



Implementation of the Domino Card Media Game to Improve Cognition In Understanding the Concept of Numbers

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Abstract: The aim of this research is to describe how the implementation of the domino card media game is to improve children's cognitive skills in recognizing the concept of numbers and what factors hinder the implementation of the domino card media game to improve children's cognitive skills in recognizing the concept of numbers at Uswatun Hasanah Kindergarten in Sidorejo Village, Lubuklinggau District. West I Lubuklinggau City, South Sumatra Province. The method used in this research is descriptive qualitative, the data collection techniques used are documentation, interviews and observation and the data analysis techniques used are data reduction, data presentation and drawing conclusions. The results of the research show that these domino cards attract children's attention more than conventional media so that children become focused on learning, and make it very easy for children to introduce the concept of numbers so that the application of the domino card game can improve children's cognitive understanding of the concept of numbers because by using children's domino cards children are more interested and understand better when taught about the concept of numbers. Meanwhile, the supporting and inhibiting factors, namely the domino card media, make it easier for teachers to teach. Interaction between students is more prominent so that students support each other in their learning related to understanding the concept of number symbols. Furthermore, the obstacle was because explaining how to use domino cards was a bit complicated, and made the situation chaotic because the children were fighting over the cards even though the cards had already been given to each of them.

Keywords: Implementation, Domino Card Media and Number Concept

How to cite this article :

Riyanto, M., Sari, M., Hapipa, N., & Tapsina, T. (2025). Implementation of The Domino Card Media Game to Improve Cognition In Understanding the Concept of Numbers. *IJIS Edu : Indonesian Journal of Integrated Science Education*, 7(1). doi:<http://dx.doi.org/10.29300/ijisedu.v7i1.5169>

1. Introduction

Early childhood education is organized through 3 channels, namely formal, non-formal and informal. Kindergarten is early childhood education on a formal basis. Children are the successors of the nation. Therefore, children must receive a good education so that they have a strong personality, strong character and noble morals. Early childhood education is a training effort carried out through providing educational stimuli to assist physical and spiritual growth and development so that children are ready to enter further education. Educating and guiding children is an obligation for every parent because children are a trust that must be held accountable in the afterlife. Parents must be able to provide education that will make their children have the principles to live their lives positively, both in terms of religion, relationships and the environment so that they can shape them into children who have good morals (Lestari, 2014: 36-37).

Children will experience good education if parents can choose an educational model that is relevant to the child's development and is in line with the child's needs, environmental conditions and parenting patterns in the family which will have an impact on success in learning (Iffah, 2023: 10). Kindergarten (TK) is a form of early childhood education that provides early education programs for children aged 4 - 6 years until they enter basic education. Early childhood education is education to help the physical and spiritual growth and development of students in accordance with the child's natural characteristics, so that children can become the nation's next generation who will one day develop the Indonesian nation to be advanced and not be left behind by other nations.

Learning strategies are the principles in selecting learning sequences in a learning process (Martinis, 2013: 4). Media is the plural word for medium which means an introduction or intermediary used by a communicator to convey a message to the communicant in order to achieve a certain effect. The word media comes from the Latin "medium". In Latin, media is defined as between. Media is the plural form of medium which literally means intermediary and introduction. Associated with the learning process, media is defined as a communication tool used in the learning process to convey information in the form of teaching materials from teachers to students so that students become more interested in participating in learning activities (Usep, 2016: 5-6).

The media is the source of the message and the recipient of the message. The media used by teachers in the learning process is called learning media (Satrianawati, 2018: 6). Learning media is basically a vehicle for messages that the source of the message (teacher) wants to pass on to the recipient of the message (child). The message conveyed is learning in the form of themes, learning topics with the aim of creating a learning process in children (Badru & Asep, 2016: 3.16). The Association of

Education and Communication Technology (AECT) defines media as all forms and channels used to distribute forms/information. All physical tools that can present messages and stimulate students to learn can be called media (Usep, 2016: 6).

