
KERBAU MEDIA IN IMPROVING LEARNING RESULTS STUDENTS OF CLASS V SDN BANYUAJUH 4

Cahyani Setyatika Ramadhani^{1*}, Evi Kharisma Azhari², Wahyu Kusuma
Andini³, Ananda Fitri Syarmila⁴, Andika Adinanda Siswoyo

^{1,2,3,4,5} Elementary School Teacher Education Study Program, Faculty of Education,
Trunojoyo University Madura, Madura, Kamal 69162, Bangkalan, East Java, Indonesia

email korespondensi: 190611100248@student.trunojoyo.ac.id¹,
190611100250@student.trunojoyo.ac.id², 190611100255@student.trunojoyo.ac.id³,
190611100265@student.trunojoyo.ac.id⁴, andika.siswoyo@trunojoyo.ac.id⁵

ABSTRACT

Application of the Contextual Approach with the Buffalo Media (Kramangka Bangun Ruang) in Improving Learning for Grade V students at SDN Banyuajuh 04 academic year 2021/2022. The purpose of this study is to improve learning about the properties of prisms through the application of a contextual approach with buffalo media (framework) in fifth grade students of SDN Banyuajuh 04 Academic Year 2021/2022. This collaborative Classroom Action Research (CAR) was carried out in three cycles consisting of planning, implementation, observation and reflection. The subjects of this study were the fifth grade students of SDN Banyuajuh 04 for the academic year 2021/2022 with a total of 12 students. The conclusion of this study is that the application of a contextual approach with buffalo media can improve the learning of spatial construction in fifth grade students of SDN Banyuajuh 04 academic year 2021/2022.

ARTICLE INFO

Article Info:

Received 04 Jul 2022

Revised 11 Jul 2022

Accepted 15 Jul 2022

Available online 15 Jul 2022

Keyword:

Keyword 1, Contextual Approach

Keyword 2, Concrete Media

Keyword 3, Learning Result

A. Introduction

Learning is a process of interaction between students and teachers and learning resources that are planned, implemented, and evaluated systematically in a learning environment to achieve optimal, effective and efficient learning objectives (Pane & Dasopang, 2017). Learning in elementary schools essentially aims to provide basic reading, writing, arithmetic, knowledge, and basic skills that are useful for students (Ramelan, 2017). Learning in elementary school is divided into several fields of study, one of which is Mathematics. KTSP 2022 elementary mathematics, there are several material studies that must be mastered by elementary school students, one of the study materials is building space.

Based on the results of observations and interviews conducted in the fifth grade of SD Negeri Banyuajuh 04, it shows that one of the materials that takes a long time to be understood by students is the material about building up space. Students have difficulty in identifying or determining the number and location of parallel and congruent sides, vertices of the same size and rib of the same length contained in the shapes. It is found that in learning mathematics at SDN Banyuajuh 04, teachers still use a teacher-centred or teacher-centered learning approach, only focusing on the core concept, namely emphasizing on explaining the material orally (lectures), conducting questions and answers and giving practice questions for students to do (assignments) and assessing student work. When introducing forms of space, the teacher has used model media, but students only see the shape of the space shown by the teacher, the teacher has not linked the material to the natural situation of students and students are still not active in learning, less enthusiastic, easily bored and embarrassed to ask questions when they do not understand the material being studied.

These learning conditions ultimately affected the students' daily math test scores for the 2021/2022 academic year, which did not reach the maximum limit. From the results of the implementation of the formative test for Mathematics Class V Semester II for the 2021/2022 academic year at KD Determining the nets of 12 students, only 7 students got very unsatisfactory scores. From these data, it turns out that during the learning process, it appears that students pay less attention, are less motivated to learn, do not want to ask the teacher and find it difficult to catch lessons. Based on these problems, it is necessary to make improvements so that learning becomes better and can improve learning skills to determine the

nets of cubes and blocks. One way to make learning more meaningful is to apply a contextual learning approach.

