

MULTIPLICATION AND DIVISION LEARNING ASSISTANCE USING THE FUN LEARNING METHOD ASSISTED BY RECYCLING TEACHING AIDS AT KOBER BINA WARGA MEKARJAYA

Emas Marlina¹, Windra Tasya Mahesa², Ade Rukmana Julianti³, Neneng Bernika Cahayati⁴

^{1,2,3,4}Universitas Bale Bandung, Java, Indonesia

¹emasmarlina@unibba.ac.id, ²windratasya21@gmail.com, ³ader7062@gmail.com,

⁴nenengbernika112@gmail.com

ABSTRACT

Education is instrumental in shaping individuals and societies, with mathematics education serving as the foundation for critical thinking and problem-solving skills. Understanding multiplication and division concepts is crucial for young learners, as it provides the groundwork for advanced mathematical concepts. To enhance the learning experience and make it enjoyable, innovative teaching methods and creative teaching aids are essential. This abstract focuses on the implementation of a fun learning method, supported by recycling teaching aids, for multiplication and division learning assistance at Kober Bina Warga Mekarjaya. Kober Bina Warga Mekarjaya is a renowned educational institution committed to providing quality education to young learners. Recognizing the importance of engaging teaching techniques, the institution has adopted a fun learning approach to enhance students' understanding of multiplication and division. This approach integrates playfulness and creativity into the learning process, fostering an enjoyable environment and facilitating a deeper comprehension of mathematical concepts. One innovative strategy employed in this learning approach is the use of recycling teaching aids. These aids are created from recyclable materials, promoting sustainability and environmental awareness among students. By incorporating recycling into the learning process, students not only gain mathematical knowledge but also develop a sense of responsibility toward the environment. This approach encourages active engagement and nurtures ecological consciousness among young learners.

Keywords: Assistance, Fun Learning Method, Teaching Aids.

INTRODUCTION

Education plays a vital role in shaping the future of individuals and societies. In particular, mathematics education forms the foundation for various critical thinking and problem-solving skills. For young learners, understanding multiplication and division concepts is essential as it provides the basis for more advanced mathematical concepts. To

enhance the learning experience and make it more enjoyable, the use of innovative teaching methods and creative teaching aids is crucial. This introduction focuses on the implementation of a fun learning method, supported by recycling teaching aids, for multiplication and division learning assistance at Kober Bina Warga Mekarjaya.

Kober Bina Warga Mekarjaya is a renowned educational institution

committed to providing quality education to young learners. Recognizing the significance of engaging teaching techniques, the institution has adopted a fun learning approach to enhance students' understanding of multiplication and division. The integration of playfulness and creativity in the learning process not only fosters an enjoyable environment but also facilitates a deeper understanding of mathematical concepts.

One of the innovative strategies employed in this learning approach is the utilization of recycling teaching aids. These teaching aids are crafted from recyclable materials, promoting sustainability and environmental awareness among the students. By incorporating recycling into the learning process, students not only gain knowledge in mathematics but also develop a sense of responsibility towards the environment. This approach encourages active engagement and nurtures a sense of ecological consciousness among young learners.

The implementation of multiplication and division learning assistance using the fun learning method, assisted by recycling teaching aids, at Kober Bina Warga Mekarjaya aims to create a positive and stimulating learning

environment for students. Through this approach, students will not only grasp mathematical concepts more effectively but also develop critical thinking skills, creativity, and environmental awareness. This introduction sets the stage for further exploration of the practical implementation, benefits, and outcomes of this innovative approach in supporting young learners' mathematical growth and holistic development.

Learning is a process of changing student behavior where the process of change requires what is called a stimulus as well as a response and as an actor as well as a regulator in the teaching and learning process, it is the teacher who should create an atmosphere that is meaningful, fun, creative, dynamic and dialogical so that the stimulus and response are connected to each other. In line with Government Regulation No. 19 of 2005 article 19 paragraph one which reads: "The learning process in educational unit is carried out in an interactive, inspiring, fun, challenging manner, motivating students to participate actively, providing sufficient space for initiative, creativity and independence according to with the talents, interests and physical and psychological development of students. Where the role of educators is needed for a fun teaching and learning

process, especially when it comes to mathematics subjects which according to surveys are considered boring and also a headache for students.