In conclusion, learning media or media is something that creates information and knowledge that can be used to carry out the learning process. The media used to support learning activities in acquiring knowledge, skills and attitudes are called learning media (Benny, 2017: 15). Based on its function, media is divided into 2, namely media in a broad sense is all forms of objects used by someone to carry out long-lasting actions that occur through direct or indirect experience. Learning media in the sense of, for example, the tools and materials used by teachers in the teaching and learning process that occurs in the classroom to solve problems or to achieve learning goals (Satrianawati, 2018: 6). From this opinion it can be concluded that media is a tool to facilitate the learning process, especially at the kindergarten level which really needs tools called media.

Domino is a game that uses blocks which on the only side (the sides) have holes/marks indicating the value from 1 to 6. At this time, domino games can also use paper or round signs to indicate the value of the domino card. The total number of domino cards is 28 cards. The domino game is generally played by 4 people, but it can also be less or more. There are actually many ways to play the domino game, depending on the region and the conditions of the people, but the most common domino game is the domino game by placing the domino cards with the smallest value first, namely empty cards, then followed by other players by connecting domino cards with the corresponding value. thus forming an unbroken pattern. The cards continue to be lowered until the domino cards run out or there are no more cards that can be lowered.

The game ends if a player runs out of dominoes or all players can no longer connect the blocks. The player with the fewest number values is the winner. In the game, there may be many branches so that later the player has to decide which cards to discard. The game ends if a player runs out of dominoes or all players can no longer connect the blocks. The player with the fewest number values is the winner (Fernando, 2007: 1).

Modified domino card media developed in this research for kindergarten children. Modified domino card media developed according to the needs of kindergarten children. The total number of modified domino card media developed is 21 cards. The modified domino card media developed is to improve children's ability to count.

Learning methods are the methods used by teachers in presenting lesson material or games by paying attention to the overall learning situation, learning and

playing situations to achieve a goal. There are many types of teaching methods that can be applied by teachers in delivering lessons to children, such as the lecture method, discussion method, question and answer method, group work method, sociodrama method, assignment method, field trip method, problem solving method, demonstration method and experimental method. Based on the description above, it can be concluded that there are various types of teaching methods that teachers can use in teaching, one of which is the assignment method. The assignment method is used by teachers by first formulating the goals to be achieved and making clear instructions so that children can carry out the assignments given correctly (Sujiono, 2012). So that in learning teachers can apply appropriate methods for their students.

Learning to recognize numbers is still rarely done through play activities, so it is not appropriate to the level of learning development. Schools have limited learning media for introducing numbers, so the introduction of numbers still uses conventional methods. Domino cards are a new learning media that has never been used before, so it is necessary to test the feasibility of the media.

Every child has been equipped with potential since childhood. Innate potential is a hereditary factor which is actually an initial ability possessed by every newly born individual to adapt to their environment. Age 0-8 years is the right time to lay the foundations for physical, language, cognitive, social emotional, artistic, moral and religious values development, so that efforts to develop all the potential of early childhood must begin so that children's growth and development is achieved. optimally. Thinking activity is a very important aspect for developing cognitive abilities. Recognizing number symbols is one of the thinking activities carried out by children (Zughoiriyah: 3.1).

The reality in the field shows that children's cognitive ability to recognize numbers at Uswatun Hasanah Kindergarten is still low, this can be seen in the children's activities of matching numbers with number symbols where there are still many children who are not yet able to count in learning activities to match numbers with number symbols. This is because the method that is often used is only question and answer and the media used is less varied. Teachers usually use fingers and number cards that do not match the objects around the child and are in the form of worksheets, making the child less interesting and responsive and boring for the child. on numeracy skills. Situations like this certainly have an impact on the success of subsequent learning activities and this is proven by the fact that for almost a semester children are still experiencing difficulties in their numeracy skills. The methods used by teachers to teach children to achieve the specified competencies. Domino cards are something new for Uswatun Hasanah Kindergarten children so this media will attract students' attention.

Based on this problem, children's numeracy skills are still low in matching numbers with number symbols, so action will be taken by playing dominoes at Uswatun Hasanah Kindergarten to improve children's letter skills. Based on the descriptions above, the author is interested in conducting research at Uswatun Hasanah Kindergarten by writing research entitled implementation of the domino card media game to improve cognitive understanding of the concept of numbers.