Through this contextual approach, it is hoped that learning will be more meaningful and allow students to construct their own thoughts to find these concepts and principles, and to know what the concepts are studied for, students can learn to be more active, creative, and create a meaningful impression for students. The application of a contextual approach with concrete media in the form of rectangular upright prisms and triangular upright prisms can be used as an effort to improve mathematics learning, especially learning about the properties of rectangular upright prisms and triangular upright prisms. The application of a contextual approach with concrete media in the form of rectangular upright prisms and triangular upright prisms is related to the notion of Mathematics which is a study material with abstract objects. The emergence of real problems or things using concrete media in the form of rectangular upright prisms and triangular upright prisms related to students' lives can channel the abstract mathematics material into students' thinking. In addition, it is also in accordance with the stage of development of fifth grade elementary school students, namely the concrete operational stage (Bujuri, 2018). At this stage, everything that is understood by students is something that is in accordance with the reality they experience.

Learning is defined as a process of interaction between students and teachers and learning resources in a learning environment (Law No. 20 of 2003 on National Education System, 2003: 5). Mathematics is a study material that has an abstract object built with a deductive thinking pattern where the postulates after being proven true through problem solving, so that they apply in general (Wahyudi, 2015). Fifth grade elementary school students are in the age range of 10-11 years are at the stage of concrete operational development, have a strong curiosity, are interested in the world around themselves, are active, like to play and fun things, like to try new things, have a cooperative nature and can work together and get along with friends well, start learning by using simple scientific principles, learn by observing work, taking initiative, trying, being able to follow existing rules, and starting to be motivated to excel (Nisa et al., 2015). At this age range, children have been able to think logically and systematically and begin to see things based on their perceptions but only through concrete understanding and have not been able to think abstractly.

The improvement of Mathematics learning for fifth grade elementary school students is a conscious and directed effort that has been designed in such a way by teachers to improve mathematics learning activities by using educational principles and learning theories that allow students to take an active role in learning activities so that learning objectives can be achieved (Subhanarrijal et al., 2016). Improving mathematics learning outcomes can be achieved if learning is packaged more contextually, active, and fun (Suartini et al., 2015). According to (Trianto, 2013), "The Contextual Approach (Contextual Teaching and Learning) is a learning concept that helps teachers relate the material taught to students' real-world situations and encourages students to make connections between their knowledge and its application in their daily lives.

The application of a contextual approach can be supported by the presence of concrete media. Concrete media can also be interpreted as real media, reality or relia. Asyhar argues that real objects are objects that can be seen, heard or experienced by students so as to provide direct experience to them (Asyhar, 2011). Contextual learning assisted by concrete media is able to support students to be able to relate the material taught to students' lives and encourage students to make connections between knowledge about what they have and their application to everyday life in personal, social and cultural contexts combined with real-dimensional object media. three that have length, width and height that are still intact, the actual size and recognized as the original form to facilitate the concept to be conveyed to students so that students feel interested, and really gain an understanding of what they have learned.

Contextual Teaching and Learning (CTL) has seven main components (Sagala, 2012). The seven components of the contextual approach are constructivism, questioning, inquiry, learning community, modeling, reflection and authentic assessment. The formulation of the problem from this collaborative classroom action research is: Can the application of a contextual approach with concrete media improve learning about the properties of prisms in class V SDN Banyuajuh 04 academic year 2021/2022.

The objectives of this collaborative classroom action research are: to improve learning about the properties of spatial structures through the application of a contextual approach with concrete media to the fifth grade students of SDN Banyuajuh 04 academic year 2021/2022.

B. Method

This Classroom Action Research (CAR) was conducted at SD Negeri Banyuajuh 04 Madura, Bangkalan, East Java. The subjects of this study were the fifth grade students of SDN Banyuajuh 04 for the academic year 2021/2022, totaling 12 students. The data collection technique used is Didactical Design Research (DDR). This method focuses on designing, developing, evaluating a particular design as a solution to solving a problem that exists in learning. Other methods are also used including formative tests (oral and written), homeroom interviews, and observation.

