



## IMPROVING READING COMPREHENSION THROUGH RECIPROCAL TEACHING TECHNIQUE

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### ABSTRACT

This study investigated the effectiveness of the reciprocal teaching method in enhancing students' reading comprehension. Employing a quasi-experimental quantitative design, it utilized descriptive texts as instructional materials and analyzed data through pre- and post-tests using JASP software. Normality test results showed significance values of 0.083 (pre-test) and 0.735 (post-test), indicating normally distributed data. Homogeneity tests yielded significance values of 0.849 and 0.108, suggesting equal variances between groups. An independent samples t-test revealed no significant difference in pre-test scores ( $p = 0.383$ ), but a significant improvement in post-test results ( $p < 0.001$ ), highlighting the positive influence of reciprocal teaching on reading comprehension and metacognitive skills. Conducted at a junior high school in Banyuwangi, the study involved 30 students 16 in the experimental group and 14 in the control group. In addition to assessing instructional outcomes, the research also explored the broader educational benefits of the method.

**Keywords:** *Reading Comprehension, Reciprocal Teaching Technique*

### 1. INTRODUCTION

Individuals engage in reading for diverse purposes such as problem-solving, acquiring knowledge, and personal enjoyment. Within the realm of language acquisition particularly English vocabulary proficiency is fundamental to developing robust reading comprehension skills (Ananda, Pambayun, & Husna, 2025; Arroba & Acosta, 2021; Jaya et al., 2025). Reading also plays a pivotal role in shaping students' intellectual development, influencing not only their cognitive abilities but also their values, attitudes, and behaviors. To fully grasp and interpret written texts, a high level of comprehension is indispensable (Elda & Rezeki, 2022; Fadilah et al., 2023; Kafarina et al., 2023).

Academically, reading is a complex cognitive task involving the decoding of symbols and the interpretation of textual meaning to fulfill specific objectives, such as discerning the author's intent (Carter, 2023; Nation & Waring, 2019). Scholars have emphasized that reading is a meaning-making process, requiring the integration of new information with existing cognitive framework an essential component of skilled comprehension (Dewi, Tahrur, & Firdaus, 2025). Effective reading, therefore, entails active engagement with the text and the application of prior knowledge, enabling students to extract and construct meaning (Elda & Rezeki, 2022).

Descriptive texts are commonly used to cultivate reading comprehension, offering

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vivid imagery and detailed information that stimulate visualization and textual interaction (Anwar & Januar, 2018). These texts support learners in deciphering meaning, identifying significant details, and connecting content with previous experiences (Lay, Misa, & Napitupulu, 2024). Such engagement promotes critical reading skills, including inference-making, main idea identification, and vocabulary enrichment, which are integral to advanced comprehension (Mundhiyanti, Nur'aini, & Nugrahani, 2023).

Among the numerous pedagogical strategies identified to improve reading comprehension, reciprocal teaching stands out as a scaffolded instructional model that incorporates key strategies predicting, questioning, clarifying, and summarizing (Namaziandost et al., 2019). This method fosters active involvement and elevates metacognitive awareness, equipping students with accessible tools for understanding texts (Paludo & Montresor, 2024; Suwannaphima & Vibulphol, 2023). The present study extends existing theoretical frameworks by investigating the impact of reciprocal teaching on eighth-grade students' reading comprehension at a junior high school in Banyuwangi, Indonesia. Focusing on the four core strategies, the research evaluates not only cognitive gains but also the potential of these techniques to enhance learner engagement and academic achievement. The results aim to offer empirical support for the application of reciprocal teaching in secondary-level education.

