PRATAMA WIDYA: Jurnal Pendidikan Anak Usia Dini
Volume 10, No. 1, (April 2025) 111-124
pISSN: 25284037 eISSN: 26158396
http://ojs.uhnsugriwa.ac.id/index.php/PW

ENHANCING EARLY NUMERACY SKILLS IN 5-6 YEAR-OLD PRESCHOOLERS THROUGH TRADITIONAL GAMES

Muhiyatul Huliyah[1], Yuli Rahmawati [2], Asep Supena[3]
[1,2,3]Program Studi Doktor Pendidikan Anak Usia Dini, Universitas Negeri Jakarta
e-mail: muhiyatul.huliyah@uinbanten.ac.id[1], yrahmawati@unj.ac.id[2], asupena@unj.ac.id[3]

Received 27/12/2024, Accepted 15/04/2025, Published 30/04/2025

Abstract

Early childhood numerical skills are a significant factor in academic readiness. A traditional game-based approach is an effective strategy for engagingly enhancing numerical skills. This study explores using traditional games to support the numerical development of 5-6-year-old children at RA Daarul Muqimien. A qualitative and case study approach was employed to collect data through interviews, observations, and documentation. The participants of this study consisted of three teachers, three parents and three children. Data analysis was conducted using thematic analysis techniques to identify emerging patterns. The results showed that traditional games such as Snakes and Ladders, Congklak, and Engklek were used to improve number recognition, addition, subtraction, and forward and backward counting. In addition, these games contribute positively to children's cognitive, social and motor development. Teachers play a role in adapting the games, while parents support them through guidance at home. The game promotes social interaction and cooperation among children. While there are challenges, such as limited focus and mentoring time, this approach facilitates an engaging learning experience. This research contributes to developing traditional game-based numerical learning methods with adaptations that address children's needs.

Keywords: Traditional Games; Numerical Skills; Children Aged 5-6 Years

INTRODUCTION

Numerical skills are a crucial aspect of early childhood cognitive development, particularly at 5-6 years old. Children are in a critical developmental phase at this stage that lays the foundation for further academic skills. Numeracy helps children understand numbers and simple operations and builds the ability to think logically, solve problems and make decisions. Therefore, it is essential to adopt a fun and contextual learning approach to maximize children's potential in this area. This approach not only makes learning enjoyable but also ensures that children can apply their numerical skills in real-life situations. These skills include number recognition, number grouping, and simple

calculations that form the basis for further math skills (Rekysika & Haryanto, 2019; Fajri et al., 2023; Tripuspa et al., 2024).

Traditional games offer unique advantages as one method of supporting children's numerical development. Games such as Snakes and Ladders, Congklak, and Engklek are recreational activities and serve as learning tools that involve children's cognitive, motor, and social aspects. However, modernization and digital technology are shifting children's preference to gadget-based games (Dillon et al., 2017). Integrating traditional games into early childhood education has attracted attention for its potential to enhance various developmental skills, especially numerical skills, in children aged 5-6. This study explores the effectiveness of traditional games, specifically focusing on their role in developing numerical skills in RA Daarul Muqimien.

Children aged 5-6 years are at the concrete-operational stage of development, where they learn most effectively through direct experience and interaction with the surrounding environment (Piaget, 1952). In traditional games such as Congklak, children are observed counting the seeds moved from one hole to another, which helps them understand the concepts of addition and subtraction concretely. Playing Congklak provides children with manipulative experiences that strengthen their understanding of basic math operations (Warmansyah et al., 2021).

Similarly, the Snakes and Ladders game allows children to practice counting steps forward or backward according to the dice numbers, strengthening counting skills and pattern recognition. Sulistyorini emphasized that the mechanism of this snakes and ladders game helps children understand repeating number patterns and strategic planning (Sulistyorini & Sumajaya, 2024). In addition, the game of Engklek also plays an important role in numerical learning, where the activity of jumping between squares allows children to understand number sequences while involving motor activities that strengthen their memory of numbers (Kumala et al., 2021; Ratnasari et al., 2022; Qadafi et al., 2023).

Traditional games support cognitive learning and improve early childhood social and emotional skills (F. Lestari et al., 2022). They can also be an effective alternative for introducing basic math concepts in a more relaxed and engaging setting (Ginsburg et al., 2007). Traditional games are also effective for developing numeracy skills by making numbers fun and engaging for children. According to Lestari et al.(2022), these games enhance mathematical logic intelligence and promote a better grasp of numerical concepts through their interactive nature.

