



The Effectiveness of Story Mapping Strategy on The Eighth Grade Students' Reading Comprehension Of Narrative Texts

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Abstract

This study aims to investigate the effectiveness of using the Story Mapping Strategy on students' reading comprehension of narrative texts at the eighth grade of SMP Budi Murni 2 Medan. The research employed an experimental design involving two groups, namely the experimental class and the control class. The population initially consisted of 64 students, with 32 students in each class; however, due to student absence during the testing process, the final sample included 62 students, with 31 students in each class. The experimental class was taught using the Story Mapping Strategy, while the control class was taught using the conventional method. The instrument used in this study was a multiple-choice reading test. Data were collected through pre-test and post-test. The results of the normality test showed that the data were normally distributed, and the homogeneity test indicated that the data were homogeneous. Furthermore, the data were analyzed using the independent samples t-test. The results revealed a significant difference between the students' learning outcomes in the experimental and control classes. The mean score of the post-test in the experimental class was 92.10, while in the control class it was 79.68. The result of the t-test showed that the significance value (Sig. 2-tailed) was $0.000 < 0.05$, indicating that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. In conclusion, the use of the Story Mapping Strategy is effective in improving students' reading comprehension of narrative texts. This strategy helps students understand the structure of the story and increases their engagement in the learning process.

INTRODUCTION

Reading comprehension is an essential skill in learning English, involving complex cognitive processes and the ability to construct meaning from written texts (Grabe, 2009; Alderson, 2000). Despite its importance, many students still experience difficulties in understanding narrative texts due to limited vocabulary, lack of background knowledge, and ineffective reading strategies (Snow, 2002). To overcome these problems, appropriate instructional strategies are needed, one of which is the Story Mapping Strategy, which helps students organize story elements such as characters, setting, problems, and resolution to improve comprehension. Previous studies have shown that Story Mapping Strategy can improve students' reading comprehension (Syafii, 2021; Nurrisal & Putri, 2017; Istiqomah, 2022; Pardiana, [2022]; Alkhawarizmi, [2022]).

However, although these studies confirm its effectiveness, they were conducted in different contexts, such as classroom action research designs, different grade levels, and varied school settings, and have not specifically addressed the implementation of Story Mapping Strategy for eighth-grade students in private junior high schools, particularly at SMP Budi Murni 2 Medan; therefore, a clear research gap still exists in this specific context. Based on this gap, this study aims to examine the effect of the Story Mapping



Strategy on the reading comprehension of eighth-grade students in narrative texts at SMP Budi Murni 2 Medan, with clearly defined variables, namely Story Mapping Strategy as the independent variable and students' reading comprehension as the dependent variable.

Furthermore, the hypotheses of this study are formulated as follows: (H_0) states that there is no significant effect of the Story Mapping Strategy on students' reading comprehension of narrative texts, while (H_a) states that there is a significant effect of the Story Mapping Strategy on students' reading comprehension of narrative texts.

METHODS

This study employed a quantitative approach with a quasi-experimental research design. A quantitative approach is a research method used to examine phenomena through numerical data and statistical analysis to test hypotheses (Sugiyono, 2016; Ary et al., 2010; Muijs, 2013). This approach was considered appropriate because the study aimed to investigate the effect of the Story Mapping Strategy on students' reading comprehension of narrative texts. In line with this, quantitative research allows researchers to collect numerical data and analyze it systematically to produce objective and valid conclusions. Therefore, this approach was suitable for measuring the difference in students' reading comprehension between the experimental and control groups.

The research design used was a quasi-experimental design with a pre-test and post-test control group design. This design allows the researcher to compare the learning outcomes of students before and after the treatment between two groups. In this study, the Story Mapping Strategy served as the independent variable, while students' reading comprehension of narrative texts served as the dependent variable. The research was conducted at SMP Budi Murni 2 Medan in the academic year 2025/2026.

The population of this study consisted of all eighth-grade students at SMP Budi Murni 2 Medan. The sampling technique used was purposive sampling based on intact classes, as the researcher selected two existing classes without random assignment. The selection of classes VIII-5 and VIII-7 was based on specific considerations, including the similarity of their average English scores and the recommendation from the English teacher that both classes had relatively equivalent academic abilities. Therefore, VIII-5 was assigned as the experimental class and VIII-7 as the control class, with 32 students in each class. The experimental class was taught using the Story Mapping Strategy, while the control class was taught using conventional teaching methods.

The instrument was tested for validity using the Product Moment correlation formula and for reliability using Cronbach's Alpha coefficient. The results of the instrument trial showed that all 20 items were valid ($r\text{-count} > r\text{-table} = 0.349$). Therefore, no items were discarded. The reliability test indicated that the instrument was highly reliable, with a Cronbach's Alpha coefficient of 0.846, which suggests a high level of internal consistency. Students' reading comprehension scores were calculated using a percentage formula and classified into levels ranging from Excellent to Very Poor. The data analysis was conducted using SPSS version 27. The analysis procedures included descriptive statistics, normality test using Shapiro-Wilk, homogeneity test using Levene's Test, and hypothesis testing using Independent Samples t-test to determine whether there was a significant difference between the experimental and control groups. Additionally, effect size analysis using Cohen's d was employed to determine the magnitude of the effect of the Story Mapping Strategy on students' reading comprehension (Li, 2016).

