

## **THE EFFECT OF USING RECIPROCAL TEACHING STRATEGY ON STUDENTS READING COMPREHENSION AT TENTH GRADE MECHANICAL ENGINEERING SMK N 1 SUMATERA BARAT**

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### **Abstract**

This study aimed to determine the effect of the reciprocal strategy on reading comprehension of mechanical engineering students at SMK N 1 West Sumatra. This research was a quantitative research with the type of pre-experimental research. Sampling data was collected using a random sampling technique. The number of research samples was 25 people with a population of 533 people. The treatment the researchers gave to the sample aimed to determine the effect of reading comprehension outcomes using a reciprocal teaching strategy. The instrument used in collecting data was a learning achievement test with multiple choice and essay types. Data analysis was carried out using Microsoft Excel. Based on the findings of the research that was conducted, it is observed that the t-test value of 33,32 exceeds the critical t-table value of 2.063 at a significance level of  $\alpha = 0.05$ . This indicates a significant difference in students' reading comprehension abilities before and after implementing the reciprocal teaching strategy. This shows that the alternative hypothesis (H1) has been accepted, whereas the null hypothesis (Ho) has been rejected.

### **Key words**

Reciprocal Teaching Strategy, Reading Comprehension

### **Introduction**

Reading is a fundamental skill that is crucial to students' academic success. In an increasingly interconnected world, reading and comprehending English texts is essential as English is widely used in education, research, and professional settings.

Reading skill is one of the most critical aspects of learning a language, especially learning English as a foreign language. Reading is one of the factors that can contribute to a students' success in learning English as a foreign

language, making reading a crucial subject that students' must acquire. Reading comprehension is a critical component of academic success and is essential for individuals to acquire new knowledge and communicate effectively in various contexts. However, many students' need help with reading comprehension, leading to poor academic performance and limited personal and professional growth opportunities. Patel and Jain (2008) state that reading is the most beneficial and essential skill for people, this ability is more valuable than speaking and writing.

Students usually need help in learning a language. Therefore, teachers must use effective strategies in teaching reading to attract students' attention and focus on paying attention to their teacher. Grabe and Stoller (2002) state that students' must be taught how to use specific strategies to understand the text when they learn to read. So teachers must use interesting strategies and try many alternatives that interest students' in learning to read.

The researcher found some problems with students related to reading comprehension ability when the researcher conducted PLK. First, the student needed more motivation and interest in reading activities. The student felt it took more work to identify and support the text main idea in this case. Second, several students' were more preoccupied with other activities than with the instruction. Therefore, the instructing and learning process cannot operate effectively. Moreover, many students' feel that reading English text is a monotonous and boring activity because the text they are reading is unrelated to their interests.

Educators have employed various strategies to enhance students' reading comprehension to address this issue, such as the reciprocal teaching strategy. Reciprocal teaching is a highly effective way to teach comprehension strategies (Miller and Veatch, 2011). Reciprocal teaching is a comprehension strategy that involves students' working collaboratively to construct meaning from texts by predicting, questioning, clarifying, and summarising the text. In this teaching strategy, students' convey information to their peers as instructors. In the meantime, the teacher functions more as a role model who transforms into a facilitator and guide. Therefore, reciprocal instruction can be an effective strategy for enhancing students' reading comprehension.

Reciprocal teaching has improved reading comprehension skill among students' of all ages and ability levels. However, there is still a need to explore the effectiveness of this strategy in specific contexts and with different populations.\

Based on the problem above, the researcher conduct a pre-experimental research entitled "The Effect of Using Reciprocal Teaching Strategy on Reading Comprehension at Tenth Grade Mechanical Engineering SMK N 1 Sumatera Barat."

### **Literature Review**

Reading comprehension is the ability to understand and make meaning from written text. Koda in Grabe (2009) states that comprehension is when readers dig and relate information from the text with what they already know. Through reading comprehension, people can get information from the written text that they have read.

