

Application of Traditional Dakon Games in Improving Cognitive Abilities in Early Childhood

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Abstract

This research aims to understand how the application of the traditional dakon game can improve the cognitive abilities of young children through a qualitative approach using the interview and observation method. Dakon, or congklak, is a traditional game that has long been known in Indonesia and is believed to have significant educational value. This research involved in-depth interviews with teachers Bustanul Athfal Aisyiyah in Sukoharjo to collect data regarding their experiences and views on the impact of dakon games on children's cognitive development. Research results show that the dakon game helps children develop counting skills, strategic planning, memory and concentration. Additionally, this game is also reported to improve children's social and fine motor skills. Study participants noted that children who regularly played dakon showed significant progress in critical thinking and problem-solving skills. The conclusion of this research is that dakon games can be integrated into the early childhood education curriculum as an effective learning tool to support their cognitive development.

Keywords: traditional games, dakon, cognitive early childhood

Introduction

Early childhood education is an important phase in the formation of child development. According to experts, early childhood education includes an understanding of the learning process in children, the importance of appropriate stimulation in the early stages of a child's development, as well as the role of the environment in shaping the quality of education. So, during this period children experience a golden age which usually occurs from birth to 5 years of age.

Child cognitive development is the process of growth and development of a child's cognitive abilities or thoughts from infancy to adolescence. This cognitive development includes changes in understanding, information processing, problem solving, and the ability to understand the world around them. Jean Piaget divided cognitive development into several stages, including; sensorimotor, preoperational and formal operational stages. Jean Piaget emphasized the importance of children's interactions with their environment in building an understanding of the world.

During this time, children's brains experience significant growth and development, so children have a natural tendency to absorb information quickly and develop their cognitive abilities quickly. Children's cognitive development is characterized by their ability to learn language, understand abstract concepts, solve problems and build social skills. Stimulating activities, such as playing, singing, reading and interacting with the environment, play an

important role in accelerating children's cognitive development during the golden age (Ni & Yu, 2015).

Traditional games are recreational or entertainment activities that have existed in the culture and traditions of a society for generations. In Indonesia, traditional games have deep meaning and are an integral part of the nation's culture and identity. According to Prof. Dr. Djoko Santoso explained that traditional games are cultural expressions which are ancestral heritage, passed down from generation to generation and reflect local wisdom and the rich creativity of the nation's children. In Indonesia there are many traditional games that are still played today, such as dakon, mushroom, gobak sodor and many more (Alvisari et al., 2023).

The dakon game is a strategy game played in Indonesia, especially on the island of Java. Where this game uses a wooden board with holes and seeds as the playing tool, each hole on the board represents a position or house to place the grain. In addition, this game starts with players placing a number of seeds in each hole, then trying to pick up and move the seeds according to the rules of the game. The main objective of the dakon game is to collect as many seeds as possible in the house or the holes on the dakon board.

The traditional dakon game is very good in supporting children's growth and cognitive abilities, because it has many benefits for their growth and development, including: (1) developing strategic thinking skills; dakon game requires strategic thinking in deciding the best moves for grains and moving them in strategic holes (2) improving math skills; the dakon game involves counting the seeds that are taken and moved, so it can help in the development of mathematical skills, such as addition and subtraction (3) social learning; Dakon games are often played in groups, so they can help in social learning, such as cooperation, communication and interpersonal skills (4) cultural preservation; Dakon games are part of Indonesia's cultural heritage, playing dakon helps in preserving traditions and cultural values that are important to society (Handayani & Iswantiningtyas, 2020).

Thus, the traditional dakon game is not just a traditional game, but is also a means for developing skills and learning cultural values. The reason for conducting this research is to determine the application of traditional dakon games to improve children's cognitive abilities and development.