Regarding the teaching implementation, both the experimental and control classes were taught by the same English teacher to maintain consistency in teaching quality and minimize instructional differences. However, to reduce potential bias such as the Hawthorne effect, the teacher followed a structured lesson plan and was instructed to treat both classes equally, differing only in the teaching strategy applied.

The research procedure consisted of three stages: pre-test, treatment, and post-test. In the pre-test stage, both groups were given a reading comprehension test to determine their initial ability. In the treatment stage, the experimental class was taught using the Story Mapping Strategy, while the control class was taught using conventional methods. In the post-test stage, both groups were given another test to measure their improvement in reading comprehension after the treatment.

RESULTS AND DISCUSSION

The effect of the Story Mapping Strategy on students' reading comprehension of narrative texts was analyzed using descriptive and inferential statistics. The data were obtained from pre-test and post-test results of the experimental and control groups. The research instrument was tested for validity using Product Moment correlation and for reliability using Cronbach's Alpha. Data analysis included descriptive statistics, normality tests, homogeneity tests, independent samples t-test, and effect size analysis.

Table 4.1 Descriptive Statistics

		PretestControl	PretestExpeimental	PosttestControl	PosttestExperimental
N	Valid	31	31	31	31
	Missing	0	0	0	0
Mean		67,42	67,26	79,68	92,10
Median		65,00	65,00	80,00	90,00
Mode		45 ^a	45 ^a	75 ^a	95
Std. Deviation		18,114	18,567	4,069	4,791

Based on Table 4.1, both the experimental and control groups experienced an improvement in reading comprehension scores from the pre-test to the post-test. However, the improvement in the experimental group was substantially higher. The mean score of the experimental group increased from 67.26 to 92.10, while the control group increased from 67.42 to 79.68. In addition, the post-test standard deviation in both groups became much smaller (4.791 and 4.069), indicating that students' scores were more homogeneous after the treatment. This suggests that the Story Mapping Strategy not only improved students' performance but also reduced score variability, meaning that most students achieved consistently high scores. Further analysis shows that the post-test mode of the experimental group was 95, which indicates that a large number of students achieved very high scores. This may suggest a clustering of scores at the upper level (ceiling tendency), meaning that the test may have become relatively easier for students after they were familiar with the narrative structure through the Story Mapping Strategy. In contrast, the control group showed a more moderate improvement with a mode of 75, indicating that their achievement was still more varied.

Table 4.2 Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PretestControl	,108	31	,200*	,964	31	,375
PretestExpeimental	,088	31	,200*	,967	31	,434

Posttest_Control	,105	31	,200*	,946	31	,117
Posttest_Experimental	,074	31	,200*	,974	31	,622

The data met the assumption of normality across all groups, as all significance values are greater than 0.05. Therefore, the data are normally distributed and suitable for parametric statistical analysis.

Table 4.3 Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Value	Based on Mean	1,755	1	60	,190
	Based on Median	1,214	1	60	,275
	Based on Median and with adjusted df	1,214	1	55,404	,275
	Based on trimmed mean	1,711	1	60	,196

Based on Table 4.3, the significance value of 0.190 is higher than 0.05, indicating that the data are homogeneous. Therefore, the assumption of homogeneity is fulfilled, and further analysis using parametric tests can be conducted.

Table 4.4 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	
Value	Equal variances assumed	1,755	,190	-11,000	60	,000	-12,419	1,129	-14,678	-10,161
	Equal variances not assumed			-11,000	58,467	,000	-12,419	1,129	-14,679	-10,160

Based on Table 4.4, the results of the Independent Samples t-test showed a significance value (Sig. 2-tailed) of 0.000, which was lower than 0.05. This indicates that there was a significant difference between the reading comprehension scores of students in the experimental group and those in the control group after the treatment was administered. Therefore, the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. It can be concluded that the use of the Story Mapping Strategy had a significant effect on students' reading comprehension of narrative texts.