According to Woolley (2011), reading comprehension is the process of deriving meaning from text. The objective is to acquire an overall comprehension of what is described in the text instead of understanding individual words or sentences. That statement is also supported by Horowitz (2014), states that reading comprehension is a complex cognitive process that requires the reader to be intentional and deliberate while monitoring the words and their meanings as they are read. Therefore, they can scan the text, comprehend its meaning, and construct sentences.

reading comprehension is a fundamental requirement for access to learning; it is one of the primary instruments for ensuring the exercise of a responsible, critically minded individual who actively participates in the society in which they develop (Roldan, 2019). reading comprehension is vital for acquiring knowledge, academic success, career advancement, critical thinking, empathy, personal growth, and effective communication. Developing and honing reading comprehension skills can significantly enhance an individual's overall learning experience and contribute to their success in multiple areas of life.

According to Foster and Ratoloni (2008), reciprocal teaching is an instructional strategy in which students can share their learning experiences and encourage one another to think. Reciprocal teaching is a comprehensive, research-based instructional strategy that fosters active and collaborative learning to enhance students' reading comprehension skills.

According to Brown & Palincsar in Doolittle, Hicks, Triplett, Nichols, & Young (2006), reciprocal teaching is a method of instruction based on modeling and guided practice in which the instructor first models a set of reading comprehension strategies and then gradually cedes responsibility for these strategies to the students. Precisely, reciprocal teaching consists of three main components: (a) The teaching and learning of specific reading comprehension strategies. (b) The dialogue between an instructor and students in which the instructor models why, when, and where to use these reading comprehension strategies. (c) The appropriation of the role of the instructor by the students

Jumrah (2019) conducted research entitled *The Effectiveness of Reciprocal Teaching on Students' Competence in Reading Skill*. The students work cooperatively with the four steps of reciprocal teaching, namely predicting, questioning, clarifying, and summarizing. Implementing the reciprocal teaching method changed the students' competence in reading skills. The improvement of mean scores proved that the pre-test of the experimental class 68 became 77 in the post-test, and the mean scores of the pre-test in the control class 63 became 74 in the post-test. It showed an improvement which indicated that implementing reciprocal teaching effectively improved students' competence in reading skills.

Masita (2021) conducted research entitled *The Use of Reciprocal Teaching Technique to Improve Reading Comprehension*. The use of the reciprocal teaching method resulted in improved performance on the part of the students when reading narrative content. The post-test results show that students' overall performance has improved since the initial test. Reciprocal teaching can be proposed to teachers as a solution to a new concept based on the value of growing points, and this method can assist students in making use of their capabilities in the reading skill of narrative material.

Nirma Herlia (2017) conducted research entitled *The Use of Reciprocal Strategy in Teaching Reading Comprehension*. She used a quasi-experimental research design that involved 30 second-grade students at senior high school 1

Riau. The result of this research the results of the post-test administered to students whose education included the utilization of the reciprocal teaching approach revealed that the students' reading comprehension had improved due to the implementation of the reciprocal teaching method. The scores of those in the experimental group were significantly higher than those in the control group. The students' comprehension was strengthened by implementing an approach known as reciprocal teaching improved. Because the comprehension indicators used in this study were based on students' graduate competency, the utilization of a reciprocal technique may prove advantageous for the students when they are subsequently required to take comprehension examinations such as the National Examination.

### **Research Method**

This is pre-experimental research that consists of only one group pre-test and post-test. This research is using quantitative method. The location of this research is SMK N 1 Sumatera Barat with the mechanical engineering 2 students' as the subject with the total sample 25 students.

In this research, the researcher used a single instrument, the reading test, for this research. The test was given by the teacher to the students to determine their scores. The research instrument consisted of multiple-choice questions and essays. Pre-test and post-test were administered to the students once. The pre-test assessed the student's reading comprehension before any treatment was given. The post-test measured the improvement in students' reading comprehension after the treatment was provided.

### **Findings and Discussion**

#### **1. The Students' Pre-test Score**

The pre-test was carried out at the very first meeting before any treatment was administered. Students are given a test known as a pre-test to determine whether they have already learned the content that will be taught to them before the material is presented to them.