C. Result and Discussion

Cycle I

Conducted on April 20, 2022 held at SDN Banyu Ajuh 4 in grade 5. Implementation at 08.00-11.00 WIB.

a. Planning

This stage begins with initial observations and interviews to identify problems so that problems are obtained. The plans prepared for this activity include:

1. Identify the problems that exist in students.
2. Plan solutions to the known problems.
3. Develop a Learning Implementation Plan (RPP) in mathematics subjects about building cubes and blocks.
4. Prepare observation sheets and interview guidelines for teachers and students as well as prepare written test sheets for students.
5. Prepare the media that will be used in the improvement of learning as well as the tools and materials needed.

a. Implementation

1. Opening

First, the teacher greets the students and prepares the class by greeting. Then, the teacher appointed one student to lead the prayer together and sing the national anthem "Indonesia Raya" with wisdom. The teacher provokes students by giving apperceptions asking the shape of the cube and its nets and examples in everyday life. Another perception was also given by asking about the shape of the blocks and their nets, for example in everyday life. After all that the teacher asked the students voluntarily to come to the front of the class by describing the nets of cubes and blocks. At that time

there were many students who wanted to come forward to draw on the blackboard, but only 2 students were chosen. Additional questions were given by the teacher by asking how to calculate the volume and area of cubes and blocks. Students actively answer the formulas of the two shapes. Every question asked was answered by students enthusiastically.

2. Core

First Syntax

The teacher together guides students to analyze and understand what elements are in the shape of cubes and blocks with the media "Buffalo". It was seen that the students were enthusiastic because based on the resource person the class teacher said that during the material building cubes and blocks did not use learning media. And provide opportunities for students to ask questions if they feel something is not understood. In addition, teachers and students do ice breaking by clapping 3 6 9. This has the aim of stimulating students so they don't feel bored during the learning process.

Second Syntax

First, the teacher forms small groups according to the number of students in the class. Since there are 12 students, they are divided into two groups. After that, the teacher gives questions for students to work on in groups. The teacher asks group members to work together on the problems that have been distributed. Group members choose to divide the questions so that they can work faster.

Third Syntax

The teacher supervises the group's performance. The teacher's job is to supervise and guide students if there are difficulties. The teacher also observes how students discuss working on the questions that have been distributed previously. Serve students who find it difficult and discipline students who are busy in their own world.

Fourth Syntax

During the work on the questions, the students were able to apply the cube and block formulas to the existing questions. However, it was found that some students were unable to apply multiplication in order to find answers. And some students also can't use Jarimatika. At that time the teacher also taught how to use arithmetic and use multiplication to work on problems. After that, students together explain the results of their group discussions.

Fifth syntax

The teacher analyzes and also evaluates the performance results of each group together with the students. So the teacher discusses the questions that were previously on the blackboard which are then matched with the answers from the students' work. It was found that some students could not continue their answers because they could not apply multiplication and arithmetic. Then the teacher gives homework in the form of learning about the application of arithmetic and multiplication in a row as a form of evaluation to students.

3. Closing

In closing, students and teachers review the learning that has taken place. Find out the reason why they can't apply multiplication and arithmetic in problems. At the same time, the teacher gives advice to students and tells them to stay diligent in studying and stay enthusiastic during learning. The teacher then asked one student to lead the prayer before going home. As a form of appreciation gift to the students, the teacher distributed small gifts to all students. From this small gift, students feel happy.

b. Observation

At the time of conducting classroom action research (CAR) in cycle 1, there were observations or observations which were included in the researcher stage. The researcher used this stage for the 5th grade students and teachers of SD Negeri Banyuajuh 04. On observation, the researcher could see that the 5th graders had difficulties in understanding and calculating formulas from blocks and cubes. Researchers used interview guidelines for 5th grade teachers and written tests for 5th grade students. Researchers could observe during student learning activities and ongoing learning activities.

c. Reflektion

Reflection is done after making observations. If the learning in Cycle I about nets of cubes and blocks found an obstacle, namely the existence of student scores who have not reached the KKM or the action has not been achieved optimally, it is necessary to make improvements in Cycle II. Data from observations from three observers on teachers and students can be seen in the following table:

Table 1. Results of Observation of the Application of Contextual Approach with Concrete Media on Teachers and Students Cycle I