Mathematics is known as a basic science to master various kinds of knowledge, where we must be able to think critically, logically and systematically. Therefore, cultivating a love for Mathematics is needed from an early age, in the process of learning basic Mathematics in early childhood a method that is not boring also creates comfort for the students. Therefore, teachers as educators are required to understand various effective learning methods in order to be able to guide students optimally. In this study, the fun learning method was used with the hope of increasing early childhood interest in basic mathematics material regarding multiplication and division with the help of recycling props.

The fun learning method is a learning method where the teacher can create a warm and fun atmosphere in the learning process. With a warm and pleasant atmosphere, whatever is taught will be easily accepted by students at Kober Bina Warga Mekarjaya.

IMPLEMENTATION METHOD

The design of this research was made by looking at the ability problems of children at an early age who have difficulty learning mathematics, especially in multiplication and division. Seeing the difficulties children have in learning mathematics, especially in multiplication and division, the researchers will make teaching more fun and of course be able to make children understand more quickly using the fun learning method. This fun learning method will be assisted by recycling props which are of course easy to make and practiced by teachers and parents by making two recycling props, namely used bottle recycling props and used cardboard recycling props.

The multiplication and division learning assistance method at Kober Bina Warga Mekarjaya incorporates a fun learning approach to engage students and enhance their understanding of mathematical concepts. The method utilizes a variety of interactive and hands-on activities to make the learning experience enjoyable and meaningful. Through the integration of games, puzzles, and real-life examples, students are actively involved in the learning process, promoting active engagement and retention of knowledge.

Central to this method is the use of recycling teaching aids. These teaching aids are created from recycled materials, promoting environmental sustainability and instilling a sense of responsibility towards the planet. By incorporating recycling into the learning process, students not only gain mathematical knowledge but also develop an understanding of the importance of reducing waste and protecting the environment. These teaching aids are designed to visually represent multiplication and division concepts, making them more accessible and tangible for students.

The fun learning method focuses on creating a positive and stimulating learning environment. Teachers at Kober Bina Warga Mekarjaya employ various instructional strategies, such as group activities, role-playing, and problem-solving tasks, to encourage collaboration, critical thinking, and creativity among students. The method also emphasizes personalized learning, allowing students to progress at their own pace and providing individualized support when needed. This approach recognizes that each student has unique learning styles and preferences, fostering a more inclusive and effective learning experience.

Regular assessments and evaluations are an integral part of the multiplication and division learning assistance method. Teachers at Kober Bina Warga Mekarjaya utilize formative assessments, such as quizzes and games, to monitor students' progress and identify areas that require further attention. These assessments not only provide valuable feedback for students but also help teachers tailor their instructional strategies to address individual learning needs. Additionally, periodic evaluations enable the school to assess the effectiveness of the method and make necessary adjustments to improve the learning outcomes.

In summary, the multiplication and division learning assistance method at Kober Bina Warga Mekarjaya combines a fun learning approach, recycling teaching aids, and personalized instruction to create an engaging and effective learning experience. By incorporating interactive activities, real-life examples, and collaborative tasks, students develop a deeper understanding of mathematical concepts while fostering creativity, critical thinking, and environmental awareness. Regular assessments and evaluations ensure continuous improvement and help monitor students' progress, ensuring that

they achieve mastery in multiplication and division skills.

The time and place for the research will be carried out from June to August 2022, with the subject of this research are children at an early age from the age of 5-6 years in Kober Bina Warga Mekarjaya.

RESULTS DAN DISCUSSION

This community service is carried out to carry out basic mathematics learning assistance with the fun learning method assisted by visual aids in developing basic multiplication and division skills in early childhood. The learning design is as follows.

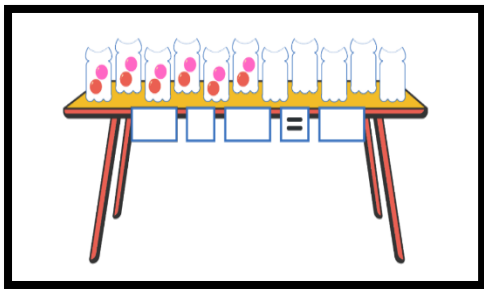


Figure 1. Design of Used Bottle Recycling Tools

Multiplication and division demonstrations made from used bottles. For information, the table can be replaced with anything that can be used to put bottles. Later this bottle will be decorated using flannel to make it look more attractive.

How to use this prop is by inserting ping-pong balls or colorful pom-pom balls according to the number you want. For example, for multiplication 3×4 means that 3 balls are put in the bottle 4 times or 4 bottles. As for division, for example $10:5$ division means that as many as 10 balls are put in 5 bottles with the same number of balls in each bottle.