**Table 1. Classification of Students' Pre-test Score**

No	Score	Classification	frequency	Percentage
1	80-100	Good	0	0%

		to Excellent		
2	60-79	Average to Good	6	24%
3	50-59	Poor to Average	15	60%
4	0-49	Poor	4	16%
Total			25	100%

According to Table 1, it is showed that only 6 students (24%) received grades of average to good, 15 students (60%) received grades of poor to average, and 4 students (16%) received grades of poor. It was also measurable from the table that none of the students received grades ranging from good to excellent.

The pre-test data above showed that students are getting an average score from 50 to 60. The score is still below the KKM of English subjects in SMK N 1 Sumatera Barat, which is 75. From the table above, there were 24 students with scores below the KKM, and only one got a 75. It can be concluded that the students' reading comprehension achievement still needs to improve.

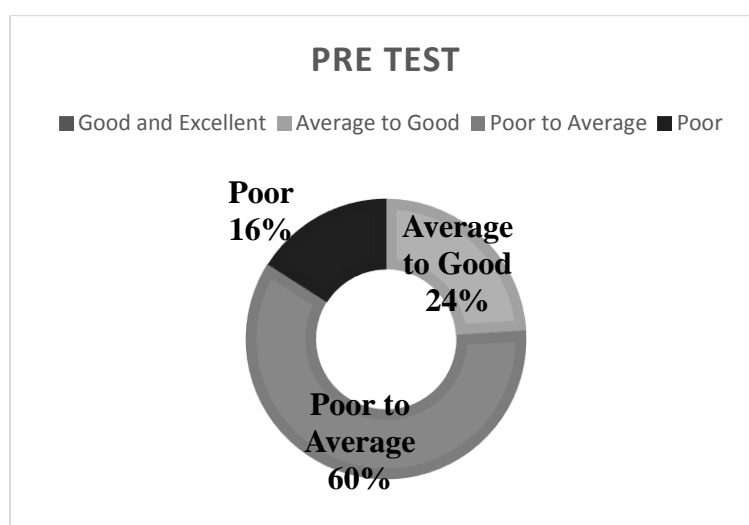


Figure 1. Students' Pre-test Scores Chart

## 2. The Students' Post-test Score

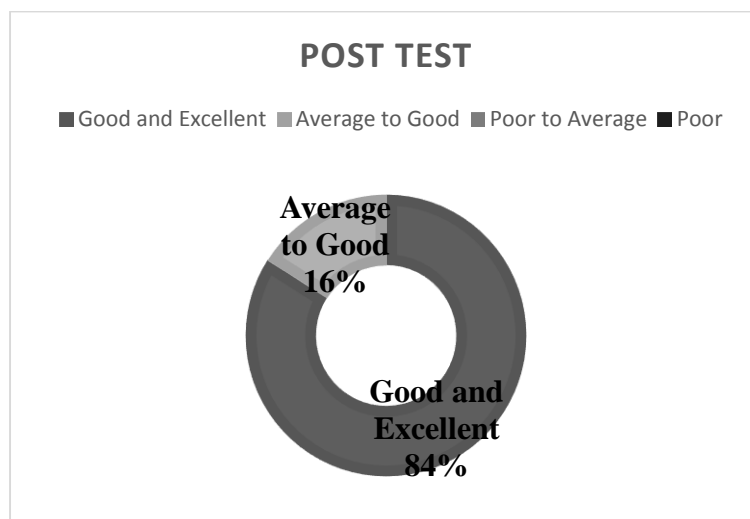
the researcher continued the second meeting by giving a post-test to analyze the impact of the reciprocal teaching strategy on the mechanical mechanic student's final score.

**Table 2. Classification of Students' Post-test Score**

No	Score	Classification	frequency	Percentage
1	80-100	Good to Excellent	21	84%
2	60-79	Average to Good	4	16%
3	50-59	Poor to Average	0	-%
4	0-49	Poor	0	-%
Total			25	100%

According to the data presented in Table 2, it can be observed that a majority of the students, precisely 21 Students' or 84% of the total, achieved grades ranging from good to excellent. On the other hand, a smaller proportion of the students, specifically 4 students or 16% of the total, obtained grades ranging from average to good. According to the data presented in the table above, it can be observed that a total of 25 students achieved scores surpassing the minimum qualifying criteria (KKM). It can be conclude that after the treatment were administered to the students, the students score had significantly improvement.

