

The Effectiveness of Using Story Mapping Technique Towards Students' Narrative Text Reading Comprehension Achievement

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Abstract

This study aims to find out whether the use of the story mapping technique could improve students' reading comprehension achievement and there was a significant difference between the students who were taught by using the story mapping technique and those who were not. This research applied a quantitative approach in pretest and posttest nonequivalent design. From 494 students of the population at the eighth grade of MTS N 1 Palembang and the number of the sample in this research was 66 divided into experimental and control used convenience sampling. The technique of data collection was reading test. To analyze the data, the researchers used paired sample t-test to find out whether there was a significant improvement in reading comprehension achievement after being taught using Story Mapping Technique. It was found the t value was 14.832, the t-value was higher than critical value of t-table (1.66901). It can be stated that there was significant improvement in reading comprehension achievement after being taught using Story Mapping Technique. In addition, the result of the independent sample t-test showed that the value of the t-test was 4.168, the t-value was higher than critical value of t-table (1.66901) it meant the alternative hypothesis was accepted and the null hypothesis was rejected. It can be concluded that there was a significant difference in students' achievement in narrative reading for the students who were taught using the story mapping method and those who were not. Therefore, story mapping technique can provide solution to improve students narrative reading comprehension significantly.

Keywords: *Narrative Text, Reading, Story Mapping Technique*

A. Introduction

In this current era, for Indonesian students, English language proficiency is needed in order to interact and compete effectively with individuals from various regions around the world. According to Ilyosovna (2020), English has been playing

a major role in many sectors, including medicine, engineering, and education, which is the most important arena where English is needed. Knowing English makes it easy to get assistance in many parts of the world. Therefore, Indonesian students must have proficient English language skills.

Reading is essential for acquiring new knowledge According to Sari (2018), the primary benefits of reading for high school students are to help them learn various knowledge, add information, and expand their vocabulary. Furthermore, Selong (2019) states that reading requires a variety of techniques and abilities because pupils must infer meaning from the text and its context. Students interested in acquiring English are going to discover that enhancing their reading comprehension skills is useful in improving their' understanding of texts and their ability to gather information and knowledge. In summary, students must possess proficient reading skills to augment their information and enhance their knowledge base.

In reading English, comprehension is a required process. Comprehension is a dynamic process that involves engaging with knowledge or having an internal dialogue with the subject. According to McNamara (2007), comprehension typically entails analyzing the text's information, applying existing knowledge to grasp it, and eventually forming a cohesive mental representation or image of the text's content. Furthermore, Gilakjani and Sobouri (2016) states that comprehension is the ability to understand the meaning of a text, which is the main goal of reading. As a result, understanding words, sentences, and cohesive text is essential for comprehending the information presented in written form.

Reading comprehension challenges are common for students proficient in decoding and spelling. After students read a text, a reader usually cannot reproduce the entire text from memory. The results of the Program for International Student Assessment (PISA) in 2022, the average reading literacy score for 15-year-old students in Indonesia was 359, more than 25% of Indonesian students achieved level 2 reading competence which means it is lower than the OECD average of 74% (OECD, 2023). Shehu (2015) states that reading comprehension difficulties arise

from various factors. It is seen as a significant obstacle. Some passages are easily comprehensible, while others are somewhat challenging.

Story Mapping is a strategic method created to illustrate the relationships between important concepts or terms in a story. According to Ibnian (2010) states that story mapping is designed to facilitate students' understanding of a story by presenting parts of the story in a structured manner. Story mapping enables students to retain information without the need for rote memorization. Furthermore, Smith (2017), states story mapping is an excellent technique for eighth grade English classes because it helps students visualize and organize the plot of a story. Thus, story mapping is a visual tool designed to help students understand the essential components of a narrative text to comprehend its content.

The researchers have collected several studies that are pertinent to the subject under examination. First, the research was written by Hasanah (2016). The research findings showed that using a story map could enhance junior high school students' reading comprehension of narrative texts. Then, the second study was conducted by Yufariani (2018). The research findings showed that utilizing the story mapping technique was successful in enhancing students' reading proficiency. Third, the research was written by Oktaviana and Aminin (2021). The research findings showed that utilizing story mapping led to a rise in students' reading comprehension. The fourth study was conducted by Hidayanti (2017). According to this study's findings, narrative mapping may help students improve their reading comprehension. The last study was conducted by Sugandi et. al (2022). SMK 1 Kragilan tenth-grade students can enhance their reading comprehension of narrative texts through the use of story maps, as suggested by the study's findings.