Several previous studies have examined the application of traditional dakon games to improve children's cognitive abilities and development. Like research conducted by (Kusuma et al., 2022). This article aims to find out how to stimulate children's cognitive development through traditional dakon games in terms of Vygotsky and Piaget's theories. The researcher's aim is to find out the differences between the two theories through the traditional game of dakon. The method used in this research is descriptive qualitative research in the nature of a case study using observational data collection. The results of the analysis show that the dakon game stimulates cognitive development seen from Vygotsky's perspective, namely that children's cognitive development develops when interacting with opponents playing dakon who explain the rules of the game. Meanwhile, seen from Piaget's perspective, children's cognition develops according to age stages, so that when playing the traditional Dakon game, they treat the game differently.

Research conducted by (Puspita et al., 2021). This research aims to analyze the dakon game in developing the cognitive development of children aged 5-6 years based on the Child Development Achievement Level Standards (STPPA). Learning using the dakon game was chosen because it can improve children's numeracy skills by learning and problem solving, logical thinking and symbolic thinking. This research is descriptive qualitative research. The subjects in this study were 4 children consisting of 2 girls and 2 boys. The object of this research is the ability to count in children aged 5-6 years, especially using dakon games and knowing how to learn and solve problems, think logically and think symbolically. Data collection techniques in this research are observation, interviews and documentation. Data analysis uses qualitative descriptive. The results of this research show that the dakon game is able to develop the cognitive abilities of children aged 5-6 years very well. Improvement can be seen in

research results that children are able to demonstrate learning by problem solving, logical thinking and symbolic thinking.

Meanwhile, research conducted by (Uniati, 2019). The aim of this research is to describe the use of the dakon game to increase understanding of the concept of addition and subtraction for group B children at Kindergarten ABA 26 Malang. The type of research used is classroom action research which consists of two cycles. The results of the research showed that there was an increase in children's abilities in understanding the concept of adding and subtracting numbers in cycle I reaching 40% and achieving an increase of 46.5% in cycle II. In conclusion, understanding of the concept of addition and subtraction in group B children of Aisyiyah Bustanul Athfal 26 Malang Kindergarten can be improved through dakon games.

Research Methods

This research uses a qualitative approach with an interview method to explore how the application of the traditional dakon game can improve the cognitive abilities of young children. This research methodology was designed to gain an in-depth understanding of the experiences and perspectives of teachers and parents regarding the impact of dakon games on children's cognitive development.

1. Research Design

The design of this research is a descriptive qualitative study. This research focuses on collecting data through in-depth interviews to understand phenomena that occur in the field.

2. Research Location

Research Location refers to the place and location where the research is carried out. This research will be carried out in a kindergarten at BA Aisyiyah Pojok.

3. Participants

The research participants consisted of 1 early childhood teacher who attended a kindergarten in BA Aisyiyah Pojok. The selection of participants was carried out using purposive sampling, namely selecting individuals who have direct knowledge and experience related to dakon games and children's cognitive development.

4. Research Instrument

The main instrument of this research is a semi-structured interview guide designed to elicit information about teachers' experiences in implementing the dakon game.

5. Data Collection Procedures

Collecting data through interviews involves a number of systematic steps. In the first stage, preparation begins by creating clear guidelines for the interview and obtaining permission from the educational institution and consent from the participants. After preparations are complete, the interview is conducted face-to-face in a place that is comfortable for the participant and lasts for 30 to 45 minutes. Each interview was recorded with the participant's permission to ensure data accuracy. Transcription, the final stage, is the transformation of recorded interviews into verbatim text that can be used for data analysis.

6. Data analysis

The thematic analysis method was used to analyze interview data. In the first step, the interview transcripts were read thoroughly to understand the content and context related to dakon play and early childhood cognitive development. The next step is interpretation, where the themes found in the data are analyzed to understand how the game plays.

7. Data Credibility and Validity

To ensure the credibility and validity of the data, triangulation was carried out by comparing the results of interviews from various participants and carrying out member checking, namely confirming the results of interviews with participants to ensure the accuracy of the interpretation.

8. Research Ethics

This study upholds research ethics by ensuring participant anonymity. All participants were provided with complete information about the aims of the study and provided written informed consent before the interviews were conducted.