Based on the provided pre-test and post-test scores and percentages in the table above, it can be inferred that the post-test percentage scores are higher than the pre-test percentage scores.

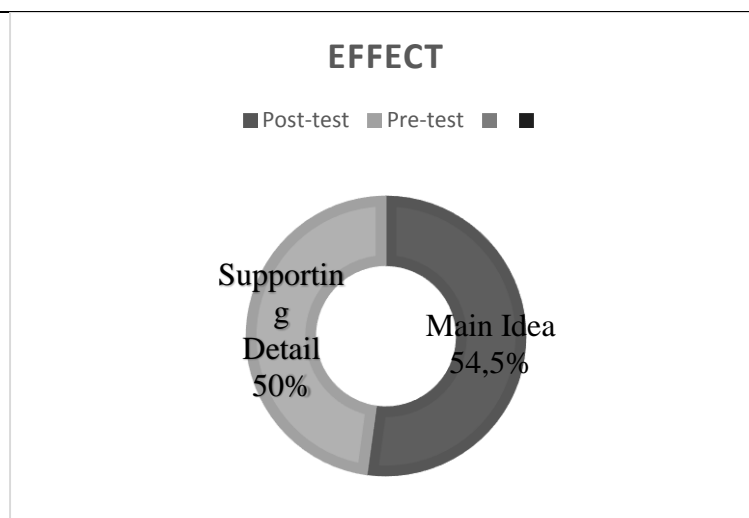


**Figure 2. Students' Post-test Scores Chart**

### 3. The Effect of Using Reciprocal Teaching Strategy on Reading Comprehension

**Table 3. The Effect of Using Reciprocal Teaching Strategy on Reading Comprehension**

Type	Mean Score		Effect of RTS on Reading Comprehension (improvement)
	Pre-test	Post-test	
Main Idea	55	85	54.5%
Supporting Detail	56	84	50%



**Figure 3. The Effect of Using Reciprocal Teaching Strategy Chart**



The figure shows an observed effect, specifically improving students' reading comprehension. The improvement in understanding the main idea was 54.5%, while the improvement in comprehending supporting ideas was measured at 50%. The reciprocal teaching strategy can potentially improve students' reading comprehension skills, specifically in terms of identifying main ideas and supporting ideas.

As indicated in the table above, a significant difference was observed in the average score of students' reading comprehension related to the main idea when comparing the pre-test and post-test. The data analysis indicates an improvement in the mean score of the students from the pre-test to the post-test. Before implementing the treatment during the pre-test phase, the average score for the main idea was 55, while the supporting details showed an average score of 56. After administering the treatment, the average score for the main idea was found to be 85, while the supporting detail got an average score of 84.

#### 4. T-Test of the Students in Reading Comprehension

Reading Comprehension	T-test	T-table	Comparison	Classification
Pre-test and Post-test score	33,32	2,063	T-Test > T-Table	Significantly different

Based on the data presented in the table, it can be concluded that the calculated t-test value exceeds the critical t-table value ( $T\text{-Test} > T\text{-Table}$ ). The result of T-test was 33,32 and the result of T-table was 2,063. The results indicate a substantial difference in mechanical engineering students' reading comprehension skills before and after implementing the reciprocal teaching strategy. This suggests that the alternative hypothesis ( $H_1$ ) has been accepted, while the null hypothesis ( $H_0$ ) has been rejected.

#### Conclusion

The research on the effect of using the reciprocal teaching strategy on reading comprehension has produced valuable insights into the potential benefits of this innovative approach. The findings from various studies suggest

that reciprocal teaching is an effective strategy for enhancing students' reading comprehension skills, fostering critical thinking abilities. Students engaged in reciprocal teaching demonstrated improved comprehension and a more remarkable ability to transfer these skills to other subject areas.

Furthermore, the strategy proves advantageous for students struggling with reading difficulties, providing them with personalized support and building their confidence as active learners. Additionally, the collaborative nature of reciprocal teaching contributes to a positive classroom environment, encouraging active participation and developing essential communication and social skills. The researcher highlights reciprocal teaching as a promising strategy to elevate students' reading comprehension.

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