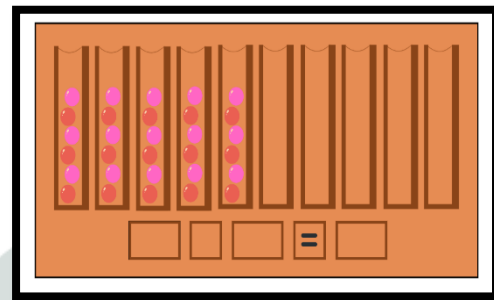


Figure 2. Design of Used Cardboard Recycling Tools

The picture above is a design for multiplication and division props made from used cardboard. This prop will be made in the form of a board with 10 rectangular boxes attached to the board. The way to use this prop is the same as the previous prop, namely by inserting ping-pong balls or colorful pom-pom balls according to the number you want. As for division, for example the division of $15:3$ means that as many as 15 balls are put in 3 bottles with the same amount of each ball in the bottle.

The steps for making used bottle recycling props:

1. Prepare the tools and materials needed.
2. Clean the used bottle and dry it, then cut the top of the bottle with a cutter.
3. Decorate the bottle with flannel and beads as attractive as possible, so that the children like it more.
4. Cut 3 pieces of white melamine plywood with a size of 10 cm x 15 cm and 2 pieces of 10 cm x 10 cm. This plywood will later be used to write numbers, times/divide symbols, and also the equals symbol.
5. After everything is ready, the bottles can be arranged on a table or other place as many as 10 bottles, then stick melamine plywood on the table below or where desired.
6. Also prepare 100 ping-pong balls or colorful pom-pom balls in a box as a complement to this prop.
7. And props are ready to use.

The steps for making used cardboard recycling props:

1. Prepare the tools and materials needed.
2. For baseboards, cut cardboard into 1 piece of 150 cm x 90 cm. For ball boxes, cut the cardboard into 20 pieces of 10 cm x 30 cm in size and 10 pieces of 10 cm x 7 cm in size.

3. A cardboard measuring 150 cm x 90 cm was trimmed on the edges using black solution to make it look neater.
4. After that, stick a cardboard measuring 10 cm x 30 cm on a cardboard board to form a box with a cardboard base measuring 10 cm x 7 cm. Arrange everything to form 10 squares according to the design.
5. Cut plastic mica into 10 cm x 30 cm size of 10 pieces. Then, attach the mica plastic to the boxes on the board, as a barrier for the balls so they don't scatter out of the boxes.
6. Make a title or props name using colored paper, then stick it on the top of the cardboard board. Color paper can also be used to make decorations to make it more attractive.
7. Cut 3 pieces of white melamine plywood with a size of 10 cm x 15 cm and 2 pieces of 10 cm x 10 cm. This plywood will later be used to write numbers, times/divide symbols, and also the equals symbol.
8. Paste the melamine plywood on the bottom of the cardboard board.
9. Also prepare 100 ping-pong balls or colorful pom-pom balls in a box as a complement to this prop.
10. The props are ready to use.

1. The implementation of community service which was carried out at Kober Bina Warga Mekarjaya obtained satisfactory results with the level of satisfaction of students learning multiplication and division using the Fun Learning method assisted by recycling props, as follows.

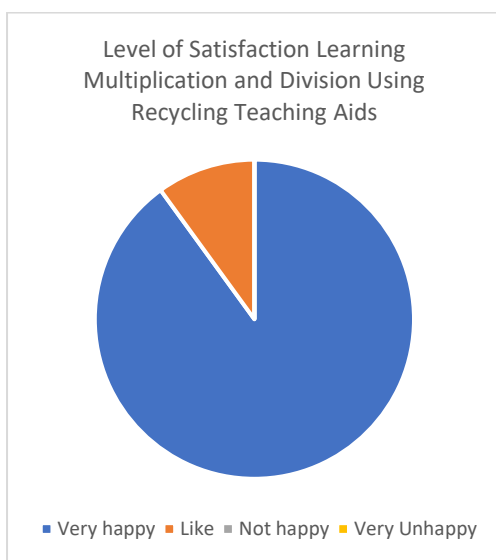


Figure 3. Level of Learning Satisfaction

From the picture above it can be concluded that the implementation of community service has a very significant influence on learning at the early childhood level by obtaining a 90% satisfaction level with great pleasure. So that the same activities need to be carried out by early childhood teachers in schools by developing learning using this recycled teaching aid.

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