

THE EFFECTIVENESS OF TWO STAY TWO STRAY (TSTS) STRATEGY TOWARDS READING COMPREHENSION OF TENTH-GRADE STUDENTS AT SMA YOS SUDARSO METRO

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Abstract

The Two Stay Two Stray (TSTS) cooperative learning approach aimed to improve student participation and involvement during collaborative assignments. The impact of TSTS on the reading comprehension of tenth-grade students at SMA Yos Sudarso Metro was examined in this study. Instruments for the pre-test and post-test were used in a quantitative quasi-experimental approach. Thirty-five students from the experimental class (Pratama 1) and thirty-five students from the control class (Pratama 3) made up the sample, which was selected using cluster random sampling from the population of 137 students. SPSS version 27 was used for data analysis. The results revealed that the experimental class's pre-test mean score was 45.29 (SD = 9.339), while the control class's was 57.97 (SD = 18.883). Then, the control class scored 71.17 (SD = 17.431) on the post-test, whereas the experimental class scored 69.69 (SD = 13.955). A significant value of 0.000 was identified through hypothesis testing, suggesting that TSTS influenced students' reading comprehension. Nevertheless, the second hypothesis provided a significance value of 0.695, indicating that there was no significant distinction between TSTS and conventional teaching. Overall, the study found that while TSTS improved reading comprehension, it did not significantly improve conventional approaches in this aspect.

Keywords: TSTS Strategy, Tenth-Grade Students, Reading Comprehension.

INTRODUCTION

Reading comprehension is a vital skill in students' academic development, involving active thinking to understand and interpret texts (Mardin Silalahi & Yuni Winda Sary, 2020). It is especially important for grade X students in high school (Elleman & Oslund, 2019), yet many struggle with it, which negatively affects their academic performance (Compe, 2018). In Indonesia, senior high school teachers play a key role in improving students' reading comprehension (Hoesny & Darmayanti, 2021). Therefore, many students face challenges such as limited vocabulary, difficulty with complex sentences, and extracting meaning from

context (Lisiana et al., 2021). Additionally, students often rely on problemsolving strategies but neglect global and support strategies that could enhance comprehension (Susilo Adi, 2020). These issues reduce their engagement and understanding of English texts.

In addition, at SMA Yos Sudarso Metro, a preliminary study showed that nearly half of the tenth-grade students scored poorly in reading comprehension, indicating widespread difficulties. Given this, the researcher proposes using the Two Stay Two Stray (TSTS) strategy to improve reading comprehension. The pre-survey mainly assessed general comprehension skills, so this study aims to explore TSTS's effectiveness more deeply. The TSTS strategy encourages active, student-centered learning through collaboration and discussion (Sucihati, 2021). While previous studies have shown TSTS improves academic achievement and engagement, there is limited research on its impact on reading comprehension in EFL settings, especially for tenth graders at SMA Yos Sudarso Metro. Moreover, factors like motivation and classroom interaction, which influence learning outcomes, have been underexplored.

Moreover, this study aims to evaluate how TSTS affects students' reading comprehension, motivation, and participation. Supporting evidence includes (Muchyidin, 2020), who found significant improvements in reading scores using TSTS, and Silalahi and Sary (2020), who reported increased engagement and academic performance. Hasyim et al., (2019) also confirmed TSTS's positive effect on reading comprehension with statistically significant results. The previous research mainly focused on cognitive outcomes and factual texts, with less attention to affective factors or descriptive texts. Then, this study seeks to fill that gap by examining TSTS's impact on descriptive text comprehension in an EFL context, using classroom observations and test score comparisons.

Research on TSTS highlights three key areas: text analysis, reading improvement, and statistical validation. Descriptive texts help students identify structure and key information, fostering critical thinking and collaboration (Osi et al., 2024). Studies consistently show TSTS enhances comprehension and promotes teamwork and information sharing (Muchyidin, 2020; Silalahi and Sary 2020; Hasyim et al., 2019). T-tests have been effectively used to confirm these findings, appropriate for comparing two groups as in this study.