## 2. LITERATURE REVIEW

### 2.1 Reading Comprehension Skill

Generally, reading is a dynamic and interactive activity through which people obtain meaning from written materials. It entails recognizing letters, creating words, and comprehending the meaning, as well as more advanced skills such as analyzing and assessing information. Napitupulu (2023) In her study, she describes reading as a dynamic and interactive process that engages readers in anticipating content, posing questions, and confirming the accuracy of information. It not only assists individuals in gaining knowledge and exploring ideas, but it also allows them to engage with people from various cultures and perspectives. Reading, when viewed from a

psycholinguistic perspective, is more than just a visual activity. According to Navaie (2018), it involves both visual (textual) and non-visual input (the reader's background knowledge, linguistic understanding, and life experience). On the other hand, reading comprehension is generally understood as the capacity to construct meaning from textual input. Within the reading context, it involves the cognitive process of interpreting, analyzing, and understanding written literature. Cited from Anwar and Januar (2018), reading comprehension refers to the cognitive act of deriving and building meaning at the same time, achieved through active engagement and interaction with written texts.

Based on previous literature, reading comprehension is divided into three progressive levels, namely literal, inferential, and evaluative (Elda & Rezeki, 2022). Each level of reading comprehension requires cognitive improvement to engage and interact with the text. According to Schünemann, Spörer, & Brunstein (2013), readers must first master literal comprehension, which involves recognizing and recalling explicitly stated information, relying on word recognition and sentence understanding (Cockerill, Thurston, O'Keeffe, & Chiang, 2025). Building on this, inferential comprehension enables readers to go beyond the surface by connecting textual details with prior knowledge to interpret implied meanings (Thurston, Cockerill, Chiang, Taylor, & O'Keeffe, 2020). The highest level, evaluative comprehension, challenges readers to analyze, critique, and connect the text to their own experiences in order to generate new insights and perspectives (Boudah, 2018).

### 2.2 Descriptive Text

According to Anwar and Januar (2018), descriptive text is a text that provides detailed descriptions of a certain person, place, or item so that the reader may clearly perceive the subject. It focuses on certain traits and employs rich sensory language to create a vivid image in the reader's imagination (Napitupulu, 2023). Similarly, in other study define descriptive text as a text that giving information about how something appears, generally utilizing adjectives, sensory expressions, and figurative language to aid visualization and engagement

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(Lay, Misa, & Napitupulu, 2024). So, based on the characteristics mentioned, descriptive text is especially beneficial for reading comprehension improvement.

**2.3 Reciprocal Teaching Technique**

Nurdianti, Rosita, and Fadloeli (2019), highlight that reciprocal teaching serves as an effective instructional method that fosters learner autonomy by promoting the use of metacognitive reading strategies rather than solely relying on cognitive processes. Based on writings she quoted from Palincsar and Brown published in 1984, reciprocal teaching involves the application of four core strategies designed to enhance reading comprehension: making predictions, seeking clarification, generating questions, and summarizing key information. The predicting component encourages readers to form logical expectations about the text's content by interpreting contextual cues, allowing them to anticipate forthcoming information or grasp the central theme (De Wilde et al., 2020). Then, clarifying helps students deal with unfamiliar vocabulary or complex passages to resolve confusion and ensure overall comprehension, includes identifying difficult words or recognizing when the main ideas are unclear. Next, questioning fosters critical thinking by prompting students to ask in-depth questions about the text, which encourages analysis rather than simple recall (Nobutoshi, 2023). Finally, summarizing requires students to identify and synthesize the main ideas and key points, then express them in their own words, which enhances their understanding and retention of the material (Ismalinda et al., 2023). These four strategies work together to build students' independent reading skills and deepen their engagement with the text.

The implementation of this technique includes several stages. The first stage is explicit modeling, where the teacher leads the entire class in practicing each strategy in a clear, direct, and structured manner (Cockerill, Thurston, O'Keeffe, & Chiang, 2025). In the second stage, students engage in guided group work, during which they are divided into small groups to practice each strategy individually, while the teacher still controls the rhythm. After practicing, students reconvene to share how they applied the strategies with the class (Hashemi, 2021). In the subsequent stage

(independent group work), each learner assumes a designated role, such as predictor, questioner, clarifier, or summarizer, and leads their group's discussion accordingly. During this phase, the teacher adopts a supportive role, offering guidance when necessary (Nurdianti, Rosita, & Fadloeli, 2019). Finally, in the individual work stage, students are expected to absorb the strategies and will be able to apply them while working independently on their personal reading and homework (Navaie, 2018).

