given to the experimental class on 30th January 2024, and to the control class on 03rd February 2024. The result of pre-test and post-test of both classes were analyzed and described in the table as follows:

Table 2. The Score of Experimental Class (X-MIPA 2)

No	Initials	Standard Score		Deviation (d)	Square Deviation
		Pre- test (X ¹)	Post- test (X ²)		
1	AD	51,43	71,43	20	400
2	AF	60	74,29	14,29	204,2
3	AL	51,43	91,43	40	1600
4	AN	65,71	82,86	17,15	294,12
5	AY	48,57	80	31,43	987,84
6	DS	28,57	82,86	45,72	2090,32
7	FI	40	80	40	1600
8	FNNS	60	82,86	22,86	522,58
9	HA	62,86	71,43	8,57	73,44
10	IJ	51,43	80	28,57	816,24
11	IO	62,86	80	17,14	293,78
12	IAS	51,43	71,43	20	400
13	MA	62,86	74,29	11,43	130,64
14	MHF	60	82,86	22,86	522,58
15	MNM	62,86	71,43	8,57	73,44
16	MS	68,57	77,14	8,57	73,44
17	MU	62,86	82,86	20	400
18	NA	48,57	74,29	25,72	661,52
19	NKGW	65,71	74,29	8,58	73,62

20	NH	51,43	77,14	25,71	661
21	NL	45,71	71,43	25,72	661,52
22	NU	40	74,29	34,29	1175,8
23	RA	65,71	77,14	11,43	130,64
24	RE	48,57	71,43	22,86	522,58
25	RI	45,71	80	34,29	1175,8
26	RM	48,57	74,29	25,72	661,52
27	RR	45,71	71,43	25,72	661,52
28	SF	65,71	74,29	8,58	73,62
29	SR	57,14	85,71	28,57	816,24
30	SI	54,29	74,29	20	400
31	TA	62,86	74,29	11,43	130,64
32	UL	60	85,71	25,71	661
33	YV	48,57	71,43	22,86	522,58
TOTAL DEVIATION				734,35	19472,22
MEAN DEVIATION					22,25

Based on the table above, the pre-test highest score in experimental class is 68.57, while the lowest is 28.57. The post-test highest score is 91.43, while the lowest is 71.43. It means that, the there is an improvement of students reading comprehension after they had given the treatment.

Table 2. The Score of Control Class (X-MIPA 3)

No.	Initials	Standard Score		Deviation (d)	Square Deviation
		Pre-test (X ¹)	Post-test (X ²)		
1	AA	60	77,14	17,14	293,78
2	AB	82,86	85,71	2,85	8,12
3	AI	80	80	0	0
4	AH	65,71	80	14,29	204,2
5	AL	51,43	62,86	11,43	130,64
6	AM	65,71	77,14	11,43	130,64
7	AP	71,43	82,86	11,43	130,64
8	AR	80	80	0	0
9	AS	68,57	68,57	0	0
10	BA	54,29	57,14	2,85	8,12
11	DS	88,57	88,57	0	0
12	ED	71,43	74,29	2,86	8,18
13	FA	57,14	74,29	17,15	294,12

14	FR	71,43	74,29	2,86	8,18
15	IL	54,29	71,43	17,14	293,78
16	JA	65,71	74,29	8,58	73,62
17	KA	77,14	80	2,86	8,18
18	MA	80	82,86	2,86	8,18
19	MAH	82,86	88,57	5,71	32,6
20	MF	48,57	71,43	22,86	522,58
21	MRA	57,14	57,14	0	0
22	MS	57,14	68,57	11,43	130,64
23	MY	54,29	77,14	22,85	522,12
24	MZ	60	62,86	2,86	8,18
25	NA	68,57	74,29	5,72	32,72
26	NF	48,57	80	31,43	987,84
27	NRS	60	74,29	14,29	204,2
28	PAR	60	71,43	11,43	130,64
29	RA	77,14	80	2,86	8,18
30	SI	48,57	60	11,43	130,64
31	SS	80	82,86	2,86	8,18
32	SN	65,71	77,14	11,43	130,64
33	SR	51,43	71,43	20	400
34	WA	62,86	71,43	8,57	73,44
TOTAL DEVIATION				311,46	4922,98
MEAN DEVIATION					9,16

Based on the table above, the pre-test highest score in control class is 88.57, while the lowest is 51.43. The post-test highest score 88.57, while the lowest is 57.14. When the result of control class compared to the experimental class, it can be seen that the control class is relatively low. It was concluded that the strategy can improve students reading comprehension.