In conclusion, while prior studies provide valuable insights, this research aims to offer a more comprehensive understanding of TSTS by integrating cognitive and collaborative aspects across different text types and learner contexts. Furthermore, there were hypotheses for the first research aim. 1) *Alternative Hypothesis (H_{a1})* means using the Two Stay Two Stray (TSTS) strategy affects reading comprehension for tenth-grade students at SMA Yos Sudarso Metro and 2) *Null Hypothesis (H_{01})* means using the Two Stay Two Stray (TSTS) strategy does not affect reading comprehension for tenth-grade students at SMA Yos Sudarso Metro. Also, there were hypotheses for the second research aim. 1) *Alternative Hypothesis (H_{a2})* means using the Two Stay Two Stray (TSTS) strategy has a significant effect on reading comprehension for tenth-grade students at SMA Yos Sudarso Metro and 2) *Null Hypothesis (H_{02})* means using the Two Stay Two Stray (TSTS) strategy has no significant effect on reading comprehension for tenth-grade students at SMA Yos Sudarso Metro.

METHOD

This study was conducted at SMA Yos Sudarso Metro using a quantitative approach with a quasi-experimental design. The research aimed to examine the effectiveness of the Two Stay Two Stray (TSTS) strategy in improving students' reading comprehension by comparing an experimental group receiving TSTS treatment and a control group taught with conventional methods. Both groups were given pre-tests before the treatment and post-tests afterward to measure changes in reading comprehension (Waruwu, 2023; Andrade, 2021). This design allowed for comparison of outcomes without random assignment, ensuring ethical and practical feasibility. Furthermore the study involved two variables: the independent variable (X) was the use of the TSTS strategy, and the dependent variable (Y) was students' reading comprehension. The independent variable represents the intervention applied, while the dependent variable reflects the outcome influenced by the intervention.

In addition, the population consisted of all tenth-grade students at SMA Yos Sudarso Metro, totaling 137 students across four classes. Using cluster random sampling, three classes with equal numbers of students (35 each) were selected as the sample, totaling 105 students. A lottery method was employed to randomly assign two classes as the experimental and control groups, ensuring fairness and objectivity. Pre-tests confirmed that both groups had comparable reading

comprehension levels before treatment. The instrument used was a reading comprehension test consisting of 40 multiple-choice questions based on descriptive texts aligned with the tenth-grade curriculum. The test assessed various comprehension aspects, including identifying story elements, analyzing messages, responding to content, and rewriting parts of the text (Setiyadi et al., 2019). The instrument was validated by experts and tested for reliability using Cronbach's Alpha to ensure consistency and accuracy. The pre-test was administered to both groups before treatment to establish baseline comprehension levels. The experimental group received three sessions of TSTS-based instruction focusing on descriptive texts, while the control group received conventional textbook-based instruction over the same period. After treatment, a post-test identical in structure to the pre-test was given to both groups to measure learning outcomes. The researcher supervised all testing sessions to maintain consistency and validity.

Moreover, data were analyzed using statistical methods appropriate for quantitative research. Normality tests (Shapiro-Wilk) and homogeneity tests (Levene's Test) were conducted to verify assumptions for parametric analysis. Paired sample t-tests evaluated within-group differences before and after treatment, while independent sample t-tests compared post-test scores between experimental and control groups. These analyses determined the significance of the TSTS strategy's effect on reading comprehension.

FINDINGS AND DISCUSSION

This part presents the results of the study on the effectiveness of Two Stay Two Stray (TSTS) strategy towards reading comprehension of tenth-grade students at SMA Yos Sudarso Metro. The findings are divided into three sections: data description, preliminary analysis, and hypothesis testing. The data description explains the outcomes of the pre-test and post-test in both the control and experimental groups. The preliminary analysis covers normality and homogeneity tests to confirm that the data meet the assumptions for hypothesis testing. Lastly, the hypothesis testing examines whether the use of the TSTS strategy led to a significant improvement in students' reading comprehension.

A. Pre-test Results

A pre-test was administered to both the control and experimental classes to evaluate the students' initial reading comprehension knowledge. The experimental class obtained a mean score of 45.29 with a standard deviation of

9.339, while the control class achieved a mean score of 57.97 with a standard deviation of 18.883.

