The Effect of the Story Map Method in Narrative Text to Improve Students' Reading Skills

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Abstract

Investigation on instructional strategies provides valuable insights that contributes to students' better academic outcomes. This study aims to determine the significant effect of using the story map method on improving the reading skills of eleventh-grade science students at Madrasah Aliyah Attaqwa Tangerang. The research specifically focuses on their comprehension of narrative text learning material during the 2023/2024 academic year. This study employed a Quasi-Experimental Design. The research population consisted of all eleventh-grade science (XI IPA) students at Madrasah Aliyah Attaqwa Tangerang for the 2023/2024 academic year. The sample size was 30 students. Data were collected through pre-test and post-test instruments to measure student reading skills before and after the intervention. The collected data were tested for assumptions and found to be both normally distributed and homogeneous. Subsequently, hypothesis testing was conducted using a paired sample t-test. The results of the hypothesis test led to the rejection of the null hypothesis (Ho) and the acceptance of the alternative hypothesis (Ha). This indicates a statistically significant positive effect from using the story map method. Therefore, it is concluded that the story map method effectively improves the reading skills of eleventh-grade science students at Madrasah Aliyah Attaqwa Tangerang in narrative text comprehension.

Keyword: Quasi-Experimental, Reading Skill, Story Map Method

Introduction

Reading is a foundational skill in education, essential for acquiring knowledge and information (Widowati & Kurniasih, 2018; Hudri & Irwandi, 2019). However, effective reading extends beyond mere word recognition; it is a complex, active process that requires deep comprehension and critical engagement with the text (Rombot, 2020). True reading proficiency involves understanding meaning, grasping the author's message, and thinking critically about the content (Nurviyani, 2020; Fitria, 2019). This makes reading a multifaceted task that demands more than just vocabulary and grammar knowledge; it also requires the reader to analyze,

synthesize, and evaluate information (Anggadewa & Tarigan, 2022).

The development of robust literacy skills is a cornerstone of academic success, transcending the traditional boundaries of language arts and emerging as a critical competency within science education. For eleventh-grade science students, the ability to comprehend complex expository texts—ranging from textbook chapters and research articles to scientific reports—is not merely advantageous but essential for engaging with the sophisticated concepts of biology, chemistry, and physics. However, a significant challenge persists: many students at this level, despite having mastered basic decoding skills, struggle with higher-order reading comprehension, such as identifying central ideas, understanding cause-and-effect relationships, and synthesizing information from multiple sources. This deficit can fundamentally hinder their ability to construct meaningful scientific knowledge and engage in evidence-based reasoning.

Given this complexity, the teacher's role is crucial. Educators must move beyond monotonous and uninteresting reading instruction by adopting more creative, interactive, and engaging teaching methods. By doing so, they can help students achieve their reading goals and foster a genuine understanding of the texts they read.

At Madrasah Aliyah Attaqwa, the teachers still use conventional methods which is less creative and not attractive for the students. As the result, the students find it difficult to understand what the teacher taught. The reading material for 11th grade is narrative text. For some students, it is

not easy to understand, particularly by the application of inappropriate learning methods. Hence, the students got bad grades. Figure 1 illustrates the number of students who got the highest, average, and lowest scores in one class, class 11 Science Grade for the 2023/2024 academic year. Overall, the number of students who got the lowest score was more than the students who got the highest and average scores
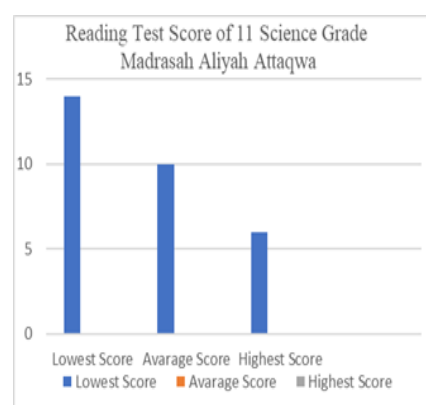

Figure. 1
Reading Test Score of 11 Science Grade Madrasah Aliyah Attaqwa

There are 30 students in grade 11 science and from the scores, it can be seen that the lowest score is 45% which is 14 students, then the average score is 35%, which is 10 students and the highest score is 20%, which is 6 students. The KKM score for English subjects determined for grade 5 is 75. Thus, based on the initial score they got, only 20% of 30 students pass the KKM score, and almost 80% of students in grade 11 science can be declared as not passing the KKM score.