The researcher then calculates the sum of square deviation using the formula by Arikunto (2013) as follows:

1. Experimental Class

$$\sum x^2 = \sum x^2 - \frac{(\sum x)^2}{N}$$

$$\sum x^2 = 19472.22 - \frac{(734.35)^2}{33}$$

$$\sum x^2 = 19472.22 - \frac{536269.92}{33}$$

$$\sum x^2 = 19472.22 - 16341.51$$

$$\sum x^2 = 3130.71$$

The sum of square deviation of the experimental class is 3130.71.

2. Control Class

$$\sum y^2 = \sum y^2 - \frac{(\sum y)^2}{N}$$

$$\sum y^2 = 4922.98 - \frac{(311.46)^2}{34}$$

$$\sum y^2 = 4922.98 - \frac{97007.33}{34}$$

$$\sum y^2 = 4922.98 - 2853.15$$

$$\sum y^2 = 2069.83$$

The sum of square deviation of the control class is 2069.83.

T-Counted

$$t = \frac{Mx - My}{\sqrt{\left(\frac{\sum x^2 + \sum y^2}{Nx + Ny - 2}\right)\left(\frac{1}{Nx}\right) + \left(\frac{1}{Ny}\right)}}$$

$$t = \frac{22.25 - 9.16}{\sqrt{\left(\frac{3130.71 + 2069.83}{33 + 34 - 2}\right)\left(\frac{1}{33}\right) + \left(\frac{1}{34}\right)}}$$

$$t = \frac{13.09}{\sqrt{\left(\frac{5200.54}{65}\right)\left(\frac{67}{1122}\right)}}$$

$$t = \frac{13.09}{\sqrt{(80.00)(0.05)}}$$

$$t = \frac{13.09}{\sqrt{4}}$$

$$t = \frac{13.09}{2}$$

$$t = 6.54$$

Based on the computation above, it could be determined that the t-counted of the research is 6.54.

Testing Hypothesis

The testing hypothesis is used to determine whether the treatment was improved. There are two criteria for testing the hypothesis. If the t-counted is higher than the t-table, the hypothesis is accepted. In other words, using the Reciprocal Teaching strategy is effective to improve students' reading comprehension in the tenth grade of SMA Negeri 1 Sojol. Otherwise, if the t-counted is the same or lower than the t-table, the hypothesis is rejected, or using the Reciprocal Teaching strategy is not effective to improve students' reading comprehension.

To obtain the t-table and determine the significant difference between t-counted and t-table, the researcher needs to find out the critical t-table. To find out the critical t-table, the researcher computed the degree of freedom (df) with a two-tailed significance level of 0.05. The calculation as follows:

Experimental Class (N_x) = 33

Control Class (N_y) = 34

$$df = N_x + N_y - 2$$

$$df = 33 + 34 - 2$$

$$df = 65$$

Based on the calculation above, 65 is not listed in the t-table degree of freedom. Therefore, the researcher applied the interpolation formula by Gujarati (1995) to find out the t-table value. The formula as follows:

$$I = \frac{a}{b} \times c$$

In which:

I = interpolation

a = the subtraction of the df obtained from the students' number in the sample and df whose figure precedes right before df obtained on the table of the critical values of students' distribution (t).

b = the deviation of two df whose figure precedes and comes after the degree of freedom on the table of critical values of the students' distribution (t).

c = the deviation of values of df in b.