Table 1 Descriptive Statistics of Pre-Test

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experiment	35	38	30	68	45.29	9.339
Pre-Test Control	35	65	30	95	57.97	18.883
Valid N (listwise)	35					

Source: SPSS Calculation

B. Post-test Results

The post-test was administered to both the control and experimental classes. The mean score in the experimental class is 69.69 with a standard deviation of 13.955, while the control class had a slightly higher mean of 71.17 and a standard deviation of 17.431. Table 2. Descriptive Statistics of Post-Test

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Post-Test Experiment	35	55	40	95	69.69	13.955
Post-Test Control	35	58	40	98	71.17	17.431
Valid N (listwise)	35					

C. Hypothesis Testing

Hypothesis testing was conducted to evaluate the effectiveness of TSTS strategy in reading comprehension. The first hypothesis was tested using the Paired Sample T Test with SPSS, and the second hypothesis was tested using the Independent Sample T Test with SPSS. Before conducting hypothesis testing, researchers compared the average pre-test and post-test scores of the experimental class to determine the improvement after using TSTS strategy in Reading comprehension.

Table 3. The Mean Score of Pre-Test and Post Test in Experimental Class

Group	N	Mean Pre-Test	Mean Post-Test	Mean Different
Experimental	35	45.29	69.69	24.40

The data indicate that the mean scores in the experimental class changed between the pre-test and post-test. The mean score on the pre-test was 45.29, whereas the mean score on the post-test increased to 69.69. The mean of the post-test was higher than the pre-test mean ($69.69 > 45.29$) with a difference of 24.40 points. This indicates that teaching reading comprehension using TSTS strategy contributed positively to students' learning outcomes.

1. First Hypothesis

The Paired Sample T-Test is used to compare the means of two related samples taken from the same group. In this study, the first hypothesis test was the Paired Sample T-Test, which was used to compare the pre-test and post-test scores of the experimental group. The normality test results indicated that the data were normally distributed. The criteria of Paired Sample T-Test that using significant value (Sig.), the statistical hypothesis for first hypothesis as follow:

- a) Alternative Hypothesis (Ha1): there is an effect of using Two Stay Two Stray (TSTS) strategy towards reading comprehension for tenth-grade students SMA Yos Sudarso Metro, accepted provided that the significance value (Sig) is ≤ 0.05 .
- b) Null Hypothesis (H01): there is no effect of using Two Stay Two Stray (TSTS) strategy towards reading comprehension for tenth-grade students SMA Yos Sudarso Metro Is accepted on the condition that the significance value (Sig) is greater than 0.05.

Table 4. Result of Paired Sample T-test

		Paired Samples Test							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2tailed)
					Lower	Upper			
Pair 1	Pretest - Posttest	24.40	16.677	2.819	-22.272	10.814	5.868	34	.000

Based on the table above, it was analyzed that the significance value (2tailed) was 0.000, lower than 0.05 ($\text{sig} < 0.05$). Theoretically, if $\text{sig. (2-tailed)} < 0.05$, the alternative hypothesis (Ha1) was accepted and the null hypothesis (Ho1) was rejected. Therefore, it meant that the first hypothesis (Ha1) was accepted,

indicating that there was an effect of the TSTS strategy on the reading comprehension of the tenth-grade students at SMA Yos Sudarso Metro.

2. Second Hypothesis

The Independent Sample T-Test was a method used to test the average differences between two data sets obtained by researchers from two different groups. Based on the second hypothesis, the Independent Sample T-Test used the post-test score in the experimental class and the post-test score in the control class. The criteria of the Independent Sample T-Test used a significance value (Sig.) > 0.05. The researcher pointed out the alternative hypothesis and null hypothesis as follows:

Second hypothesis:

1. Alternative Hypothesis (H_a^2) significant effect of using Two Stay Two Stray (TSTS) strategy towards reading comprehension for tenth-grade students SMA Yos Sudarso Metro.
2. Null Hypothesis (H_0^2) no significant effect of using Two Stay Two Stray (TSTS) strategy towards reading comprehension for tenth-grade students SMA Yos Sudarso Metro.

