Innovation in Mathematics Learning for Islamic Elementary Schools (MI/SD) through *Nara* Card Games

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Abstract

One of the common challenges faced by mathematics teachers is students' lack of proficiency in basic arithmetic operations (KaTaBaKu-*Kali Tambah Bagi Kurang*), which often hinders their understanding of other mathematical concepts such as multiplication, addition, division, and subtraction. Additionally, teachers encounter difficulties in cultivating students' interest in learning. Therefore, innovative teaching methods are required to make learning more engaging and enjoyable, thus enhancing students' motivation to learn and their understanding of the subject. One such innovation involves the use of *Nara* card games. *Nara* cards consist of a set of cards numbered from 0 to 9, where participants are free to choose arithmetic operations to win the game. This research aims to describe the use of *Nara* card games as an innovative teaching approach for mathematics in MI/SD (Islamic Elementary Schools). The research methodology employed in this study is literature review, which involves the analysis of various literature sources to draw conclusions. The research findings indicate that the use of *Nara* card games as an innovation in mathematics education at MI/SD can be a solution to boost students' interest in learning and improve their fundamental understanding of arithmetic operations concepts.

Keywords: *Nara card games; innovation; games; mathematics*

INTRODUCTION

The teaching of mathematics at the elementary level often faces challenges in motivating students to learn. Low interest and poor understanding in mathematics can hinder students' academic progress. In tackling these challenges, mathematics educators continue to seek innovative and effective teaching methods. One method that has proven to be effective is the use of games in learning. According to Langeveld, games represent the most authentic activity within a child's lively world (Langeveld, 1979). For children, playing is a serious yet enjoyable activity (Zaini, 2015).

Play is crucial for children as it constitutes a vital part of their developmental process. Through play activities, children learn various aspects of daily life. They gain experiences related to their social and cultural environment, as well as their economic and physical surroundings, which are immensely valuable for enhancing language skills, critical thinking, attitudes, social interactions, creativity, and more. In games, children focus their attention, feelings, and thoughts on the process of playing, as well as on the nature and form of the play materials. Consequently, children learn to recognize and

explore their environment (Khobir, 2009).

Nara card game is one of the challenging and educational forms of mathematical games, enabling students to learn mathematics through engaging and interactive methods. Utilizing the Nara card game as a learning approach provides students with opportunities to develop basic integer operation skills, namely addition, subtraction, multiplication, and division (known as KaTaBaKu). Additionally, card games also foster social skills such as teamwork, communication, and problem-solving.

In mathematics learning, students actively engage in calculations. Understanding arithmetic is a crucial skill for every student because every human activity involves the concept of counting. In mathematics, every problem involves calculations. Basic arithmetic operations in mathematics include addition, subtraction, multiplication, and division, commonly referred to as KaTaBaKu-Kali Tambah Bagi Kurang. Lack of mastery of these basic integer operations can be overcome through innovative teaching methods in mathematics that make students more interested and involved, such as using the Nara card game.

Based on this context, the author is interested in writing an article titled 'Innovation in Mathematics Learning through the Nara Card Game.' This article aims to describe the use of the Nara card game as an innovative learning tool for mathematics education in elementary schools. Additionally, the article is expected to make a significant contribution to the development of elementary-level mathematics education.

METHODS

This article was crafted using the literature review method. Data were gathered from various literature sources, including scientific journals, books, and research articles related to mathematics learning through card games. The study involved observing the process of playing the Nara card game in elementary school classrooms. Students were organized into small groups of 2-4 children to play the Nara card game at the beginning of the mathematics lessons. The aim was to sharpen their basic integer operation skills, namely addition, subtraction, multiplication, and division (known as KaTaBaKu - *Kali Tambah Bagi Kurang*).

The Nara card game (Nata Alam Raya) is a mathematical game that utilizes a total of 60 cards, ranging from numbers 0 to 9, divided into six sets created by the President Director of Mathematics and Science Education, Ridwan Hasan Saputra. This card game is specifically designed to train students in basic arithmetic operations, including addition, subtraction, multiplication, and division.

In playing the Nara card game, students are divided into small groups consisting of 2-4 children. Firstly, the players conduct a suit/hompipah to determine who will play first. After that, the cards are shuffled and distributed to each player (each player receives 3 cards). The player who goes first has the right to choose the arithmetic operation to be

used. For example, if the first player chooses the operation of Greatest Sum Addition, then each player selects two out of their three cards to be added together. The player with the largest sum gets to collect all the cards. The player who collects the cards has the right to choose the next arithmetic operation.

RESULTS AND DISCUSSION

The use of the Nara card game in mathematics education is not only effective in enhancing students' skills and understanding of basic mathematical operations but also designed to boost students' interest and motivation in learning mathematics. Students not only learn to calculate quickly but also grasp fundamental mathematical concepts better. Additionally, students become more engaged in learning, gain confidence in answering math questions, and feel more motivated to study.