To determine the magnitude of the effect, Cohen's d was calculated. In this study, the standard deviation used in the calculation ($SD = 4.45$) represents the pooled standard deviation, which combines the variability of both groups. The pooled standard deviation was calculated using the following formula:

Given :

$$n_1 = 31, S_1 = 4,069$$

$$n_2 = 31, S_2 = 4,791$$

$$\begin{aligned}
 SD_{pooled} &= \sqrt{\frac{(n_1 - 1)SD_1^2 + (n_2 - 1)SD_2^2}{n_1 + n_2 - 2}} \\
 SD_{pooled} &= \sqrt{\frac{(30)(4,069)^2 + (30)(4,791)^2}{31 + 31 - 2}} \\
 SD_{pooled} &= \sqrt{\frac{30(16,56) + 30(22,95)}{60}} \\
 SD_{pooled} &= \sqrt{\frac{496,8 + 688,5}{60}} \\
 SD_{pooled} &= \sqrt{\frac{1185,3}{60}} \\
 SD_{pooled} &= \sqrt{19,75} = 4,45
 \end{aligned}$$

Based on the data obtained, the mean score of the experimental class in the post-test was 92.10, while the mean score of the control class was 79.68. The standard deviation was 4.45. The calculation is presented below:

$$\begin{aligned}
 d &= \frac{M_{Experimental} - M_{Control}}{SD} \\
 d &= \frac{92,10 - 79,68}{4,45} \\
 d &= \frac{12,42}{4,45} \\
 d &= 2,79
 \end{aligned}$$

The effect size was calculated using Cohen's *d* to determine the magnitude of the effect. The mean score of the experimental group was 92.10, while the control group was 79.68, with a standard deviation of 4.45. The calculation showed that Cohen's *d* = 2.79. Based on Cohen's criteria (1988), this value indicates a very large effect. It means that the Story Mapping Strategy has a strong effect on students' reading comprehension of narrative texts.

Several factors may explain this result. First, there is a possible ceiling effect, as indicated by the high concentration of scores near the maximum value (mode = 95) in the experimental group. Second, the test items may have become easier for students after the treatment, since the Story Mapping Strategy explicitly trains students to understand narrative structure. Third, the relatively small sample size (*n* = 31 per group) may have contributed to inflating the effect size. Additionally, the intensive and focused implementation of the strategy during the treatment phase may have amplified its impact.

To enhance the robustness of the interpretation, it is also important to consider the confidence interval of the effect size. A very large effect size accompanied by a relatively narrow variability suggests strong treatment impact; however, without further replication or a larger sample, the generalizability of this finding remains limited. Moreover, although the Methods section classified students' ability levels (Excellent to Very Poor), the distribution of students across these categories was not previously reported. Based on the post-test results, most students in the experimental group would likely fall into the Excellent category, while the control group would be distributed between Good and Excellent categories. This further supports the conclusion that the Story Mapping Strategy significantly improved students' reading comprehension performance in a meaningful and consistent way.

Discussion

The findings of this study indicate that the Story Mapping Strategy had a significant effect on students' reading comprehension of narrative texts. The descriptive statistics showed that the experimental

group's mean score increased from 67.26 in the pre-test to 92.10 in the post-test, while the control group improved from 67.42 to 79.68. This finding confirms that students who were taught using the Story Mapping Strategy achieved greater improvement compared to those who received conventional instruction.

This result is consistent with previous studies on the effectiveness of Story Mapping Strategy. For instance, Istiqomah (2022) found that story mapping significantly improved students' reading comprehension by helping them identify the structure of narrative texts. Similarly, Syafii (2021) reported that students showed better comprehension after being taught using story mapping through a classroom action research design. In addition, Nurrizal and Putri (2017) as well as Putri et al. (2020) also revealed that visual mapping strategies can enhance students' understanding of text by organizing information systematically. The consistency of these findings suggests that the Story Mapping Strategy is a reliable and effective approach across different contexts. However, the effect size found in this study ($d = 2.79$) is considerably higher than those reported in previous studies. This difference may be influenced by factors such as the intensity of the treatment, the relatively small sample size, or the possibility of a ceiling effect in the post-test scores.

From a theoretical perspective, the effectiveness of the Story Mapping Strategy can be explained through schema theory, as proposed by Grabe. Schema theory suggests that reading comprehension involves activating prior knowledge and connecting it with new information. Story mapping provides a visual framework that helps students organize narrative elements such as characters, setting, problem, and resolution. This structured representation allows students to process information more efficiently and integrate it into their existing cognitive schema. In addition, from an information-processing perspective, visual mapping reduces cognitive load by presenting information in a structured and meaningful way, making it easier for students to understand and recall the content of the text.

In terms of pedagogical implications, this study suggests that the Story Mapping Strategy can be effectively implemented in classroom instruction through several stages. First, the teacher introduces the concept of narrative text structure, including orientation, complication, and resolution. Second, the teacher provides a story map template and models how to fill it using a sample text. Third, students work individually or in groups to complete the story map based on the given narrative text. Finally, students discuss their answers and reflect on the structure of the text. In terms of time allocation, this strategy can be implemented within 2–3 meetings, depending on the complexity of the text and students' proficiency levels. Teachers are also encouraged to combine this strategy with interactive activities such as group discussion to enhance students' engagement.

Overall, the findings of this study demonstrate that the Story Mapping Strategy not only improves students' reading comprehension but also supports their ability to organize and interpret narrative texts effectively. Therefore, this strategy is recommended as an alternative teaching method for English teachers, particularly in teaching narrative texts at the junior high school level.

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