However, the existence of traditional games is currently facing serious challenges due to the influence of modernization and the development of digital technology. Children are more likely to be attracted to gadget-based games, which often reduces their social interaction and physical engagement. Therefore, this research becomes relevant to re-examine the benefits of traditional games in early childhood learning, particularly in developing numerical skills. In addition, the social aspects of traditional games cannot be ignored.

Previous research has highlighted the effectiveness of traditional games in supporting early childhood numeracy learning. For example, Ongoren & Gundogdu (2021) showed that traditional games can help children develop numeracy and number recognition skills in a fun way. However, most of these studies do not examine the local context or the integration of traditional games in the early childhood education curriculum that could

support children's numerical skills in a more contextualized and engaging way. This study aims to fill this gap by focusing on traditional games in RA Daarul Muqimien and how these games can be used as a practical learning medium to develop the numerical skills of children aged 5-6 years.

Traditional games are a cultural heritage that provides entertainment and holds educational, social, and character values. Vygotsky (1978) emphasized the importance of social interaction in children's cognitive development, primarily through the Zone of Proximal Development (ZPD) concept. Within the ZPD, there are three main components: (1) tasks that the child can complete independently, (2) tasks that can be completed with the guidance of adults or more experienced peers, and (3) tasks that are beyond the child's ability, even with assistance. Traditional games such as Congklak, Snakes and Ladders, and Engklek reflect the ZPD because they involve guidance and collaboration, which allow children to develop new abilities. For example, a child who initially struggles to count Congklak seeds can quickly grasp the concept of addition through peer assistance. Montessori (1912) also supports this, stating that learning will be more meaningful if children can interact directly with concrete objects, as found in many traditional games. In addition, the social interaction in these games encourages children to learn through observation, conversation and feedback, making the learning process more prosperous and profound.

In addition, Benavides-Varela et al. (2016) noted that engaging in counting activities at home can improve 5-6-year-olds' numeracy skills, suggesting that traditional games can be a valuable alternative to support numeracy learning. These games improve math comprehension and foster social skills and cooperation among children, which is particularly important in group learning contexts (Dillon et al., 2017).

However, in this modern era, traditional games are being replaced by technology-based games such as gadgets and video games. A survey showed that 75% of children aged 5-10 years are more interested in gadget-based games than traditional games. This results in less social interaction and physical activity, which are important for their holistic development. In addition, Dillon et al. (2017) noted that excessive screen use often reduces children's engagement in collaborative activities, an important aspect of social and numerical learning. This results in fewer opportunities for children to learn through physical activity and social interaction, which is important for their holistic development. For example, Dillon et al. (2017) note that screen-based games often reduce children's opportunities to engage in collaborative activities, an important aspect of social and numerical learning. Research such as that conducted by Ratnasari et al. (2022) shows that the traditional game of clogs (*bakiak*) can improve children's social-emotional skills through cooperation and self-control, which are relevant to support numerical learning indirectly.

In addition, research by Qadafi et al. (2023) revealed that Sumbawa traditional games, such as "*Kolodood*" and "*Tampek Ada Bulan*," are effective in instilling character values such as hard work, discipline and responsibility. These values help children develop strong character and improve their math skills by giving them a straightforward way to think. "*Kolodood*" is a fun game that helps children develop their strategic thinking skills while they take on various roles during play. Playing traditional games like "*Goak Maling Taluh*" can improve children's character traits such as discipline, hard work, and tolerance. These traits are important for developing math skills. A study by Kumala et al.

(2021) showed that these games can help children become better problem solvers. The game involves elements of healthy competition that encourage children to understand the concepts of turn-taking and strategy, which are also important in developing numeracy and mathematical logic. The research reinforces the idea that traditional games are a cultural preservation tool and an effective medium to support early childhood education, especially in developing numerical and social skills.

Furthermore, research from Ratnasari et al. (2022) confirms that traditional games increase children's engagement in learning and build social skills that support the mastery of numerical concepts. In the context of numerical learning, the game of Congklak, as reported by Warmansyah et al. (2021), allows children to recognize number concepts and simple operations by manipulating the Congklak seeds. Counting the seeds one by one introduces basic math concepts such as addition, subtraction and number distribution in a concrete way. This research also highlights how the game of Congklak creates an atmosphere of collaborative learning when children play with friends or family members.