The Problems of the Study are is there any significant improvement of using story mapping technique towards students' reading achievement among the Eighth Grade Students at MTSN 1 Palembang and is there any significant difference between the eighth grade students who are taught by using story mapping technique and those who were not at MTSN 1 Palembang. The purpose of this research study is to find out whether the use of story mapping technique could improve students' reading comprehension achievement among the Eighth Grade students at MTSN 1

Palembang and to find out the significant difference between the student who were taught by using story mapping technique and those who were not.

The researchers proposed story mapping as a potential strategy to assist students with reading difficulties and improve their understanding of story literature. Prior research had asserted that story mapping was a successful method for enhancing the reading comprehension of narrative texts among students. The researchers were enthusiastic about undertaking an investigation titled "The Effectiveness of Using the Story Mapping Technique Toward Students' Narrative Text Reading Comprehension Achievement."

B. Research Methodology

The research method was quantitative, chosen based on the problem and objective. Quantitative research issues necessitated explanations of how one variable influenced another. Quantitative research entailed examining specific populations or samples, collecting data using research instruments, and evaluating statistical data to determine hypotheses. In the experiment, the researchers conducted a test to determine the impact of an idea or method on a specific outcome or dependent variable (Creswell, 2012).

This study was a quasi-experimental research design. A quasi-experimental design is utilized to establish a causal relationship between the treatment and the outcome (Rogers & Revesz, 2020). Quasi-experimental research involved a comparison group. This research involved a comparison between two classes. The study involved two main groups: the experimental group and the control group. The story mapping technique was used on the experimental group. The teacher taught the control group using the usual method.

The pretest-posttest nonequivalent group design is a commonly used quasi-experimental method in educational research. The researchers then administered a pre-test to both groups to assess their initial levels. The researchers administered distinct treatments to each group. After finishing the study, the researchers administered a post-test to both groups.

A target population was a particular category of people who shared a common identifying attribute that the researchers would pinpoint. The study's population

comprised eighth-grade students enrolled at MTS N 1 Palembang. The total population was 449 students, who were divided into thirteen classes. The study sample consisted of eighth-grade students from MTS N 1 Palembang for the school year 2024/2025. The researchers selected the VIII A class as the experimental group and VIII B as the control group for this research. In choosing the subjects of this study, the researchers used convenience sampling. Creswell (2012) defines convenience sampling as the method by which researchers choose people who are willing and available to be examined.

The technique for collecting data used by the researchers was through reading test. Reading test is a widely used evaluation instrument in education to measure the quality, ability, skill, or knowledge of a sample against an established standard. Prior to the samples being tested, the test was carried out firstly in one of the eighth grade students of MTS N 1 Palembang, Pahlawan area; however, in other classes beside the sampled class.

Prior to applying the research treatment to the experimental and control groups, the research instrument was assessed to determine its validity and reliability. The tryout was held at MTS N 1 Palembang, Pahlawan area. The instrument utilized for the test was a multiple-choice examination. Students completed both a pre-test and a post-test regarding their comprehension of reading texts, as well as an assessment of the impact that story mapping instruction might have had on their reading achievement. The purpose of this was to compare the reading comprehension scores of students before and after the treatment.

The researchers used SPSS with Cronbach Alpha to calculate the students' scores for measuring the test's reliability in this study. The students who participated in the trial were distinct from the research project participants. The researchers employed the split-half test method to obtain scores for examiner evaluation. According to Fraenkel et. al. (2012), split-half assessment is the process of individually calculating the correlation coefficients between the two sets of scores after scoring the two halves of a test for each individual. The researchers used paired sample t-test to compare the average of two variables in one group and also the researchers used independent sample t test for analyzing the data.