2. Method

The type of research used in this research is qualitative field research. namely research where data collection was carried out in the field at the Uswatun Hasanah Kindergarten in Sidorejo Village, West Lubuklinggau I District, Lubuklinggau City, South Sumatra Province. The data sources in this research are as follows: 1 school principal, two Uswatun Hasanah Kindergarten teachers in Sidorejo Village, West Lubuklinggau I District, Lubuklinggau City, South Sumatra Province, 13 students and 13 parents of students. Data collection techniques are used to obtain the necessary data, both related to literature or literature studies (library research) and data generated from the field (field research). This data collection technique is the most important step in research, because the main aim of research is to obtain data. The data collection techniques used were observation, documentation and interviews. Meanwhile, the data analysis techniques used in this research are data reduction, data presentation and drawing conclusions. Furthermore, the data validity testing technique used is the triangulation technique used is source and method triangulation.

3. Result and Discussion

Cognitive development is an important aspect in a child's life span because it is a thinking process in the form of the ability to connect, assess and consider things. It can also be interpreted as the ability to solve problems or to create work that is valued in a culture. The cognitive process includes various aspects, such as perception, memory, thoughts, symbols, reasoning and problem solving. The importance of teachers developing cognitive development in children is first, so that children are able to develop their perception of what they see, hear and feel, so that children will have a complete and comprehensive understanding. Second, so that children are able to train their memories of events and incidents that they have experienced. Third, so that children are able to develop thoughts in order to connect one event with another event. Fourth, so that children are able to understand the

symbols scattered around them. Fifth, so that children are able to reason, whether it occurs scientifically (spontaneously) or through a scientific process (experiment). Sixth, so that children are able to solve the life problems they face, so that in the end they will become individuals who can help themselves.

Cognitive development is the development of the mind. The mind is the part of the brain used for understanding, reasoning, knowledge and understanding. A child's mind begins to be active from birth from day to day throughout its growth, the child's cognitive development greatly influences the ability to recognize the concept of numbers. In early childhood, children's interest in numbers is generally very large. In the environment around children's lives, various forms of numbers are often found, for example on wall clocks, candles on birthday cakes, quantities of fruit, etc. Therefore, it can be said that numbers have become a part of everyday life, so it is necessary to pay attention to the intellectual understanding of the symbolic quantity of numbers in children.

The teaching and learning process at Uswatun Hasanah Kindergarten in Sidorejo Village, West Lubuklinggau I District, Lubuklinggau City, South Sumatra Province, in the field of cognitive development, especially in the ability to say, there are still many difficulties. The difficulties experienced by children are such as when children are asked to name numbers either sequentially from smallest to largest, sequentially from largest to smallest, or when children are asked to name numbers randomly by pointing to the number symbol. For example, when children are asked to take 5 objects, there are children who take 4 or 6 objects. The difficulties experienced by this child are caused by limited supporting media which is less varied. Apart from that, the methods used by class teachers also tend to be lectures and giving assignments, so that children do not understand what the teacher is saying.

The teacher feels the need to make improvements to learning, namely recognizing the concept of numbers. Teachers are required to make various efforts and improve their learning strategies with various variations so that the process of delivering the material runs well. This includes using domino cards to improve cognitive understanding of number concepts at Uswatun Hasanah Kindergarten.

The benefits of learning media are that the delivery of lessons becomes more standardized, learning can be more interesting, learning is more interactive by applying learning theory with accepted psychological principles in terms of child participation, feedback and knowledge, the length of learning time required can be shortened because most media It only takes a short time to deliver messages in the learning system in large quantities and is likely to be absorbed by children. The quality of learning outcomes can be improved if integration, words and images as learning media can communicate elements of knowledge in a well-organized, specific and clear manner. , learning can be provided when and where it is desired or needed,

especially if the learning media is designed for individual use, students' positive attitudes towards what they are learning and towards the learning process can be increased.