In addition, the Snakes and Ladders game, as noted by Sulistyorini & Sumajaya (2024), helps children understand number patterns by going forward and backwards according to the numbers on the dice. This activity introduces repetitive patterns and trains children's ability to plan steps and predict the outcome of their movements, which supports problem-solving skills. On the other hand, the Engklek game allows children to physically practice the concept of number sequence by jumping from one box to another. Playing traditional games helps children learn numbers and sequences while being physically active. Research shows that these games effectively improve children's math skills and build strong social ties among their peers and families.

Traditional games have been shown to positively impact the development of social and emotional skills in early childhood. Lestari & Prima (2017) and Astarina et al. (2023) identified that participation in traditional games can foster cooperation, sharing, and improved emotional management among children. Furió et al. (2015) support this, noting that traditional games contribute to a relaxed and enjoyable learning environment, which may enhance children's engagement and motivation.

Although traditional games have many benefits, modernization and digital technology remain a significant challenge in their preservation and implementation. Children tend to be more interested in gadget-based games, which often reduces their social interaction and physical engagement. Research by Melianasari & Suparno (2018) and (Sari, 2025) highlights the importance of social interaction in traditional games, which supports cognitive learning and helps build children's character and social values. Thus, integrating traditional games into the early childhood education curriculum is very important, especially in RA Daarul Muqimien, which is the location of this study. This study explores what traditional games are used in RA Daarul Muqimien and how traditional games can be used as a learning tool to improve the numerical skills of children aged 5-6 years. These games were chosen because they directly involve cognitive, motor and social activities relevant to early childhood developmental stages. In addition, this research will discuss how collaboration between teachers, parents, and educational institutions can strengthen the implementation of traditional game-based learning, including through special training for teachers and socialization to parents on the benefits of traditional games. With a structured approach, traditional games are not

only an effective learning medium but also a relevant means of cultural preservation in facing the challenges of modernization.

This research will significantly enhance academic literature and educational practices. It gives practical advice for educators and parents on using traditional games as learning tools while promoting local culture and improving early childhood math skills. A primary focus is on traditional games in the local context of RA Daarul Muqimien, combining cultural values with current educational needs. We can adapt traditional games to meet today's educational demands, helping children learn and preserve their culture. Practical steps include incorporating these games into early childhood education, training teachers, and organizing play activities for children, parents, and teachers. Everyone should recognize the educational benefits of these games. Schools should set up play spaces for these activities and collaborate with local communities to maintain traditional games as part of their culture.

METHODS

This research uses a qualitative approach with a case study design. As explained by Creswell & Creswell (2023), a case study is a method that focuses on an in-depth exploration of a particular phenomenon in a specific context. This research utilizes a case study framework to understand how traditional games are applied in early childhood numerical learning at RA Daarul Muqimien. The location was chosen because the RA utilizes several traditional games for learning activities. The method involves three main steps: data collection, data analysis, and reflection on the results. Data was collected through in-depth interviews, participatory observation, and document analysis (Spradley, 1979). Interviews were conducted with descriptive and structural questions to gain greater insight into teachers', parents', and children's perceptions of traditional games. The research was conducted from October to December 2024, with participants involving three main groups: teachers, parents, and children from RA Daarul Muqimien. The research subjects consisted of three teachers, three parents and three children, so the total number of participants was nine. Participatory observation involved the researcher's presence at the site to directly observe how the games were conducted and how the children responded.

Data analysis used the thematic method, which reduced data from interviews, observations and summarised documents to find relevant patterns (Creswell & Creswell, 2023). Data validity was tested by triangulation, which validated data from interviews, observations, and documentation. Data findings were then organized in descriptive form to facilitate interpretation. Conclusions were drawn based on thematic patterns to answer the research objectives. The data obtained were coded based on themes such as the type of game, the role of the teacher, children's responses, and parental involvement. Triangulating sources and methods strengthened data validity. Furthermore, reflection on the results was conducted to ensure that the interpretations made were in line with the participants' experiences by critically reflecting on the data to increase the credibility of the research. Analyzing documents such as lesson plans and relevant previous research on traditional games and their implementation in early childhood education. The flow of this research can be depicted in the following diagram (Figure 1).