Level of significance = 0.05

$$df = (60) = 1.671$$

$$df = (120) = 1.658$$

$$a = 120 - 65 = 55$$

$$b = 120 - 60 = 60$$

$$c = 1.671 - 1.658 = 0.013$$

$$I = \frac{a}{b} \times c$$

$$I = \frac{55}{60} \times 0.013$$

$$I = \frac{0.715}{60}$$

$$I = 0.0119$$

$$df = (65) = 1.671 - 0.0119$$

$$df = (65) = 1.659$$

$$t\text{-table} = 1.659$$

After analyzed the t-counted and t-table, the researcher found that the t-counted value is 6.54 while the t-table value 1.659. It shows that the t-counted is higher than the t-table. Based on the results, the hypothesis of the research is accepted. The researcher concludes that using Reciprocal Teaching strategy as a teaching method is effective to improve reading comprehension of the tenth grade students' of SMA Negeri 1 Sojol.

DISCUSSION

The results indicates that using the Reciprocal Teaching strategy effectively improves students' reading comprehension. This strategy helps students to understand the text that are discussed in class. Students can predict the content of the text by only seen the picture and the title, identify the unfamiliar words, and make questions that relevant to the text, also make summaries that helps students to reveal the main idea and facts of the material by using their own language.

As Yulianti & Setiawan (2019) following statement that the Reciprocal Teaching is an instructional approach designed to improve reading comprehension in which the students are encouraged to use reading strategy. The Reciprocal Teaching strategy was effective when utilized for reading comprehension. After distributed the test, implemented the treatment to the experimental group, calculated and finding the data of both groups, the purpose of this research is indicates achieved. In

the pre-test, the mean score of experimental group is lower than the control group, while in the post-test, the mean score of the experimental group is higher than the control group.

From the research conducted in class, the researcher found that from the 4 stages of the Reciprocal Teaching strategy, the most challenging stage for students is the four stage, which is summarizing stage, because the students have problem dealing with findings or identifying the main idea and several students' still did not know how to make summary, after giving explanation and example, slowly but surely the students' making progress. Summarizing stage plays an important role in determining the success of students' reading comprehension because if students can summarize what they have been read, it means that they understood the text.

After the researcher conducted the treatment, the students' reading comprehension could be categorized as improving, because the students could make the text more comprehensible by doing the stages of the strategy and also the strategy emphasized student centered, so could make the students became active in a group discussion. It is indicated by the improvement in the mean score of post-test in the experimental group (77.23) relative to the mean score of the control group (74.71). The t-counted (6.54) is also higher than the t-table (1.659). Therefore, the researcher concludes that using Reciprocal Teaching strategy is effective to improve reading comprehension for the tenth grade students at SMA Negeri 1 Sojol.

There are two hypothesis in this research: Alternative hypothesis (H_a) that using Reciprocal Teaching Strategy is effective to improve reading comprehension of the tenth grade students of SMA Negeri 1 Sojol, and Null hypothesis (H_0) that using Reciprocal Teaching Strategy is not effective to improve reading comprehension of the tenth grade students of SMA Negeri 1 Sojol. Finally, based on the research result, using Reciprocal Teaching Strategy is effective to improve reading comprehension of the tenth grade students of SMA Negeri 1 Sojol, and it can be concluded that the alternative hypothesis (H_a) is accepted and the null hypothesis is rejected.

CONCLUSION

Through the research data that has been collected, it could be concluded that using Reciprocal Teaching strategy are effectively to improve students reading comprehension. The researcher takes advantage that exist in this strategy, and also minimize the disadvantage of the Reciprocal Teaching strategy, so that this strategy can be used effectively in the learning process. This is evidenced by the results obtained by the two classes, where the experimental class got lower score (54.46) than in control class (65.55). However, after being given the treatment, the results obtained by the two classes differed greatly in the post-test, and the experimental class scores (77.23) were far above the control class (74.71). This is also reinforced by the t-counted (6.54) which is higher higher than the t-table (1.659), which means the hypothesis is accepted. In other words, Reciprocal Teaching strategy is effective to improve reading comprehension of the tenth grade students of SMA Negeri 1 Sojol.

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