Domino cards are cards containing circles that represent numbers from blank (zero) to 12. These cards are good for training children to count and recognize patterns. Domino cards can be used as educational toys, one of which is to introduce the concept of numbers and number operations. Things that can be done through playing domino cards are learning to count, learning to compare, recognizing patterns, addition operations.

The materials and tools for making domino cards are white Manila paper, blue folded paper, scissors, glue, compass, pencil and marker, iron, laminating plastic. How to make domino cards: a) Make a rectangular pattern on white Manila paper measuring 3x6 cm. b) Divide into 2 equal sizes and thicken them using a marker. c) Cut the sides of the patterned paper neatly. d) Make a circle using a compass on blue folded paper with a diameter of 0.5 cm. e) Cut out each circle neatly. f) Stick the circles on the manila paper in a domino pattern. g) Put it in laminating plastic then iron it so that the card lasts a long time and is not damaged.

With regard to the application of domino card media games to improve cognitive abilities, namely after teachers use domino card media, this shows extraordinary things for kindergarten children. On average, children already know the concept of numbers and children can count from 1-10 or even more, children can solve problems that children face when learning mathematics, children become more diligent and patient in solving a problem, children also really enjoy learning the concept of numbers because of the media those used are considered interesting. By using domino cards, children are more enthusiastic about learning so that children can understand the concept of numbers quickly, children also enjoy learning. So that children's cognitive abilities increase, especially in counting and recognizing the concept of numbers.

The results of the discussion can be concluded that these domino cards attract children's attention more than conventional media so that children become focused on learning, and make it very easy for children to introduce the concept of numbers so that the application of the domino card game can improve children's cognitive understanding of the concept of numbers because by using domino cards Children are more interested and children understand better when taught about the concept of numbers.

The supporting factor in using domino cards to improve children's cognitive abilities in recognizing the concept of numbers is that this game is something that is fun to do because it is considered a morning dance for children, especially

kindergarten age children. Students understand more about using this media, because domino cards are very suitable, especially for calculating. This domino card media, namely a game, allows for active participation from students in learning so that it can improve children's cognitive abilities in recognizing the concept of numbers. This makes it easier for teachers to teach. Interaction between students is more prominent so that students support each other in their learning related to understanding the concept of number symbols. As well as being able to provide direct feedback, immediate feedback on what we do will enable the learning process to be more effective.

These domino cards can improve children's cognition in recognizing the concept of number symbols because they require students to think, remember, predict, calculate and guess. f) This activity requires everyone to be involved, this helps shy students participate openly so that students become active. The inhibiting factor in applying domino cards to improve children's cognition in recognizing the concept of numbers is because it takes quite a long time. This is because explaining how to use domino cards is a bit complicated, and makes the situation busy because children are fighting for cards even though the cards have already been given to each other.

Using domino cards disturbs the peace of learning in other classes, so it can become a problem, even though the world of children tends to be busy, the presence or use of domino cards makes the situation even more busy. From the results of the research discussion, it can be concluded that this domino card media makes it easier for teachers to teach. Interaction between students is more prominent so that students support each other in their learning related to understanding the concept of number symbols. Furthermore, the obstacle was because explaining how to use domino cards was a bit complicated, and made the situation crowded because the children were fighting over the cards even though the cards had already been shared by each of them.

4. Conclusion

The results of the research and discussion carried out by researchers with the title research on the implementation of the domino card media game to improve cognitive understanding of number concepts, the results of this research can be concluded as follows: 1). In the application of domino card media, dominoes attract more attention from conventional media so that children become focused on learning, and make it very easy for children to introduce the concept of numbers so that the application of the domino card game can improve children's cognitive understanding of the concept of numbers because by using children's domino cards. children are more interested and understand better when taught about the concept of numbers, 2). The supporting factor is that this domino card media makes it easier

for teachers to teach. Interaction between students is more prominent so that students support each other in their learning related to understanding the concept of number symbols. Meanwhile, the obstacle is that explaining how to use domino cards is a bit complicated, and makes the situation crowded because the children are fighting over the cards even though the cards have already been shared by each of them.

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