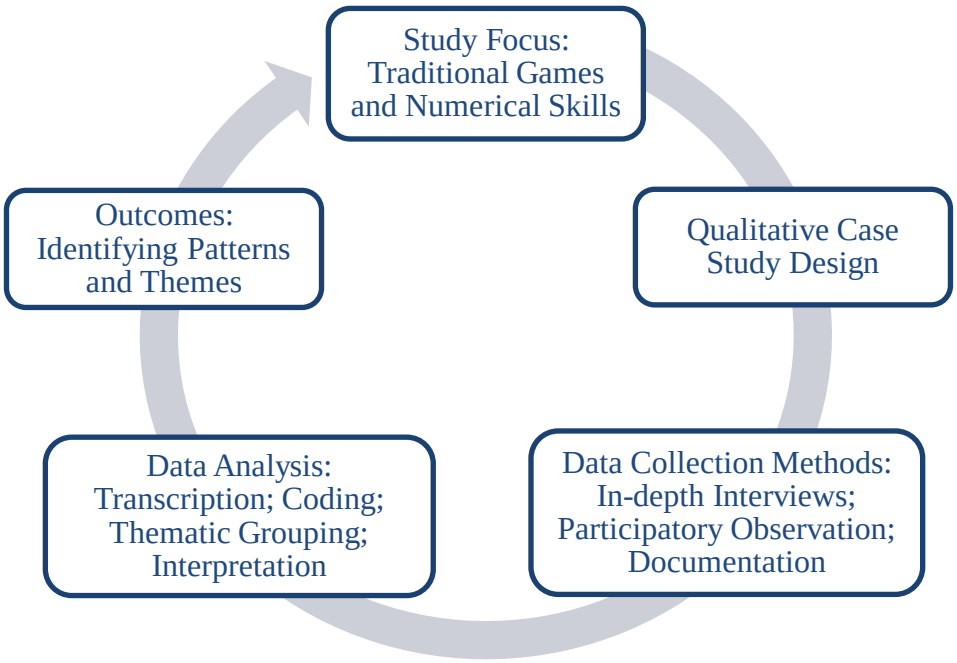

Figure 1. Research Method Flow

RESULT AND DISCUSSION

1. Types of Traditional Games Used

Based on the results of observations and interviews, it was found that the traditional games most often used in numerical learning for children aged 5-6 years at RA Daarul Muqimien include Snakes and Ladders, Congklak, and Engklek. These games play an important role in supporting concrete experience-based learning, as proposed by Piaget's cognitive development theory. Children have the opportunity to understand numerical concepts directly in a real context (Piaget, 1999). For example, the Snakes and Ladders game helps children recognize numbers and count steps forward and backward while developing strategic thinking skills in choosing the game path. In addition, following Vygotsky's theory, the social interaction in this game accelerates children's cognitive development through discussion and group cooperation (Vygotsky, 1978). Traditional cooperation-based games can improve children's numerical and social skills (Harahap, 2023). However, this study adds a new dimension by exploring how traditional games can be adapted specifically for numerical education purposes.

Congklak is a game that enhances counting and addition skills through seed counting while improving children's understanding of number distribution and logical thinking. The physical activity of moving the Congklak seeds supports Bandura's theory that physical actions influence learning (Bandura, 1977). Research conducted by Ratnasari et al. (2022) highlighted that this game also helps children build the value of honesty and cooperation. On the other hand, the Engklek game allows children to recognize numbers while performing physical movements, such as jumping according to the number sequence on the game box. The game enhances children's balance, coordination, and gross motor skills (Muthmainah, 2022). It allows them to channel their energy effectively while enjoyably learning numbers (Simatupang et al., 2023).

The Snakes and Ladders, Congklak, and Engklek games used in RA Daarul Muqimien develop numerical skills and cognitive, social, and motor aspects. Iswinarti's study mentioned that Congklak is a game that involves strategy and calculation, thus improving children's numeracy skills (Iswinarti, 2022). Sulistyaningtyas' research highlights that traditional games significantly enhance early childhood learning, particularly by strengthening numerical skills through play activities (Sulistyaningtyas & Fauziah, 2019). Furthermore, Tatminingsih's research explains that a comprehensive game-based learning model, including traditional games, can improve children's understanding of basic numerical concepts (Tatminingsih, 2020).

