

## Improving Mathematics Learning Outcomes For Fourth Grade Students At SD Negeri 0309 Pagaranbira Using Unit Square Media

**Supiati**

SD Negeri 0309 Pagaranbira  
Email : supiatipagaranbira@gmail.com

**Abstract,** In the context of square unit media on flat shapes, how the application of square unit media in broad flat shapes learning affects student activities and learning outcomes will be discussed. In particular, this study aims to describe student activities and student learning outcomes using the media unit squared on the flat plane of fourth grade students at SD Negeri 0309 Pagaranbira. The method used in this research is qualitative and descriptive research. The data of this study were obtained from students of SD Negeri 0309 Pagaranbira. The subjects of this study were the fourth grade students of SD Negeri 0309 Pagaranbira, totaling 36 students. Collecting data using observation and tests. Researchers observe student learning activities, and tests are questions that researchers give to students. Data processing uses data reduction, data presentation, conclusion drawing/validation, and percentages. The results showed that the application of square unit media to student activities in the fourth category of SD Negeri 0309 Pagaranbira in the field of flat shape learning showed that not all of the 12 aspects observed by the researchers could be implemented by students in the wide flat wake learning process. surface. Fourth graders form. Aspects of the learning process that have not been realized include cutting square units, using the formula for the area of a rectangle. The results of the learning test showed as many as 27 students who completed and as many as 6 students who did not complete. From the results of data analysis, it can be seen that the student integrity test has been completed. Referring to the KKM in the school environment, "Every student is said to have completed his studies and achieved a minimum competency score of 70." Teachers are expected to use interesting media to teach and motivate students to complete assignments and learn so that students' activities will be much better.

**Keywords :** Media, Unit Square, Area of flat shape

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license



### I. INTRODUCTION

Education is the most important part of life because in education there is learning, a process of change experienced by everyone. If a person becomes conscious

from previously unconscious and can do things that were previously impossible, the process is called change. Susanto, (2016) argues that learning is a two-way communication between teachers and students, and teaching is carried out by

teachers as educators, while learning is carried out by students. Learning includes the notion of learning and teaching, or a teaching and learning activity.

According to Law No. 20 of 2003 (Sanjaya, 2006), education is a conscious and threatened effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by himself, society and the State.

In the learning process, a person will gain knowledge or insight that is very diverse. This knowledge and insight includes social sciences and exact sciences. Social science topics studied in elementary school, civic education, religious education, environmental education, local culture and arts and crafts. The exact sciences include scientific conditions and logical thinking in the surrounding life, which can be implemented in elementary schools in natural science and mathematics lessons.

Mathematics is one of the exact subjects studied at the elementary school level. Mathematics is often considered a difficult subject for students to learn, especially in general elementary schools, and Indonesian students still have low math scores. This can be seen from the Program for International Student Assessment

(PISA) survey, which shows that the mathematical ability of students under the age of 15 is still low. The average score of Indonesian students in 2012 was 375, ranking 64 out of 65 countries (OECD, 2003).

Judging from abstract mathematical concepts, the thinking stage of elementary school students is usually concrete and concrete, teachers and parents should try to make abstract concepts concrete so that students do not feel difficult. At this stage, the teacher must use physical media such as sticks, pebbles, etc. Because it is often difficult for students to understand concepts without using physical objects.

In learning the area of flat shapes, the teacher can apply concrete media in the form of a unit square. According to Hidayah and Sugiarto (in Sugianto, 2015:9), what is meant by a unit square to determine the area of a rectangular area is a teaching aid made of transparent plastic (mica) in the form of a rectangle, lined into squares.

When researchers observed in grade IV SD Negeri 0309 Pagaranbira semester 1 of 2021, many students had difficulty in calculating the area of flat shapes for various types of flat shapes. They don't know how to find the formula for flat shapes, and usually students memorize the formula for the area of a rectangle, but they don't understand either. Students cannot

solve the problems given by the teacher if they do not remember the formula for the area of a flat shape.

## **II. RESEARCH METHODS**

The methodology of this research is a qualitative method and the type of descriptive research. Sugiyono, (2013) says that qualitative research methods are research methods (as opposed to experiments) that are used to examine the condition of natural objects, where the researcher is the key tool, the data collection technique is done by triangulation (combination), and the analytical data is inductive. , his findings emphasize meaning rather than generalization.

Sugiyono, (2013) states: "Descriptive statistics are statistics used to analyze data by describing or describing the data that has been collected, without the intention of drawing conclusions that apply to the public or generalizing.

The purpose of this research is to describe, analyze and interpret the data. Instead of manipulating the data, the researcher provides an overview of the condition. The research was conducted by collecting data, processing and describing the results. Explain what happens when research is conducted properly and objectively.

