



Learning Mathematical Paragraph Reading Skills Using Multiple Choice Test Techniques through Special Teaching Materials

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ABSTRACT

This study aims to explore: 1) the learning procedure for mathematical paragraph reading skills using multiple-choice tests through specialized teaching materials; 2) the learning outcomes of mathematical paragraph reading skills using multiple-choice tests through specialized teaching materials. This study was conducted at SD Negeri 8 Mataram during the even semester of the 2025/2026 academic year. The study population was 5th-grade students who participated in factual paragraph reading skills learning using multiple-choice tests through specialized teaching materials. Fifteen out of 18 students participated in this study. This study used a total sample, meaning all members of the population were included as sample members. The main instrument of this study was the specialized teaching materials containing four-option multiple-choice questions. The second instrument was a four-option multiple-choice mathematical paragraph reading skills test. The third instrument was a lesson plan. Data from the learning procedure for mathematical paragraph reading skills using multiple-choice tests through specialized teaching materials were analyzed using a thematic approach by examining the alignment between the lesson planning procedures and classroom implementation procedures. Learning outcome data were analyzed using descriptive statistical procedures, namely mean and percentage. Research results: 1) The learning procedure for mathematical paragraph reading skills using multiple-choice tests through special teaching materials involved three initial activities, 12 core activities, and two final activities, in accordance with the learning plan; 2) the learning outcomes for mathematical paragraph reading skills reached a mean of 81.67 percent.

Keywords: mathematical paragraph, reading skills, multiple choice, test techniques, special teaching materials

INTRODUCTION

Mathematical paragraph reading skills are essential for upper-grade elementary school students. Mathematical paragraph reading skills are essential for reading narrative texts such as elementary school mathematics textbooks. In other words, mathematical paragraph reading skills are closely related to mathematics subject matter. Therefore, research on reading skills (in Indonesian language lessons) is closely related to mathematics.

Given the importance of mathematical paragraph reading knowledge and skills for

upper-grade elementary school students, regular learning is necessary. This learning involves teaching mathematical paragraph reading skills using testing techniques through simple, specialized teaching materials.

The use of multiple-choice tests in teaching mathematical paragraph reading skills is believed to be effective. This is because testing techniques can stimulate higher learning motivation in students.

The special teaching materials consist of eight pages of A4 HVS paper, not including the cover. These special teaching materials contain two

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groups. The first group consists of multiple-choice questions (to apply the multiple-choice test technique) on the main sentence, supporting sentence 1, supporting sentence 2, main idea, supporting idea 1, and supporting idea 2 per mathematical paragraph. Three independent mathematical paragraphs are provided, covering the topics of multiplication and the area and perimeter of right triangles. Second, there are 188 questions for three independent mathematical paragraphs.

Based on the description above, scientific research is needed. This research activity is entitled "Learning Mathematical Paragraph Reading Skills Using Multiple-Choice Test Techniques through Special Teaching Materials."

This research contains two problem statements. These problem statements are:

- 1) What is the procedure for learning mathematical paragraph reading skills using a multiple-choice test technique through specialized teaching materials?
- 2) What are the learning outcomes of mathematical paragraph reading skills using a multiple-choice test technique through specialized teaching materials?

These are the two objectives of this research on mathematical paragraph reading skills using a multiple-choice test technique through specialized teaching materials. The intended objectives are to describe:

- 1) the procedure for learning mathematical paragraph reading skills using a multiple-choice test technique through specialized teaching materials;
- 2) the learning outcomes of mathematical paragraph reading skills using a multiple-choice test technique through specialized teaching materials.

This research has many benefits. First, for elementary school teachers, it is useful because it provides objective information about students' mathematical paragraph reading skills. Second, for school principals, this research can be used as discussion material in Principal Working Group

meetings on teaching mathematical paragraph writing in elementary school senior classes. Third, this research is also useful from an integrated learning perspective, with Indonesian as the focus subject and mathematics as the integrated material.