2. Development of Children's Numerical Abilities

The children showed significant improvement in numerical aspects, as observed through data from interviews, observations, and documentation. The main findings are as follows: (1) Recognition of numbers 1-20: Children begin to recognize numbers in sequence through the game of snakes and ladders, which involves determining steps based on the numbers on the dice. (2) Forward and backward counting skills: Counting steps on a snakes and ladders board helps children understand the concept of counting forward to achieve a goal and counting backwards when facing a penalty or challenge. (3) Simple addition: In the game of Congklak, children are trained to add seeds to each hole, reinforcing their understanding of total counting and number distribution. Understanding number patterns and sequences: Some children can identify simple number patterns in games, reflecting higher cognitive development. (4) Counting strategies: Children begin to use simple strategies to count steps or the number of seeds, such as counting on their fingers or using visual references on the game board.

This development supports numerical skills and increases children's confidence in interacting with numbers and doing numerical-based tasks in everyday environments. Srinivasan (2019) study indicates that playing Snakes and Ladders can enhance children's cognitive development by improving their understanding of numbers and basic math. The findings suggest that the game may be more effective for building numerical skills than traditional learning methods.

3. The Role of Teachers and Parents

Teachers play an important role in modifying traditional games to meet learning needs. For example, teachers add elements of mathematical questions before children continue to move forward in the game of snakes and ladders. According to Ginsburg et al., strategies like this effectively increase children's involvement in learning while gradually building numerical skills through play activities (Ginsburg et al., 2007; McMillin et al., 2015). Teachers play a central role in implementing traditional games as practical learning tools. As facilitators, teachers introduce traditional games to children and ensure that the games align with predetermined learning objectives. For example: (1) Game Design and Modification: Teachers are responsible for modifying traditional games to make them more relevant to numerical learning concepts. For example, in the game Snakes and Ladders, the teacher adds a math challenge in each square so that children can practice addition or subtraction operations before continuing their steps. (2) Clear Instruction: The teacher gives clear instructions on the game's rules to help children understand and engage with the learning experience. (3) Observe and Guide: Teachers actively observe children's interactions during the game to ensure they understand the concepts. If children have difficulties, teachers provide guidance or questions that motivate them to find solutions. (4) Create a Fun Learning Environment: Teachers foster a supportive and enjoyable

environment during play by using positive praise, rewards, and healthy competition to engage children. (5) Evaluation and Reflection: After the game session, the teacher evaluates the extent to which the children understand the material taught through the game. The teacher can also reflect on the game's effectiveness and look for ways to improve activities in the future.

With this role, teachers are educators and innovators who can creatively integrate traditional games into the curriculum, ensuring that children derive maximum benefit from this approach (Sulistyaningtyas & Fauziah, 2019). Teachers play an important role in modifying traditional games for learning purposes. For example: (1) Modification of Snake and Ladder; the teacher adds math questions every time a child steps on a specific square. (2) Use of Congklak: Teachers incorporate elements of healthy competition by giving additional counting tasks. This modification increases children's involvement in the learning process and accelerates the understanding of numerical concepts in a fun way.

On the other hand, parents play a supporting role that complements the teachers' efforts at home. Parents involve themselves by playing traditional games with their children and use them to strengthen children's communication and understanding of numerical concepts. This activity helps create a fun learning atmosphere at home and strengthens the emotional relationship between parents and children. Some parents also report that they use this game as a way to motivate children to learn numbers outside the school environment. However, the leading challenge parents face is time constraints due to busy work schedules, so some involve other family members to accompany their children to play.

Parents support learning through similar activities at home, such as playing Congklak or Snake and Ladder with their children. This support helps children strengthen their numerical skills and strengthens the emotional relationship between parents and children. Some parents also report using these games to improve children's communication and understanding of simple numerical concepts. However, time constraints are often an obstacle faced by some parents.

Junaidi's research shows that parents' involvement in playing with their children helps strengthen emotional bonds and supports children's social and numerical development (Junaidi, 2020). Parents support traditional game-based learning because it provides various benefits: (1) Improve Children's Understanding; Parents realize that traditional games, such as Snakes and Ladders and Congklak, help children understand numbers, addition, and other numerical concepts. For example, counting steps or Congklak seeds introduces children to simple mathematical operations. (2) Fun and Non-Coercive: This approach allows children to learn without feeling pressured because learning occurs in a playful atmosphere. (3) Encourage Involvement at Home: Parents who play with their children at home enhance their understanding and strengthen family bonds.