9. Research Limitations

Limitations of this research include the limited number of participants and location which is limited to one school in BA Aisyiyah Pojok. Therefore, the findings of this study may not be generalizable to a wider population. With this methodology, the research aims to provide in-depth insight into how the traditional dakon game can be used as an educational tool to improve the cognitive abilities of young children.

Results and Discussion

The results of this research are based on in-depth interviews with 1 early childhood teacher who attends a kindergarten in BA Aisyiyah Pojok. The interview aims to explore their experiences in implementing traditional dakon games and their impact on children's cognitive abilities.

1. Numeracy Ability

Dakon games help children develop counting skills. Children learn to count grains repeatedly during the game. Based on an interview with Mrs. Muryani, the class teacher, said that "The children seemed to understand the concept of number and addition more quickly after playing Dakon regularly. They also started to recognize numbers better." Interviewed teachers noted that children more quickly grasped the concepts of number and addition. They also say that after playing dakon, children understand numbers more easily. This is in line with research by early childhood education experts such as Halim and Santoso, who found that traditional games such as dakon can improve children's cognitive skills, including their ability to count and remember. Therefore, dakon games can be used as an effective method to improve children's numeracy skills and teach them basic mathematical concepts that are important for their overall development.

2. Strategy and Planning

Children who regularly play dakon show an increase in planning and strategic thinking abilities. The teacher observes that the children are starting to think about their steps more maturely. The teacher stated "I see children thinking more ahead and considering the steps they will take. This is very helpful in other games and daily activities." In the dakon game, children have to think of ways to fill small holes with seeds that match the number of seeds available in each row. They must consider their steps more carefully to avoid losing seeds and maximize hole filling. So, dakon games help children learn to think rationally and plan good actions. Teachers who looked at this game found that children who played dakon regularly showed better abilities in thinking rationally and planning actions. This is very useful for improving broader cognitive skills in addition to helping in daily activities and other games.

3. Memory and Concentration

Dakon games also improve children's memory and concentration. They have to remember the number of checkers in each hole and focus their attention during the game. The teacher stated "Children who play dakon seem more focused and their memories are sharper. They can remember the order of the game well." By playing dakon, you can test a child's ability to remember and focus on filling in the holes in the playing equipment. This game can improve memory and concentration abilities. By playing dakon, children can improve their short-term and long-term memory abilities as well as improve overall cognitive skills, such as thinking speed and problem-solving skills.

4. Social Skills

Apart from cognitive abilities, dakon games also help children develop social skills. They learn to take turns, cooperate, and obey the rules of the game. Based on the interview, Mrs. Muryani said that "Dakon games also teach children about cooperation and taking turns. They

learn to respect their friends and play fairly." According to teachers, children learn to take turns, cooperate and obey the rules of the game, which greatly helps the development of their social skills. Additionally, dakon games teach children to respect their friends, play fairly, and cooperate with others. Thus, dakon games can be an effective method to improve their social skills.

This research found that dakon has various cognitive benefits for children through in-depth interviews with a teacher. First and foremost, dakon games improve children's numeracy skills. Counting grains repeatedly accelerates their understanding of the concepts of addition and quantity. According to teachers interviewed, playing dakon regularly helps children understand basic mathematical concepts and recognize numbers more quickly (Sujatna, 2024).

Second, this game trains children to think strategically and plan their steps better. They also learn to carefully consider each step, which improves their problem-solving and critical thinking abilities. In other games and daily activities, this is also useful.

Third, dakon improves children's concentration and memory. Children must pay attention to the sequence of game steps and remember the number of seeds in each hole during the game. According to teachers, children who play dakon show improved memory and ability to focus.

Apart from that, dakon games also help develop children's social skills. They learn to take turns, cooperate, and obey the rules of the game, which improves their interpersonal skills and ability to work in teams. Teachers note that children who play dakon respect their friends more and play fairly.