Apart from the characteristics mentioned above, the reciprocal teaching technique has advantages and disadvantages when implemented. In terms of advantages, the role-play process carried out during the learning process encourages active learning (Kusuma, 2023), while small group discussion activities provide cooperative learning (Arisman & Haryanti, 2019). This technique is also designed to improve reading comprehension with metacognitive strategies to better understand and retain information. The application of this technique encourages the growth of students' critical thinking abilities by engaging them in consistent practice of core strategies, including anticipating content, posing inquiries, seeking clarification, and synthesizing key ideas (Anwar & Januar, 2018).

One limitation of the reciprocal teaching technique is the relatively extended time needed to observe significant outcomes, particularly during the role-playing stage. In addition to time constraints, the success of this strategy also depends on the quality of participants' engagement during discussions, as well as both students' and teachers' comprehension of the method itself, and students' reading skill.

Despite its limitations, empirical findings indicate that the implementation of reciprocal teaching contributes to improved reading comprehension among students. These findings serve as the foundation for the present study. The first research conducted in 2011, the results revealed that 68 participants classified as low-proficiency learners experienced a notable improvement in reading comprehension skills. This conclusion was drawn from the results of the paired sample t-test and the comparison of mean scores

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between the pre-test and post-test within the experimental group, which revealed a mean difference of approximately 11.765, indicating a substantial improvement. Based on these statistical findings, the researcher accepted the alternative hypothesis. The findings confirmed a statistically significant difference in students' reading comprehension performance between the pre-intervention and post-intervention phases. These results provide strong evidence that the reciprocal teaching strategy contributed meaningfully to enhancing students' understanding of expository texts.

Secondly, The study included 76 participants aged between 18 and 35, who were randomly allocated to either an experimental group or a control group. Statistical analysis of post-test data revealed that students exposed to the reciprocal teaching strategy demonstrated a significant improvement in reading comprehension compared to those in the control group (Navaie, 2018). Finally, the study was carried out among ninth-grade junior high school students, utilizing narrative texts as the primary instructional material. An examination of students' scores on the pre-test and two subsequent post-tests revealed that the mean score on the pre-test was 52.57. This increased to 63.14 on the first post-test and further to 71.71 on the second. These results indicate a substantial improvement in student achievement following the application of the reciprocal teaching strategy (Nurdianti, Rosita, & Fadloeli, 2019).

Drawing from the aforementioned studies, this study aimed to evaluate how effective reciprocal teaching strategies are in improving reading comprehension among eighth-grade students at the junior high school level. While there are some distinctions—for instance, this study utilized descriptive texts as the instructional medium—the main objective of this study was to evaluate the effectiveness of reciprocal teaching in enhancing students' reading comprehension skills, and extent to which it contributes to students' improvement. In contrast, the three prior studies primarily focused on the outcomes of implementing the strategy, without exploring its underlying influence on the development of reading comprehension skills.

**3. METHODS*****Research Design***

This study employed a quasi-experimental design within a quantitative research framework, utilizing structured pre-tests and post-tests as instruments for data collection. A quasi-experimental approach is a form of empirical investigation aimed at estimating the causal relationship between a specific intervention and its observed outcomes (Hastjarjo, 2019). Even though it is similar to the experimental methodology, assignments in this methodology are structured (Gopalan, RosinGer, & Ahn, 2020). The selection of this quasi-experiment refers to the conditions of the research field that are in accordance with the characteristics of this methodology, where it does not allow for random class settings (Miller, Smith, & Pugatch, 2020).