## **III. RESEARCH RESULTS AND DISCUSSION**

A good learning process will definitely affect students' understanding of the material taught by the teacher. The main purpose of the learning process is the student learning process. Learning is an attempt to create conducive learning conditions for students. In learning activities, students are required to actively learn. That is, it is an activity that is indispensable in learning. Without activity, the learning process cannot run well. Therefore, activity is a very important principle or principle in teaching and learning interactions.

Observation sheets were used to obtain data on student activities during the mathematics learning process. Observations were made at each meeting by observing, recording, and filling in the names of students who carried out activities according to the indicators that had been prepared. This research took place in the morning, the condition of students still seemed enthusiastic and enthusiastic in participating in learning. In this study, learning methods and media serve to provide easier understanding to students in participating in learning.

Mathematics learning is not effective, and students will not be interested in learning without special media that involve

students actively in the learning process. Based on the 12 aspects of student activity data ability in learning I, there are several aspects that are not carried out in learning, namely cutting paper 1 cm long, covering circumference and area with square unit media, presenting the results of pre-class discussions, asking questions. The formula for finding the perimeter and area of a rectangle, even though the researcher has explained it to students.

In the first aspect, students observe rectangular pictures, such as tables and blackboards, in books or classrooms. In the second aspect, students identify flat shapes in classrooms and books, and the properties of rectangles are opposite sides of the same length. In the third area, students measure the sides of the rectangle. In the fourth field, students write down the results of measuring the length and width of a rectangle. In the fifth aspect, students use 1 cm long paper to make square unit media. In the sixth aspect, students use the media unit square to find the perimeter and area of a rectangle. In the seventh area, students answer the questions in the book. In the eighth area, students discuss this problem with their partner or group. In the ninth aspect, students present the results of their discussions in front of the whole class. In the tenth aspect, students ask questions or provide comments to friends who present

the results of their discussions. In the eleventh aspect, students spelled worksheets by calculating the square of the unit, and in the twelfth aspect, students found the formula for the perimeter and area of a flat shape.

Based on student learning outcomes, it was shown that the 12 aspects observed by the researchers were not all implemented in the learning process of flat-to-level learning for fourth grade students. The aspects that were not implemented in the learning process included cutting the unit square, finding the formula for the perimeter of a rectangle. In this second learning, the goal or activity is further increased in the first learning.

In the third lesson, it was shown that the 12 aspects observed by the researchers were not all implemented in the learning process of flat-to-wide learning for fourth grade students. The aspects that were not implemented in the learning process included finding the formula for the perimeter and area of a rectangle, in this third lesson the activities of students increased.

Hosnan, (2014) said: "In learning activities, teachers must realize that each student has an optimal and different way to learn and understand new information". From this it can be concluded that the application of square unit media on

rectangular area material can help students understand the material and stimulate learning motivation in the learning process. Observations based on student events during the learning process apply to student activities during the learning process. Student learning activities are exercises that are carried out consciously to bring about changes in students' knowledge, values, attitudes, and skills.

Effective learning is learning that provides opportunities for self-study or individual activities. So that students can act as actors in learning activities, teachers must plan a learning process that requires students to carry out learning activities in large numbers so that students can learn lessons and reflect on their learning outcomes. Learning outcomes play an important role in the learning process. The low level of student learning activities also often results in reduced understanding and mastery of learning materials. If this is allowed to continue, it cannot be denied that it will affect learning outcomes.

Mathematics is an abstract subject that requires teachers to have the ability to find the right way according to the level of psychological development of students. Rectangles are an important part of mathematics. We use rectangles every day. This situational learning theory assumes that learning is not about memorization, but

about experience, and students can build their own knowledge through innovative and active participation in the learning process.

#### **IV. CONCLUSION**

In the research that the author conducted, the use of media in square units at SD Negeri 0309 Pagaranbira Class IV allows students to actively participate in the learning process. Researchers used flat boxes made of cardboard and origami to attract students' attention. Early students have never used mobile media, so students are positive, interested and happy to use mobile media. Based on the research data sources and the results of data analysis, the following conclusions can be drawn:

1. The use of the area of a flat shape by the media of a square unit in the mathematics learning process can help students understand the material of rectangular area. This can be seen from the average score obtained 75,7.
2. Student activities show enthusiasm, and they are motivated to use the media unit to participate in learning. Likewise, student activity increased from lessons 1, 2, and 3.

#### **BIBLIOGRAPHY**

Ahmad Susanto, M. P. (2016). *Teori belajar dan pembelajaran di sekolah dasar*. Kencana.

Hosnan, M. (2014). Pendekatan Saintifik dan Konstektual Dalam Pembelajaran Abad 21 Kunci Sukses Implementasi Kurikulum 2013. *Bogor: Ghalia Indonesia.*

OECD. (2003). *Literacy Skills for the World of Tomorrow—Further results from PISA 2000.* OECD, dostupno na <http://www.oecd.org>.

Sanjaya, W. (2006). *Pembelajaran dalam implementasi kurikulum berbasis kompetensi.* Kencana.

Sugiyono, D. (2013). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D.*