The students' assessment scores indicate a clear need for more effective instructional methods. One promising solution is the story map method, a visual learning technique

that helps students record and organize the key elements of a narrative. This method, developed in the 1970s, is grounded in the brain's natural propensity to recall information through diagrams, symbols, and visual shapes. As Millah (2018) emphasizes, this procedure aids learners in recognizing the fundamental structure of a story, thereby improving their overall text comprehension.

Previous studies have shown that they succeeded in improving students' reading skills (Irmayanti, 2014 and Amini, 2020). In these studies, students were only asked to transfer stories from narrative texts to story maps. Therefore, for this study the students were required to discuss with their peers what they had read. After that, they will prepare a reading map or story map and students will be given questions that are more developed after compiling the story map. In previous studies, the pre-test and post-test always used multiple-choice questions, while in this study the researcher used essays. So that reading indicators and assessment indicators are different.

One promising instructional scaffold that addresses this need is the Story Map method. Originating from narrative text analysis, the Story Map is a graphic organizer that visually represents the key elements of a plot. When adapted for informational and expository texts in science, it transforms into a powerful tool for structuring knowledge. Students use the map to identify and delineate core components such as the main topic, key phenomena, sequential processes, cause-and-effect chains, problems, and experimental solutions. This process of active deconstruction and

visual representation compels learners to move beyond superficial reading and engage in a deeper analysis of the text's organizational framework.

Based on the description that has been described, it is expected that the story map method is able to help the students understand the text of the story and the main elements in the story. The researchers will provide a method based on several sources that must improve students' understanding of narrative texts, namely the story map method. This study aims to determine the significant effect of using the story map method on improving the reading skills of eleventh-grade science students at Madrasah Aliyah Attaqwa Tangerang focusing on their comprehension of narrative text learning material during the 2023/2024 academic year.

METHOD

The researcher employed a quasi-experimental approach, analyzing the data using SPSS version 25. The study involved two stages: a pre-test conducted before the experiment and a post-test after the experiment; both administered to the participants. The class was composed of 30 students, who were split into two groups. One group served as the experimental group, while the other acted as the control group.

Once the students' scores were collected, the researcher used a paired t-test with SPSS version 25 to compare the pre-test and post-test results. This statistical method was chosen because the study involved only one class, and it helped evaluate the impact of the Story Map Method on the students' reading abilities.

FINDING AND DISCUSSION

Based on the students' pretest and posttest scores, the researcher analyzed the SPSS 25 statistical scores from the pretest and post-test results in the experimental class. Data were obtained from students' pre-tests with a minimum score of 40 and a maximum score of 70, with a mean score of 60.33 and a standard deviation of 7.622. While the post-test results show that the minimum value is 85 and the maximum value is 100, with a mean of 93.07 and a standard deviation of 4.527, It can be selected in the descriptive statistics table as follows:

Table 1.
Descriptive Statistic of the Experimental Class

Test	N	Mean	Std. Deviation	Min	Max
Pre-test	15	60.33	7.622	43	43
Post-test	15	93.07	4.527	85	100

Based on the test scores before and after the students' test, the researcher also analyzed the data using SPSS 25 software to analyze the results before and after the test in the control class. The data was taken from the results of the students' pre-tests; the minimum score obtained was 43, and the maximum value was 78, with a mean of 60.20 and a standard deviation of 10.718. The minimum value of the post-test results is 43, and the maximum value is 70, with a mean of 60.80 and a standard deviation of 7.729. This can be shown in the descriptive statistics in table 1 and 2.

Table 2.
Descriptive Statistic of the Control Class

Test	N	Mean	Std. Deviation	Min	Max
Pre-test	15	60.20	10.718	43	78
Pos-test	15	60.80	7.729	43	70

Based on the tables above, the data shows the difference between the scores of the experimental class and the control class after learning the story map method in the experimental class and conceptual learning in the control class. It can be seen that the average value of the experiment class is 93.07, and the average value of the control class is 60.80. The standard deviation of the experimental class is 4.527, and that of the control class is 7.729. In addition, the difference in the minimum score for the experimental class is 85, and the control class is 43.