C. Results and Discussion

In this section, the researchers highlighted the result of the pretest and posttest from experimental group and control group that was given to the eighth grade students of Junior High School of Bina Jaya Palembang. The results of pretest and posttest in the experimental group were drawn in table 1 below:

Table 1. The score Distribution of Experimental Group

| Score | Category | Pre-test | | Post-test | |
|---------------|-----------|-----------|------------|-----------|------------|
| | | Frequency | percentage | Frequency | percentage |
| 81-100 | Very Good | - | 0% | - | 0% |
| 61-80 | Good | 1 | 3% | 13 | 39% |
| 41-60 | Fair | 10 | 30% | 17 | 52% |
| 21-40 | Poor | 21 | 64% | 3 | 9% |
| 0-20 | Very Poor | 1 | 3% | - | - |
| | Total | 33 | 100 % | 33 | 100% |

From the above table, the results of pretest for experimental group were as follow: 3% (reached by 1 student) got “very poor”, 64 % (reached by 21 students) got “poor”, 30% (reached by 10 students) got “fair”, 3% (reached by 1 student) got “good”. After that the results of posttest were 9% (reached by 3 students) got “poor”, 52% (reached by 17 students) got “fair” and 13 students got “good” with percentage 39 %. Then the results of pretest and posttest in the control group were drawn in table 2 below:

Table 2. The score Distribution of Control Group

| Score | Category | Pre-test | | Post-test | |
|---------------|-----------|-----------|------------|-----------|------------|
| | | Frequency | percentage | Frequency | percentage |
| 81-100 | Very Good | - | 0% | - | 0% |
| 61-80 | Good | - | 0% | 5 | 15% |
| 41-60 | Fair | 8 | 24% | 11 | 33% |
| 21-40 | Poor | 21 | 64% | 17 | 52% |
| 0-20 | Very Poor | 4 | 12% | - | 0% |
| | Total | 33 | 100 % | 33 | 100% |

From the above table, the results of pretest for control group were as follow: 12% (reached by 4 students) got “very poor”, 64 % (reached by 21 students) got “poor”, 24% (reached by 8 students) got “fair”. After that the results of posttest were 52% (reached by 17 students) got “poor”, 33% (reached by 11 students) got “fair” and 5 students got “good” with percentage 15%. The descriptive statistics from students in the experimental group was drawn in table 3 below :

Table 3. Descriptive Statistics from Students in Experimental Group

| | N | Minimum | Maximum | Mean | Std. Deviation |
|----------------|----------|----------------|----------------|-------------|---------------------------|
| PreExp | 33 | 12 | 62 | 37.70 | 10.714 |
| PostExp | 33 | 36 | 80 | 57.82 | 11.899 |
| Valid N | 33 | | | | |

From the above table, it was found that the total number of samples in the pretest was 33 students. The lowest score obtained in the pretest was 12 while the highest score was 62, the mean score was 37.70, and the standard deviation of the scores in the experimental 10.714. Meanwhile the students' posttest scores in experimental group showed that the total number of samples were 33 students. The lowest score obtained in the pretest was 36 while the highest score was 80, the mean score was 57.82, and the score of standard deviation was 11.899. %. The descriptive statistics from students in the control group was drawn in table 4 below :

Table 4. Descriptive Statistics from Students in Control Group

| | N | Minimum | Maximum | Mean | Std. Deviation |
|-----------------|----------|----------------|----------------|-------------|---------------------------|
| PreCont | 33 | 16 | 56 | 33.70 | 10.273 |
| PostCont | 33 | | | | |
| Valid N | 33 | 20 | 68 | 45.88 | 11.368 |

From the above table, it was found that the total number of samples in the pretest were 33 students. The lowest score obtained in the pretest was 16 while the highest score was 56, the mean score was 33.70, and the standard deviation of the scores in the control 10.273. Meanwhile the students' posttest scores in control group showed that the total number of samples were 33 students. The lowest score obtained in the pretest was 20 while the highest score was 68, the mean score was 45.88, and the score of standard deviation was 11.368.

The Result of Paired Sample T-test

The results of paired sample t-test could be seen from the table 5 and 6 below.

Table 5. Paired Sample T-test for Experimental Group

| Paired Sample Test | | | | |
|-------------------------|--|--|--|--|
| Test Paired Differences | | | | |
| | | | | |

| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | t | df | Sig.(2 tailed) |
|-----------------------------|---------|----------------|-----------------|---|---------|---------|----|----------------|
| | | | | Lower | Upper | | | |
| Pair1 PreExp- PostExp | -20.121 | 7.793 | 1.357 | -22.885 | -17.358 | -14.832 | 32 | .000 |

The result of the paired sample t-test showed that the p-output was .000 and the t value was 14.832. Since the p-output was lower than 0.05 level and the t-value was higher than critical value of t-table (1.69389). so that the null hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was accepted.