Relevant articles were found in various online journals. Among the scientific articles:

- 1) Sa'adah, S. (2023). Peningkatan Keterampilan Membaca Paragraf Berbasis Matematika melalui Teknik Tes Pilihan Ganda Menggunakan Media Alternatif [Improving Mathematics-Based Paragraph Reading Skills through Multiple Choice Test Techniques Using Alternative Media]. *Jurnal Pembelajaran Bahasa dan Sastra*, 2(2), 213–222. <https://doi.org/10.55909/jpbs.v2i2.248>
- 2) Permana, D., & Kurniawan, O. (2024). Keterampilan Membaca Paragraf Prosedur dalam Pembelajaran Berbasis Google Form melalui Teknik Tugas Menyalin dan Teknik Tes [Procedural Paragraph Reading Skills in Google Form-Based Learning through Copying Task Techniques and Test Techniques]. *Jurnal Pembelajaran Bahasa dan Sastra*, 3(6), 745–760. <https://doi.org/10.55909/jpbs.v3i6.643>
- 3) Debataraja, M. (2023). Peningkatan Keterampilan Membaca Gagasan Paragraf melalui Pendekatan Keterampilan Proses dan Teknik Tugas Menyalin Pemaknaan Leksikal [Improving Paragraph Idea Reading Skills through Process Skills Approach and Lexical Meaning Copying Task Techniques]. *Jurnal Pembelajaran Bahasa dan Sastra*, 2(3), 391–400. <https://doi.org/10.55909/jpbs.v2i3.285>

METHOD

This research was conducted at SD Negeri 8 Mataram. This school is located at Jl. Hos Cokroaminoto Gg. Macan IV Mataram, West Monjok, Selaparang District, Mataram City, West Nusa Tenggara Province.



The research took place in the odd semester of the 2025/2026 academic year. This timeframe was divided into preparation, implementation, and reporting activities. Preparation activities included presenting simple teaching materials, developing lesson plans, and developing checklists for data validation and analysis of research data on mathematical paragraph reading skills. Implementation activities included teaching mathematical paragraph reading skills using multiple-choice tests using specialized teaching materials. Reporting activities included data processing and analysis, as well as preparing a report in the form of a scientific article.

The population of this study was fifth-grade students at Mataram State Elementary School 8 who participated in mathematics paragraph reading skills learning using multiple-choice tests using specialized teaching materials. There were 15 of the 18 registered students.

This study used a total sample. Therefore, the sample size equals the population size.

Research using total samples is common. This occurs when the population is small and the data analysis procedure does not utilize inferential statistics (Razak, 2017; Fraenkel et al., 2012; Sukmadinata, 2012; Malik & Hamied, 2014; Balaka, 2012).

This study used three instruments. First, specialized teaching materials containing four-option multiple-choice questions served as a learning technique. Second, 16 multiple-choice test items from four mathematics paragraphs served as a learning evaluation. Third, a lesson plan. The core activities in this instrument were structured based on learning techniques, namely multiple-choice tests, through specialized teaching materials. Data on the learning procedures for reading mathematics paragraphs were analyzed using a thematic approach. This analysis was conducted by assessing the alignment between the learning planning procedures and classroom implementation procedures.

Learning outcome data were analyzed using descriptive statistical procedures, namely means

and percentages. This procedure was used because parametric inferential statistical procedures such as the one-sample t-test did not meet the requirements (Yuliani, 2018).

To produce a mathematical paragraph reading skills test with content validity, a test development procedure is presented. This development procedure aligns with the opinions of (Akbar, 2013; Azwar, 2016; Fulcher & Davidson, 2007; Razak, 2020). The procedure is presented below.

First, determine the number of mathematical paragraphs that will form the basis of the learning technique: three independent mathematical paragraphs.

Second, determine the subtopics of the mathematical paragraphs. The selected mathematical paragraph subtopics are multiplication and the area and perimeter of geometric shapes.

Third, determine the test indicators. This study used explicit indicators: main sentence, supporting sentence-1, supporting sentence-2, main idea, supporting idea-1, supporting idea-2.

Fourth, develop the specifications for the mathematical paragraph reading skills test. These specifications are presented in a table containing a number column, an indicator column, a column for item numbers per mathematical paragraph, and a total column.

Fifth, compile the test items according to the specifications for the mathematical paragraph reading skills test. Twelve of the 18 multiple-choice test items are presented below.

Math Paragraph-1

First, the height is 6 cm. Second, the base is 8 cm. Third, the hypotenuse is 10 cm. That is why my right triangle has a perimeter of 24 cm.