The Nara card game can be played in the form of a competition where students compete against each other to win the game. This can enhance students' motivation to learn and improve their mathematical skills even further.

The role of the teacher in the Nara card game is crucial. The teacher can act as a facilitator who guides students through the game rules and provides guidance when needed. After the game ends, the teacher can conduct a reflection session where students share their experiences and discuss the mathematical concepts learned during the game. The teacher can also provide positive feedback and identify areas where students still need additional assistance.

Rules of the Game and Winner

The Nara card game has several rules:

1. Players can consist of 2 to 4 people.
2. Players conduct a suit/hompipah to determine who plays first.
3. The cards are shuffled and then distributed to each player (each player receives 3 cards).
4. The player who goes first has the right to choose the arithmetic operation to be used.
   (Example: If the first player chooses the operation of Greatest Sum Addition, then each player selects 2 out of 3 cards to be added together. The player with the largest sum gets to collect all the cards).
5. The player who collects the cards has the right to choose the next arithmetic operation.
6. In the following situations: (a) Two or more players have the same operation result and the same cards, the cards are divided equally. (b) There are players with the same operation result but different cards; the cards are taken by the player with the higher number (for Greatest Sum) or the lower number (for

Smallest Sum). For example, in Greatest Sum addition, a player with cards 9 and 2 has more right to collect cards compared to a player with cards 6 and 5.

7. If there are 3 cards left, a mixed operation is performed. For example, the smallest result from two numbers is added to the third number.
8. Subtraction operation is the difference between two numbers. For instance, if there are numbers 3 and 7, the smallest subtraction result is 4, as 4 is the difference between 3 and 7.
9. Other operations in the game can be added as agreed upon by the players.
10. The winner is determined based on the player who collects the most cards at the end of the game.

Benefits of the Nara Card Game

The benefits of the Nara card game in learning mathematics include:

1. Learning that actively involves students:
    - Direct Interaction: In card games, students engage in activities that require active thinking and decision-making. They need to strategize, make quick decisions, and understand the fundamental concepts of integer operations (Addition, Subtraction, Multiplication, Division) to play.
    - Learning from Mistakes: When students make mistakes in the game, it provides them with an opportunity to learn directly from those mistakes. They can see the consequences of wrong decisions and try a different approach in the subsequent rounds.
2. Motivation and Involvement:
    - Motivation: The card game Nara holds significant appeal due to its enjoyable and challenging nature. Students are more motivated to learn because they are engaged in an activity they enjoy.
    - Emotional Involvement: The card game Nara can also generate emotional involvement as students feel motivated to win the game. This emotional involvement can enhance students' concentration and interest in the learning material.
3. Problem Solving and Creativity:
    - Analytical Thinking: The Nara card game requires quick analytical thinking. Students need to understand the game situation, predict opponents' moves, and identify patterns to make smart decisions..
    - Stimulating Creativity: The Nara card game allows for variations in rules or strategies. This stimulates students' creativity as they can try different

approaches to win the game. They learn that there's more than one method to achieve the goal in a given situation.

According to Sadiman (2002), the use of games as a learning tool has several advantages. One of them is that games provide enjoyable and entertaining experiences. Meanwhile, according to Yusuf (2011), learning through play has numerous benefits, such as reducing the tension that could hinder learning, eliminating stress in the learning environment, engaging students fully in the learning process, enhancing the learning process, fostering creativity, unconsciously achieving learning objectives, gaining understanding through direct experience, and directing the role of students as learning subjects.

Advantages of the Nara card game: This game can enhance students' reasoning abilities, train numerical operation skills such as addition, subtraction, and division. Additionally, the game is easy to play, suitable for all age groups, and can be played anywhere.

Therefore, the Nara card game not only teaches the fundamental concepts of integer operations (Addition, Subtraction, Multiplication, Division) but also fosters critical and creative thinking skills that are crucial for daily life and academic success.

CONCLUSION

The innovation of teaching mathematics through the Nara card game has a positive impact on students' understanding and interest in mathematics at the elementary school level. By engaging students in interactive and enjoyable learning, this game helps create a positive learning environment and builds a strong foundation for a deep understanding of mathematics. Therefore, it is recommended that innovative approaches like this continue to be introduced and adopted in educational curricula to enhance the quality of mathematics education at the elementary school level.

The Nara card game can enhance students' reasoning abilities in the topic of numerical operations. In this game, students need to develop strategies to choose the appropriate numerical operations when their turn arrives. They must consider the numerical operations that match the cards they hold in order to secure a win in the game.

The advantages of the Nara card game include its ability to enhance students' reasoning, train numerical operation skills such as addition, subtraction, division, and multiplication. Additionally, the game is easily accessible, suitable for all ages, and can be played in various locations.

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