Table 5. Result of Independent Sample T-test

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-Test for Equality of Means					95% Confidence Interval of the Difference	
Score		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Score	Equal variances assumed	2.979	.089	.34	68	.695	1.486	3.774	-6.046	9.017
	Equal variances not assumed			.394	64.893	.695	1.486	3.774	-6.052	9.024

Based on the table above, it was analyzed that the significance value (2tailed) was 0.695, greater than 0.05 (sig > 0.05). Theoretically, if sig. (2-tailed) >

0.05, the null hypothesis (H_0) was accepted and the alternative hypothesis (H_a) was rejected. Therefore, it meant that the second hypothesis (H_0) was accepted, indicating that the TSTS strategy had no significant difference in the reading comprehension of the tenth-grade students at SMA Yos Sudarso Metro.

This discussion examined the impact of the Two Stay Two Stray (TSTS) strategy on the reading comprehension of tenth-grade students at SMA Yos Sudarso Metro during the 2024–2025 academic year. The study found that TSTS positively influenced students' reading comprehension, with the experimental group showing notable improvements in skills like identifying main ideas and making inferences compared to the control group receiving conventional instruction. The interactive, collaborative nature of TSTS fostered deeper cognitive engagement and motivation, consistent with prior research (Muchyidin, 2020); Silalahi and Sary, 2020).

However, statistical analysis revealed no significant difference between TSTS and traditional methods, suggesting that while TSTS enhances comprehension, its effectiveness may depend on factors such as student involvement, text difficulty, and classroom conditions (Hasyim et al., 2019). The use of descriptive texts in this study extended previous findings by applying TSTS in an EFL context, supporting skill-based, interactive learning approaches.

The results align with Kagan, (1994) cooperative learning theory and Oxford, (1989) language learning strategies, emphasizing structured peer interaction and active participation. Limitations included reduced effectiveness for students with lower initial proficiency, highlighting the importance of teacher facilitation and contextual factors.

In summary, the TSTS strategy benefits reading comprehension among tenth-grade EFL learners but does not consistently outperform conventional methods statistically. These findings reinforce the value of collaborative instructional approaches while underscoring the need to consider contextual variables to optimize learning outcomes.

CONCLUSION AND SUGGESTIONS

This study examined the effectiveness of the Two Stay Two Stray (TSTS) strategy in improving the reading comprehension of tenth-grade students at SMA Yos Sudarso Metro during the 2024–2025 academic year. The findings indicated

that the TSTS strategy had a positive impact on students' learning outcomes. The experimental group improved significantly from a mean pre-test score of 45.29 to 69.69 in the post-test, while the control group also increased from 57.97 to 71.17. The Paired Sample T-Test confirmed that the improvements within both groups were statistically significant ($\text{sig.} = 0.000 < 0.05$), suggesting that both conventional teaching and TSTS contributed to enhanced comprehension. However, the experimental group achieved a greater overall gain, reflecting the value of collaborative learning in fostering deeper processing, higher motivation, and more active engagement.

Despite these gains, the Independent Sample T-Test revealed no significant difference between the experimental and control groups ($\text{sig.} = 0.695$). This finding implied that although TSTS supported comprehension development, its effects were not substantially greater than those of traditional methods. Such outcomes may have been influenced by contextual variables such as text type, classroom conditions, student participation, and teacher facilitation. Nevertheless, the results confirmed previous studies emphasizing the role of interactive and cooperative strategies in enhancing comprehension skills, while also highlighting that their success depends heavily on implementation and learning context. Overall, the TSTS strategy can be regarded as an effective alternative approach to teaching descriptive texts in EFL classrooms, as it promotes active participation, peer learning, and collaborative knowledge construction, thereby improving reading comprehension when supported by careful text selection, appropriate classroom management, and student involvement.

Based on these findings, several recommendations can be drawn. For English teachers, TSTS is suggested as an alternative instructional method for descriptive texts, provided that texts are carefully selected and student engagement is maximized through proper guidance and classroom management. For students, active participation in group discussions and peer-sharing during TSTS activities is essential to develop comprehension, critical thinking, and inference-making skills. Finally, for future researchers, it is recommended to examine TSTS in various text genres such as narrative or argumentative, with larger or more diverse samples, or in combination with other interactive learning strategies, to gain deeper insights into its effectiveness.

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