***Data Collection Method***

In this research, tests were given to research participants to obtain data. The test given is in the form of multiple choices, this form was chosen to shorten assessment time and multiple choices form commonly used in reading comprehension test. This phase consists of two key assessments: a pre-test and a post-test. The pretest serves to assess students' baseline comprehension of descriptive texts prior to the implementation of instructional strategies, whereas the post-test is administered to measure their progress following the implementation of the the technique used. Furthermore, regarding the test given, content validity has been carried out to ensure that the instrument is in accordance with the learning material (Mundhiyanti, Nur'aini, & Nugrahani, 2023) provided during the technique implementation process.

***Data Analysis Procedures***

The statistical analysis was performed using JASP, a software tool designed for data analysis in research contexts. This tool facilitated the examination of normality, homogeneity, and other parametric test assumptions. The analysis followed a series of steps, beginning with the assessment of data normality through the Shapiro-Wilk test. The selection of this test was based on its effectiveness in handling small sample sizes, specifically those involving fewer than 50 subjects and its sensitivity to deviations from

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normal distribution, making it appropriate for the characteristics of the data used in this research (Majid & Qadar, 2021). In the normality assessment, the data are considered to be normally distributed when the significance value (p-value) exceeds 0.05 or approaches 1. (Sari, Hasanah, & Nursalman, 2024).

Subsequently, Levene's test was applied to determine whether the variances between the control and experimental groups were statistically equivalent. This test is a step that must be carried out before the parametric test (Waruwu, Pu`at, Utami, Yanti, & Rusydiana, 2025). At this stage, the assessment of data homogeneity is based on the p-value result. A p-value greater than 0.05 indicates that the variance across groups is considered homogeneous (Sari, Hasanah, & Nursalman, 2024).

To conclude the analysis, an independent t-test was employed to compare the post-test outcomes between the experimental and control groups, as well as to examine the changes in scores from the pre-test to the post-test within both groups. This inferential test is designed to assess whether the difference in mean scores between two independent groups is statistically significant. The interpretation of results is guided by the p-value: a p-value exceeding 0.05 suggests that the null hypothesis ( $H_0$ ), which posits no meaningful difference, cannot be rejected. However, if the p-value is less than or equal to 0.05, the null hypothesis is rejected, indicating a significant difference exists between the groups (Kim & Park, 2019).

#### 4. RESULTS AND DISCUSSION

##### *Result*

This section presents the results of the data analysis, which are intended to help address the research objectives. The outcomes are displayed in tables and include the findings from the normality test, homogeneity of variance test, and parametric statistical analysis. The participants comprised 30 eighth-grade students from a junior high school, divided into a control group of 14 students and an experimental group of 16 students. The

analysis begins with the results of the parametric tests, which are summarized as follows.:

**Table 1. Result of Normality Test**

Residuals	W	p
Pre-test	0.938	0.083
Post-test	0.977	0.735

(Source : Choo, Eng, & Ahmad, 2011)

The results of the normality test, assessed through the Shapiro-Wilk method, are presented in the table above. This test evaluates whether the distribution of residuals from both the pre-test and post-test scores adheres to a normal distribution. The W statistic indicates the calculated test value, while the p-value reflects its statistical significance. According to the analysis, the pre-test yielded a W value of 0.938 with a corresponding p-value of 0.083, and the post-test produced a W value of 0.977 with a p-value of 0.735. Since both p-values exceed the 0.05 threshold, it can be concluded that the residuals from both data sets follow a normal distribution, fulfilling the assumption of normality for further parametric analysis.

**Table 2. Result of Homogeneity Test**

	F	df <sub>1</sub>	df <sub>2</sub>	p
Pre-test	0.037	1	28	0.849
Post-test	2.760	1	28	0.108

(Source : Choo, Eng, & Ahmad, 2011)

The data in the table above indicate that the assumption of equal variances is satisfied, as the significance levels for both the pre-test and post-test are above the 0.05 threshold. For the pre-test, the F value was 0.037 with a corresponding p-value of 0.849, whereas the post-test yielded an F value of 2.760 and a p-value of 0.108. These findings suggest no significant variance differences between the control and experimental groups. Therefore, it is appropriate to proceed with the independent samples t-test, the results of which are presented in the following table..