- 1) Topic sentence of factual paragraph-1 ...
 - A. That is why my right triangle has a perimeter of 24 cm.
 - B. First, the height is 6 cm.
 - C. Second, the base is 8 cm.
 - D. Third, the hypotenuse is 10 cm.

- 2) Supporting sentence-1 factual paragraph-1
 - A. That is why my right triangle has a perimeter of 24 cm.
 - B. First, the height is 6 cm.
 - C. Second, the base is 8 cm.
 - D. Third, the hypotenuse is 10 cm.
 - 3) Supporting sentence-2 math paragraph-1
 - A. That is why my right triangle has a perimeter of 24 cm.
 - B. First, the height is 6 cm.
 - C. Second, the base is 8 cm.
 - D. Third, the hypotenuse is 10 cm.
 - 4) Main idea of math paragraph 1
 - A. My right triangle has a perimeter of 24 cm
 - B. The height of my right triangle is 6 cm
 - C. The base of my right triangle is 8 cm
 - D. The hypotenuse of my right triangle is 10 cm
 - 5) Supporting idea 1 of math paragraph 1
 - A. My right triangle has a perimeter of 24 cm
 - B. The height of my right triangle is 6 cm
 - C. The base of my right triangle is 8 cm
 - D. The hypotenuse of my right triangle is 10 cm
 - 6) Supporting idea 2 of math paragraph 1
 - A. My right triangle has a perimeter of 24 cm
 - B. The height of my right triangle is 6 cm
 - C. The base of my right triangle is 8 cm
 - D. The hypotenuse of my right triangle is 10 cm
- Math Paragraph 2**
The height is 6 cm. The base is 8 cm. The area is 24 square cm. That is my right triangle.
- 7) Topic sentence of math paragraph 2 ...
 - A. The height is 6 cm.
 - B. The base is 8 cm.
 - C. The area is 24 square cm.
 - D. That's my right triangle.
 - 8) Supporting sentence 1 of math paragraph 2 ...
 - A. The height is 6 cm.
 - B. The base is 8 cm.
 - C. The area is 24 square cm.
 - D. That's my right triangle.
 - 9) Supporting sentence 2 of math paragraph 2 ...
 - A. The height is 6 cm.
 - B. The base is 8 cm.
 - C. The area is 24 square cm.
 - D. That's my right triangle.
 - 10) Main idea of math paragraph 2...
 - A. My right triangle has a height of 6 cm
 - B. The base of my right triangle is 8 cm
 - C. The area of my right triangle is 24 square cm
 - D. My right triangle
 - 11) Supporting idea 1 of math paragraph 2...
 - A. My right triangle has a height of 6 cm
 - B. The base of my right triangle is 8 cm
 - C. The area of my right triangle is 24 square cm
 - D. My right triangle
 - 12) Supporting idea 2 of math paragraph 2...
 - A. My right triangle has a height of 6 cm
 - B. The base of my right triangle is 8 cm
 - C. The area of my right triangle is 24 square cm
 - D. My right triangle
- If a student answers one question according to the answer key, they receive a score of 1. If they answer incorrectly, they receive a score of 0. Therefore, the maximum possible score a student can achieve is 18.
- The score for the reading skills learning outcomes of the math paragraph is analyzed. using descriptive statistical procedures. The types of procedures used are mean and percentage. Malik & Hamied (2014) and Razak (2005) state that data that does not meet the requirements for analysis



using inferential statistical procedures for certain reasons, such as sampling, can be switched to using descriptive statistics.

FINDINGS

1. Learning Procedures

1.1 Initial Activities

The initial learning activities for reading mathematical paragraphs using multiple-choice tests using special teaching materials in grade 5 of SD Negeri 8 Mataram consist of three initial activities. These activities are:

- 1) students respond to the teacher's greeting when the teacher opens the class.
- 2) each student receives special teaching materials.
- 3) the teacher facilitates students in filling in the attributes, namely name and class, on the cover of the special teaching materials.