Table 6. Paired Sample T-test for Control Group

| Paired Sample Test | | | | | | | | |
|-------------------------------|---------|-------------------------|-----------------|---|---------|---------|----|----------------|
| | | Test Paired Differences | | | | t | df | Sig.(2 tailed) |
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | Lower | Upper | | | |
| Pair2 PreCont- PostCont | -12.182 | 5.553 | 0.967 | -14.151 | -10.213 | -12.601 | 32 | .000 |

The result of the paired sample t-test showed that the p-output was .000 and the t value was 12.601. Since the p-output was lower than 0.05 level and the t-value was higher than critical value of t-table (1.69389). so that the null hypothesis (Ho) was rejected and the alternative hypothesis (Ha) was accepted.

The Data Analysis of The Independent sample T-test

Based on the data collected from both experimental and control group, the researchers used independent sample t-test in SPSS 26 program to compare the result of post-test between experimental group and control group. The result of this analysis was shown in the table 7 below.

Table 7. The Result of The Independent sample T-test

| 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 | |
| | | | | | | | | Lower | Upper |
| Equal variances assumed | .015 | .902 | 4.168 | 64 | .000 | 11.939 | 2.865 | 6.216 | 17.662 |
| Equal variances not assumed | - | - | 4.168 | 63.867 | .000 | 11.939 | 2.865 | 6.216 | 17.663 |

Based on the result of the above table, the value of significant (2-tailed) was $0.00 < 0.05$ at the level significant 0.05. While, the value of t-obtained was 4.168 higher than 1.66901 based on t-table with degree of freedom 64 So that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted.

Discussion

Based on the results of analysis, the calculation indicated that result of pretest in experimental group was one student got very poor with the range score 0-20, twenty one students got poor with the range score 21-40, ten students got fair with the range score 41-60 and one students got good with the range score 61-80, it might be caused by some factors such as students have difficulty understanding what happens in the story in writing, so that students could not identify the story's main idea. The second issue is that a lot of students have trouble comprehending the narrative content. They could not identify specific details from the text; they just understood the general idea of it. The main elements, such as setting, characters, conflict, objective, and resolution, were absent. The third problem is that students easily forget what they have read. The posttest result in experimental group showed that three students got poor with the range score 21-40, seventeen students got fair

with the range score 41-60, and thirteenth students got good score with the range score 61-80. It happened because the students had treated by the new method. There were no students who were categorized very poor. The result showed the significant improvement in experimental group from pretest to posttest. Since after the treatment, the students got more understanding in comprehending the reading text. They were more motivated to read more reading text as they taught that the teaching method was interesting.

On the other hand, the result of pretest in control group showed that four students got very poor score with the range 0-20, twenty one students got poor score with the range 21-40 score and eight students got fair score with the range 41-60. The students in this group have difficulty understanding what happens in the story in writing and many students do not know a lot of vocabulary, which means they do not understand what the content of narrative text means, so they were not interested in reading. The posttest also showed little improvement. There were seventeen students got poor score with the range 21-40, eleventh students got fair score with the range 40-60 and there are five students got good score with the range 60-80. It might because of the same factors with the same instructions but they were not given the treatment using story mapping technique.

Moreover, the researchers found that the result analysis of measuring a significant difference on the students' reading achievement by using Story Mapping technique compared to those who are taught by using strategy used by the teacher at the school. The result of the independent t-test shows that the t obtained was 4.168 and p-output 0.00 Since the p-output was lower than significant level of 0.05, it means alternative hypothesis was accepted and null hypothesis was rejected. In the table was found the p-output 0.00, it was p-output $0.00 < 0.05$. It meant that there was a significant difference between post-test results of experimental group and control group in which the posttest results of experimental group showed the better score than the posttest results of control group. Therefore, Story Mapping gave a significant difference on the students' reading comprehension achievement compared to those who were not.