Furthermore, dakon games provide fine motor benefits for children. They must pick up and place grains precisely, which improves hand-eye coordination and fine motor skills. Thus, dakon is not only a recreational tool, but also a comprehensive learning tool, covering children's cognitive, social and motoric development. Apart from the direct benefits obtained by children, this research also emphasizes the importance of preserving traditional games such as dakon. Through these games, children not only gain educational benefits, but also connect with their local culture. This is important to keep cultural heritage alive and relevant amidst modernization.

This research suggests that dakon games can be more widely integrated into the early childhood education curriculum. Teachers and educators are encouraged to use this game as an effective and fun learning tool. This way, children can enjoy the learning process while developing various important skills. Through dakon, education becomes more dynamic and interactive, providing a comprehensive and meaningful learning experience for children (Nurafifah & Agustin, 2023).

In recent research, Adams and Navarro (2020) found that traditional games can function as an effective educational tool in early childhood education. Berk (2013) also emphasizes the importance of play in children's cognitive development. Research by Halim and Santosa (2018) shows that traditional games such as dakon can improve cognitive skills, including children's numeracy and memory.

By referring to these studies, it can be concluded that the traditional dakon game is not only fun, but also has significant educational value in the context of early childhood education (Nurhadi & Kusuma, 2017; Siregar & Setiawan, 2015).

Citations and References

Playing is an activity where children show their extraordinary abilities in exploring, imagining and making decisions. Games are described as "children's work" which is very enjoyable for them. One type of game that can stimulate children's development which includes cognitive, language, social emotional, religious and moral values, as well as physical-motor skills is traditional games. That traditional knowledge is distributed not only nationally but also internationally, and that children in very different cultural settings have their own

traditional knowledge (which may have many similarities to other cultures, sometimes very different) is an interesting extension of this research. children's knowledge (Kusmaedi et al., 2021).

Traditional games have human and cultural values, beliefs which are translated into the basis for developing motor skills. This game can be played as a key role in relation to the emotional aspect of physical education. In addition, traditional games can be in a context where most life-related learning can occur in children, games also provide children with a means to learn about their own culture. This is a reference that traditional games can have an important role in their lives, such as improving motor skills and emotions, and being an alternative activity that can be applied in the learning process about culture. Traditional games were an important part of the childhood of our ancestors in ancient times which are now rarely played by children. Traditional games have an important meaning and have left an impression in the childhood of every person who plays them. Traditional games do not require expensive props and everyone can play them, regardless of age and gender. This game was taken over from previous generations and passed on to the younger generation through word of mouth, sound, or presentation (Sulistyaningtyas & Fauziah, 2019).

Conclusion

The aim of this research is to find out how traditional dakon games can improve the cognitive abilities of young children. In an in-depth interview with teacher Bustanul Athfal Aisyiyah Pojok, it was found that the dakon game helps children with various cognitive abilities.

Firstly, it has been proven that dakon improves children's counting skills. Children gain a better understanding of the concepts of number and addition as a result of repeated grain counting activities. Teachers say that children who play dakon regularly show improvements in their understanding of basic mathematics and their ability to recognize numbers.

Second, children's ability to think rationally and prepare is trained through this game. Children gain the ability to think critically and solve problems better as they learn to carefully consider each step. According to teachers, children who play dakon regularly have better skills.

Third, dakon improves children's memory and concentration. Children have to pay attention to the sequence of game steps and remember the number of beans in each hole, which helps improve their memory and focusing ability. Teachers saw improvements in memory and focus during other learning activities.

Dakon improves children's social skills besides enhancing their cognitive abilities. They learn to take turns, cooperate, and obey the rules of the game, which helps them become better at interacting and working together in teams. Children who play dakon play fairly and show more respect to their friends, teachers say.

According to research, dakon games can be included in the early childhood education curriculum as an effective tool for teaching. This game should be used by teachers and educators to provide a broad and meaningful learning experience for children. Dakon games not only benefit education, but also help preserve local culture, making them relevant today.

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