1.2 Core Activities

The core activities of learning mathematical paragraph reading skills using multiple-choice test techniques through special teaching materials in grade 5 of SD Negeri 8 Mataram contain 18 core activities. The activities in question are:

- 1) Teachers facilitate students to answer multiple-choice questions 1 using special teaching materials.
- 2) Teachers facilitate students to answer multiple-choice questions 2 using special teaching materials.
- 3) Teachers facilitate students to answer multiple-choice questions 3 using special teaching materials.
- 4) Teachers facilitate students to answer multiple-choice questions 4 using special teaching materials.
- 5) Teachers facilitate students to answer multiple-choice questions 5 using special teaching materials.
- 6) Teachers facilitate students to answer multiple-choice questions 6 using special teaching materials.

- 7) Teachers facilitate students to answer multiple-choice questions 7 using special teaching materials.
- 8) Teachers facilitate students to answer multiple-choice questions 8 using special teaching materials.
- 9) Teachers facilitate students to answer multiple-choice questions 9 using special teaching materials.
- 10) Teachers facilitate students to answer multiple-choice questions 10 using special teaching materials.
- 11) Teachers facilitate students to answer multiple-choice questions 7 using special teaching materials. Question 11: Multiple Choice Questions Using Special Teaching Materials
- 12) Students are facilitated by the teacher to answer Question 12: Multiple Choice Questions Using Special Teaching Materials
- 13) Students are facilitated by the teacher to answer Question 13: Multiple Choice Questions Using Special Teaching Materials
- 14) Students are facilitated by the teacher to answer Question 14: Multiple Choice Questions Using Special Teaching Materials
- 15) Students are facilitated by the teacher to answer Question 15: Multiple Choice Questions Using Special Teaching Materials
- 16) Students are facilitated by the teacher to answer Question 16: Multiple Choice Questions Using Special Teaching Materials
- 17) Students are facilitated by the teacher to answer Question 17: Multiple Choice Questions Using Special Teaching Materials
- 18) Students are facilitated by the teacher to answer Question 18: Multiple Choice Questions Using Special Teaching Materials

1.3 Closing Activities

The final activity of learning mathematical paragraph reading skills using multiple-choice tests using special teaching materials in grade 5 of SD Negeri 8 Mataram consists of two closing activities:

- 1) Students hand over the special teaching materials to the teacher
- 2) Students respond to the teacher's greeting when the teacher Closing the Learning Program

All learning activities for mathematical paragraph reading skills using multiple-choice tests using special teaching materials in grade 5 of SD Negeri 8 Mataram were in accordance with the lesson plan. This alignment occurred in the learning sequence and the objectivity of the learning activities.

2. Learning Outcomes

The mean learning outcome for mathematical paragraph reading skills using multiple-choice oral tests using special teaching materials in grade 5 of SD Negeri 8 Mataram was 15.69 or 87.17 percent, with a standard deviation of 0.73. This mean value is considered high. Maximum score is 16.99 and minimum score is 14.27.

DISCUSSION

The learning outcomes achieved by grade 5 students at SD Negeri 18 Mataram are considered high. This is thought to be due to several factors. First, the special teaching materials. Second, the learning technique factor, which has a domino effect, namely learning motivation.

Special teaching materials containing practice questions are believed to be the main factor contributing to the high learning outcomes for mathematical paragraph reading skills. These teaching materials help teachers express their understanding to students, helping them follow the learning process and achieve maximum learning outcomes. In other words, teaching materials that are in ac-

cordance with learning objectives are a guarantee for students to be able to achieve high results.

Regarding the role of teaching materials that are appropriate to learning objectives as having a very important role in learning, many can be found in scientific articles in online journals. Among the many articles are articles published in the name of (Sudirman et al., 2023; Asnan, 2022; Hasnawati, 2022; Kasim & Razak 2023).

The test technique, namely multiple choice tests, is also believed to be the cause of high learning outcomes. This is because this technique is able to trigger extrinsic motivation for students. This means that students are motivated to be able to answer questions correctly so that they get high results. Several online journal scientific articles involving testing techniques in learning were written by (Andriani & Rasto, 2019; Muhammad, 2016; Raisah et al., 2023; Nadrah, 2025; Pratiwi et al., 2025).

CONCLUSION

At the end of this article two conclusions are presented. The intended conclusions are:

- 1) The learning procedure for mathematical paragraph reading skills through a multiple-choice test using special teaching materials involves two initial activities, 18 core activities, and three final activities.
- 2) The learning outcomes for fifth-grade students of SD Negeri 8 Mataram achieved a standard mean of 87.17, which is considered high.

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