No	Students Name	Observation Score (%)
1	Rama	60
2	Sherly	40
3	Dini	40
4	Azam	20
5	Nabila	60
6	Nayla	60
7	Fitri	20
8	Hafidz	40
9	Ilham	20
10	Ahmad	20
11	Iyun	20
12	Obert	40
Average		37%

Based on the data in the table above, it shows that there is an increase in the results of observations of teachers and students in the application of a contextual approach with concrete media in the form of building spaces. In terms of student scores, the average percentage of observations in the first cycle was 37%. In addition to the learning process carried out by teachers and students in applying a contextual approach with concrete media in the form of spatial structures, the following table shows the completeness of the process and student learning outcomes in cycles I and II following:

Cycle 2

Conducted on May 17, 2022 held at SDN Banyu Ajuh 4 in class 5. Implementation at 08.00-11.00 WIB.

a. Planning

This stage begins with initial observations and interviews to identify problems so that problems are obtained. The planning plans prepared in this activity include:

1. Identifying problems in the reflection of Cycle I.
2. Planning a solution to the problem.
3. Rearrange the Learning Implementation Plan (RPP) in mathematics subjects regarding the shape of cubes and blocks.
4. Prepare the media that will be used in the improvement of learning as well as the tools and materials needed.
5. Prepare test questions after learning is carried out
6. Prepare the assessment sheet

b. Core

Opening

First, the teacher greets the students and prepares the class by greeting. Then, the teacher appointed one student to lead the prayer together and sing the national anthem "Indonesia Raya" with wisdom. Then the teacher positioned all the students already sitting in the position of each group quietly. The teacher conveys a plan of activities that will be carried out by each group by developing students' creativity through observations of cubes and blocks as props that have been brought by students from home.

First Syntax

The teacher guides students to measure their respective objects in the form of cubes and blocks, then students calculate the surface area of the object then the results of the discussion are written on the paper provided by the teacher.

Second Syntax

From the calculation results, students are asked to find the size of the object size of the block freely which results in the surface area of the object is the same as the object that the student brings. Then each group presents the results of the group discussion in front of the class.

Third Syntax

Then the teacher re-explains the material to students and provides reinforcement from the results presented. After students feel they understand the teacher's explanation, then the teacher gives the worksheets and props needed.

Fourth Syntax

Students start working on assignments and observe the shapes that have been brought according to the worksheets given. The teacher just looks at and observes the work of students in groups. If there are groups that have difficulty, the teacher gives prompting questions that will help students answer/solve the problem.

Fifth Syntax

The next activity the teacher invites all groups to collect the worksheets that have been done. After all groups have collected the worksheets, the teacher checks the student worksheets.

Closing

In closing, students and teachers review and conclude again about the learning that has taken place. At the same time, the teacher gives advice to students and tells them to stay diligent in studying and stay enthusiastic during learning. The teacher then asked one student to lead the prayer before going home. As a form of appreciation gift to the students, the teacher distributed small gifts to all students. From this small gift, students feel happy.

c. Observation

In cycle II there are the same observations in cycle I. However, at this stage there are 2 namely learning activities and learning activities. As in the first cycle, observations can be made by the teacher himself. In cycle II learning activities are not as complicated as in cycle I but can be observed during learning activities. During the learning activities, the researcher gave a second test to determine student learning outcomes.

d. Reflektion

Reflection is done after making observations. In the second cycle found an increase in student learning outcomes. Their learning outcomes were found to have reached the KKM. The completeness of the student learning process is known by looking at the results of the formative test.

Tabel 2. Persentase Skor Observasi Proses Belajar Siswa Siklus I dan II

Name Students	Mastery of Learning Outcomes	
	Complete Cycle I	Complete Cycle II
Rama	60%	75%
Sherly	40%	43%
Dini	40%	45%
Azam	20%	45%
Nabila	60%	80%
Nayla	60%	85%
Fitri	20%	40%
Hafidz	40%	56%
Ilham	20%	46%
Ahmad	20%	50%
Iyun	20%	45%
Obert	40%	60%
Average	37%	55,83%

The data in the table above shows that the mastery of student learning outcomes always increases in each cycle. In the first cycle the percentage of student learning completeness is 37%, in the second cycle it has increased to 55.83%. The learning carried out in two cycles through the application of a contextual approach with concrete media in the form of buffalo media (framework)

in class V SDN Banyuajuh 04 academic year 2021/2022 has increased in terms of processes and results.