D. Conclusion

Based on the data analysis conducted by the researchers, some result can be drawn. Firstly, the result of the paired sample t-test showed that the p-output was $.000 < 0.05$ and the t-value was $14.832 > t\text{-table}$. There was a significant improvement before and after the students were taught by using Story Mapping strategy. Secondly, the researchers found that the result analysis of measuring a significant difference on the students' reading achievement by using Story Mapping technique compared to those who are taught by using strategy used by the teacher at the school. The result of the independent t-test shows that the t obtained was $4.168 > t\text{-table}$ and p-output $0.00 < 0.05$. It meant that there was a significant difference between post-test results of experimental group and control group in which the posttest results of experimental group showed the better score than the posttest results of control group. Therefore, Story Mapping gave a significant difference on the students' reading comprehension achievement compared to those who were not.

References

- Adom, D., Mensah, J. A., & Dake D. A. (2020) Test, measurement, and evaluation: Understanding and use of the concepts in education. *International Journal of Evaluation and Research in Education*, 9(1), 109-119. <https://doi.org/10.11591/ijere.v9i1.20457>
- Creswell, J. W. (2012). *Educational research planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Retrieved from <https://repository.unmas.ac.id/medias/journal/EBK.com>
- Farris, P. J. (2004). *Teaching Reading: A Balanced Approach for Today's Classroom*. Mc Graw Hill.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). McGraw Hill. Retrieved from https://saochhengpheng.wordpress.com/wpcontent/uploads/2017/03/jack_fraenkel_norman_wallen_helen_hyunhow_to_design_and_evaluate_research

[h in education 8th edition mcgrawhill humanities social sciences languages2011.pdf](#)

- Gilakjani, A. P., & Sabouri, N. B. (2016). How can students improve their reading comprehension skill. *Journal of Studies in Education*, 6(2), 229. <https://doi.org/10.5296/jse.v6i2.9201>
- Hasanah, N, U. (2016). *Improving students' reading comprehension in narrative texts with the medium of story map* (Thesis). Retrieved from <https://eprints.walisongo.ac.id/id/eprint/6591>
- Hidayanti, N. (2017). *Teaching reading comprehension by using story mapping technique on narrative text at the first semester of the second grade at SMP N 11 bandar lampung 2016/2017 academic year* (Thesis). Retrieved from <http://repository.radenintan.ac.id/3043/>
- Ibnian, S. S. K. (2010). The effect of using the story-mapping technique on developing tenth grade students' short story writing skills in EFL. *English Language Teaching*, 3(4), 181–194. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1081969.pdf>
- Ilyosovna, N. A. (2020). The importance of English language. *International Journal on Orange Technologies*, 2(1), 22-24. Retrieved from <https://media.neliti.com/media/publications/333378-the-importance-of-english-language-2c7b6d03.pdf>
- OECD. (2023), PISA 2022 Results (Volume I): The state of learning and equity in education, PISA, OECD Publishing, <https://doi.org/10.1787/53f23881-en>
- Oktaviana, V., & Aminin, Z. (2021). Students' perceptions on the use of story maps in reading comprehension. *Journal of English Teaching Adi Buana*. 6(2), 135-142.
- Rogers, J., & Revesz, A. (2020). *The Routledge handbook of research methods in applied linguistics*. Routledge.
- Sari, C. P. (2018). Faktor-faktor penyebab rendahnya minat membaca siswa kelas IV. *Basic Education*, 7(32), 3-128.

- Selong, Y. (2019). Improving students' reading comprehension through the use of numbered head together (nht) technique. *Journal English Educational Study*, 2(2), 78-86. <https://doi:10.31932/jees.v2i2.500>
- Sugandi, R. N., Juniardi, Y., & Rahmawati, E. (2022). The effectiveness of using story map technique to students' reading comprehension on narrative text. *Lingua Scientia*, 29(1), 1-8. <https://doi.org/10.23887/ls.v29i1.33901>
- Thayne, S. (2018). Graphic organizers. *The TESOL Encyclopedia of English Language Teaching*. 1–7. Retrieved from <https://onlinelibrary.wiley.com/jb>
- Yufariani, D. A. (2018). *The effectiveness of using story mapping on students of reading comprehension in narrative text at SMPN 1 sumbergempol* (Thesis). Retrieved from <https://repo.uinsatu.ac.id/id/eprint/99861>