**Table 3. Result of Independent sampe t-test**

	t	df	p
Pre-test	-0.886	28	0.383
Post-test	-7.257	28	< 0.001

Drawing from the independent samples t-test outcomes shown in the table, the evaluation was divided into two distinct phases: an initial pre-test and a subsequent post-test. During the pre-test phase, conducted prior to the intervention in the experimental group, the results indicated no significant difference in reading comprehension between the control and experimental groups, thus supporting the null hypothesis ( $H_0$  accepted). This conclusion is drawn from a t-statistic of -0.886 and a corresponding p-value of 0.383, which exceeds the conventional alpha level of 0.05, indicating no significant difference during the pre-test phase. However, the post-test results show a statistically significant difference between the experimental and control groups, with a t-value of -7.257 and a p-value below 0.001. As this p-value is far less than 0.05, it provides strong evidence that the implementation of reciprocal teaching significantly improved students' reading comprehension outcomes.

### Discussion

Overall, the results demonstrate that the implementation of reciprocal teaching has been shown to significantly enhance students' reading comprehension, as evidenced by the results of the independent samples t-test, which indicated a highly significant difference in post-test outcomes between the experimental and control groups. The experimental group's p-value was below 0.001 well beneath the 0.05 threshold leading to the rejection of the null hypothesis ( $H_0$ ) and affirming the method's effectiveness. This improvement is directly attributable to the structured use of four core reading strategies: predicting, questioning, clarifying, and summarizing. These strategies promote active, reflective reading through a scaffolded and dialogic instructional process (Elda & Rezeki, 2022).

Supporting studies have shown that individual components of reciprocal teaching foster deeper student engagement and enhance metacognitive regulation (Nobutoshi, 2023). Activities such as anticipating textual content, posing questions (Mafarja & Zulnaidi, 2022), and collaboratively clarifying and synthesizing information (Soonthornmanee, 2022) enable students to go beyond surface-level understanding and develop inferential and evaluative comprehension (Posi, 2022). This aligns with earlier findings that underscore the method's role in facilitating meaningful textual interaction and deeper understanding (Malini et al., 2022).

Navaie (2018) similarly reported that learners exposed to reciprocal teaching outperformed peers taught through conventional methods, attributing this to the strategy's emphasis on collaborative meaning-making and learner autonomy. Moreover, the approach proves effective not only in junior high school contexts (Mafarja, Mohamad, Zulnaidi, & Fadzil, 2023), but also in higher education settings (Arrasul et al., 2023), where it supports the development of higher-order thinking skills. By engaging students in structured peer-led activities, reciprocal teaching systematically cultivates both cognitive and metacognitive abilities. The teacher's evolving role from direct instructor to learning facilitator guiding students while progressively transferring responsibility embodies the core principles of instructional scaffolding (Rojabi, 2021).

### 5. CONCLUSION

The findings of this study clearly demonstrate that reciprocal teaching significantly enhances students' reading comprehension, as evidenced by the post-test results showing a p-value below 0.001 indicating a strong effect compared to traditional teaching methods. The effectiveness of this approach lies in its structured use of four core strategies predicting, questioning, clarifying, and summarizing which actively engage students in reading tasks, improve literal and inferential understanding, and strengthen metacognitive skills. Its implementation is particularly suitable for junior high school students, who are developmentally ready to engage in higher-

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order thinking and collaborative learning. The teacher's role as a facilitator further supports learner autonomy through a gradual release of responsibility, aligning with scaffolding principles. Additionally, prior research confirms the method's practicality and positive impact across various educational levels and subject areas.

Given these results, reciprocal teaching is recommended as an effective instructional approach for improving reading comprehension in junior high school and potentially at higher educational levels. Future research should explore its long-term effects, integration with digital platforms, and adaptability across different content areas to maximize its educational impact.

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