From this research, there are several obstacles encountered, namely: (1) There are some students who play alone when the teacher explains the material and during discussions, (2) students still look shy to express opinions or ask questions, (3) students have not joined the group. , (4) not all students are actively involved in learning. While the solutions to these obstacles are: (1) the teacher carries out interesting learning activities in the delivery of learning materials and in small group discussions, (2) students are continuously encouraged to be more active and confident in asking questions, (3) students increase collaboration between students and students. group members in solving problems, and (4) the teacher gives encouragement and encouragement so that students are active in learning and always create a fun and meaningful learning atmosphere for students. Constraints and solutions in each cycle are different. This is in accordance with the opinion (Shoimin, 2014).

D. Conclusion

Based on the data from research on learning Cycles I and II that have been carried out, the following conclusions can be drawn: Contextual Learning Models can improve student learning achievement for Mathematics for class V at SDN Banyuajuh 4, Kamal District, Bangkalan Regency in the second semester of the 2021 academic year. 2022. With CTL learning becomes active, creative, innovative and fun. This is supported by presenting real objects or artificial objects in learning. So that instilling concepts in students becomes easy because students experience, seek, find and build their own concepts so that learning becomes more meaningful.

Reference

- Asyhar, R. (2011). *Kreatif Mengembangkan Media Pembelajaran*. Gaung Persada Press.
- Bujuri, D. A. (2018). Analisis Perkembangan Kognitif Anak Usia Dasar dan Implikasinya dalam Kegiatan Belajar Mengajar. *Literasi*, IX(1), 37–50.
- Nisa, A. R., Triyono, & Joharman. (2015). Penerapan Pendekatan Kontekstual dengan Media Konkret dalam Peningkatan pada Siswa Kelas V SDN Gumilir 04 Tahun Ajaran 2015/2016. *KALAM CENDEKIA*, 4(2.1).
- Pane, A., & Dasopang, M. D. (2017). Belajar dan Pembelajaran. *FITRAH Jurnal Kajian Ilmu-Ilmu Keislaman*, 3(2), 333–352.
- Ramelan. (2017). Meningkatkan Hasil Belajar Siswa Mata Pelajaran Bahasa Indonesia Melalui Model Example Non Example di Kelas VI SD Negeri NO 053979 Kepala Sungai. *ESJ*, 7(1), 54–61.
- Sagala, S. (2012). *Konsep dan Makna Pembelajaran*. Alfabeta.
- Shoimin, A. (2014). *68 Model Pembelajaran Inovatif dalam Kurikulum 2013*. ArRuzz Media.
- Suartini, N. M., Marhaeni, A. A. I. ., & Dantes, N. (2015). Pengaruh Implementasi Model Pembelajaran Kontekstual Berbasis Lingkungan terhadap Minat dan Hasil Belajar Matematika Siswa Kelas V SD Negeri 5 Bunutan. *E-Journal Program Pascasarjana Universitas Pendidikan Ganesha*, 5, 1–13.
- Subhanarrijal, A., Triyono, & Wahyudi. (2016). Penerapan Model Problem Based Learning dengan Media Konkret dalam Peningkatan Pembelajaran Pecahan pada Siswa Kelas IV SDN 01 Bojongsari Tahun Ajaran 2015/2016. *KALAM CENDEKIA*, 4(3.1), 283–289.
- Trianto. (2013). *Mendesain Model Pembelajaran Inovatif Progresif: Konsep, Landasan, dan Implementasinya pada Kuri-kulum Tingkat Satuan Pendidikan (KTSP)*. Kencana Publisher.
- Wahyudi. (2015). *Pembelajaran Matematika di Sekolah Dasar*. FKIP UNS.



© 2022 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution ShareAlike (CC BY SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>).