FINDINGS AND DISCUSSIONS

This study employed a quasi-experimental design to investigate the efficacy of the Story Map method in enhancing the reading comprehension

of eleventh-grade science students at Madrasah Aliyah Attaqwa in Tangerang City. The research sample consisted of 30 students, divided into an experimental group and a control group. Data were collected through a pre-test and post-test model, using a validated instrument of 10 essay questions. The experimental group received instructional treatment using the Story Map method, while the control group followed conventional teaching methods. Data analysis was conducted using SPSS version 25 to determine statistical significance.

The quantitative data reveal a substantial improvement in the reading comprehension of students who were taught using the Story Map method. The analysis of pre-test and post-test scores within the experimental group demonstrated a marked increase. The average pre-test score was 60.33, which rose to an average post-test score of 93.07following the intervention. The statistical analysis led to the rejection of the null hypothesis (Ho) and the acceptance of the alternative hypothesis (Ha). This confirms that there is a statistically significant difference between the pre-test and post-test results, attributable to the use of the Story Map method.

The post-test results confirmed that all 15 students in the experimental class successfully met or exceeded the Minimum Mastery Criteria (KKM). This indicates that the method was effective in bringing the entire class to a satisfactory level of competency in narrative text comprehension.

The findings clearly indicate that the Story Map method is a highly effective pedagogical tool for improving reading comprehension,

specifically for narrative texts. The significant leap in average scores—from 60.33 to 93.07—provides strong evidence that the method helps students better structure and recall narrative elements such as plot, characters, and setting.

This study's results align with research Khotimah, et.al., (2022); Kurnianingsih and Isnaniah (2022) on improving reading comprehension using experiment method. Moreover, this study supports Pratiwi (2020) that argues: Story Map technique aids students in understanding texts and easily identifying key textual elements. The structured visual framework of a Story Map appears to simplify the cognitive process of comprehension, allowing students to organize information more effectively, which in turn leads to improved analytical skills and retention.

The success of the method is further underscored by the fact that 100% of the students in the experimental class achieved the KKM after the treatment. This universal success rate suggests that the Story Map method is not only effective for high-achieving students but is also a powerful tool for ensuring overall classroom mastery of the subject matter.

In conclusion, the data robustly supports the hypothesis that the implementation of the Story Map method significantly improves the reading comprehension of eleventh-grade science students. The method provides a clear, structured approach to deconstructing narrative texts, which facilitates a deeper understanding and leads to measurable academic improvement.

Table 3. Different Values of Experimental and Control Class

Class	N	Min	Max	Mean	Std. Deviation
Experiment	15	85	100	93.07	4.527
Control	15	43	70	60.80	7.729

Based on the table above, the data shows the difference between the scores of the experimental class and the control class after learning the story map method in the experimental class and conceptual learning in the control class. It can be seen that the average value of the experiment class is 93.07, and the average value of the control class is 60.80. The standard deviation of the experimental class is 4.527, and that of the control class is 7.729. In addition, the difference in the minimum score for the experimental class is 85, and the control class is 43. This means that there is a significant effect of the application of the story map method in learning narrative text to improve reading skills in grade 11 science students at Madrasah Aliyah Attaqwa Tangerang in the 2023/2024 academic year.

The results of this study are supported by previous research, which also supports the story map method in teaching narrative texts. This conclusion was reached by Fujihan Pratiwi (2020), who believed that students could easily understand texts and help students easily identify text texts. The process of teaching and learning by using the story map method has improved students' reading skills in understanding narrative texts. Based on the results of the study, it was concluded that the hypotheses for Ho were rejected and Ha was accepted. This shows that there is a significant difference between the results of the pre- and post-test, which also shows that the results of the post-test have a higher score than the pre-test.)

CONCLUSION

Based on the formulation of the problem, the research hypothesis, the hypothesis testing, and the results of the analysis, it can be concluded that Ha is accepted and Ho is rejected. This shows that there is a significant effect between the pre-test and post-test conducted, as well as between the control and experimental groups, by 11 science students at Madrasah Aliyah Attaqwa. This also means that the use of the story map method can improve students' reading skills. The story map method can be an appropriate learning method to make it easier for students to relay information from a text, in which the material in this text is narrative text. Based on this, it can be concluded that the story map method is an effective method for improving students' reading skills.

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