However, several challenges are still faced in implementing this method, such as the limited time parents must accompany their children to play, the variation in children's numerical understanding, and the limited number of play equipment at home. Therefore, collaboration between teachers and parents is key in optimizing the use of traditional games as a learning method. In supporting this activity, parents are expected to implement the following strategies: (1) Active Assistance**:** Parents often accompany their children while they play, help them understand the game's rules, and practice counting. For

example, in the Congklak game, they direct the child to count the seeds individually. (2) Allocating Special Time: Although some parents have limited time, many try to make time on weekends to play with their children. (3) Creating a Positive Learning Environment: Parents give praise or encouragement when children complete game challenges, which increases children's motivation to learn.

4. Challenges in Implementation

The main challenges in implementing traditional games include several aspects observed from interviews, observations, and documentation: (1) Focus of Easily Distracted Children: Children can lose concentration while playing, especially if games are long or have complex rules. Teachers may need to make games more dynamic and engaging to keep children's interest. (2) Limited Time for Parents: Many parents find it challenging to provide specific time to accompany their children to play at home. Busyness at work is a significant factor that hinders parents' direct involvement in game-based learning activities. Some parents overcome this obstacle by involving other family members, such as older siblings or grandparents, to support the child. (3) Variation in Children's Understanding: Different levels of children's numerical understanding are often challenging in implementing games. Some children need intensive teacher guidance to understand the game's rules or how to count correctly. Teachers use an individual approach to help children who are having difficulty. (4) Limited Tools and Resources: Games like Congklak and Engklek need specific tools that are not always available at school or at home. Children have fewer opportunities to play and learn outside of school. To address this, teachers make simple play equipment from readily available materials.

These challenges are successfully managed through interactive strategies, such as giving verbal praise to increase children's motivation, dividing children into small groups to increase cooperation, and involving creativity in making game rules more flexible. Thus, despite the obstacles, the implementation of traditional games continues to have a significant positive impact on early childhood numerical learning.

5. Children's Response to Games

Children show great enthusiasm for this learning method. Traditional games such as Snakes and Ladders, Congklak and Engklek, combine physical activity with number learning, making the learning process fun and interesting. Children feel motivated to participate because of the competitive nature of the games, such as winning more Congklak seeds or progressing faster on the Snakes and Ladders board. During observations, children often showed a high level of curiosity about the numbers and patterns in the game. They are actively involved in trying to count steps, understand the sequence of numbers, and complete the game's challenges. Some children who initially find it difficult to count find creative ways, such as counting on their fingers or asking friends for help. This interaction not only improves numerical ability but also strengthens their social skills.

In interviews, children revealed they felt more confident using numbers after playing. They also felt proud when they completed the numerical challenges in the game. This play experience created a positive learning atmosphere, where children did not feel pressured but learned through fun and exploration. Thus, children's responses to traditional games show that this approach is practical for developing their numerical and interpersonal abilities.

The results of this study support Piaget's theory of cognitive development, which states that children in the pre-operational stage learn through concrete experiences and play activities. Traditional games provide a fun and interactive learning context, supporting numeracy development and social and motor skills. Collaboration between teachers and parents is also key to the success of this method, creating a synergistic learning environment between school and home.

According to Vygotsky (1978), learning through social interaction can accelerate children's cognitive development. In traditional games such as snakes and ladders and congklak, children learn numbers and interact with their friends, improving their social skills. Bronfenbrenner's research also confirms that environmental factors, including parental support, greatly influence children's development. In this study, the role of parents as supporters of play activities at home is an important factor in reinforcing learning at school.

Previous research, such as that conducted by Ratnasari et al. (2022) and Widiasavitri et al. (2020), shows that traditional games support cognitive learning and instil values such as cooperation, patience, and honesty. The Congklak game helps children learn to count while teaching them to take turns. In addition, Bandura's motor theory emphasizes the importance of physical activity in children's learning. The game of hopscotch not only trains balance and motor coordination but also introduces the sequence of numbers in a fun way. This traditional game has proven to be an effective tool for integrating cognitive, social, and physical learning. Nariati & Cahyani (2024) describes implementation challenges as limited tools and children's lack of focus during play. Teachers at RA Daarul Muqimien overcome these obstacles through creative adaptations, such as making simple play tools and giving verbal praise to increase children's motivation. These findings align with previous research showing that a creative approach can overcome the obstacles of game-based learning.

Thus, traditional games become a holistic learning tool that supports the development of various aspects in early childhood. The results of this study support Piaget's cognitive development theory, which states that children in the pre-operational stage learn through concrete experiences and play activities. In this context, traditional games provide direct experiences that encourage understanding numerical concepts while strengthening social and motor skills. Research by Vygotsky (1978) also supports this finding, highlighting that learning through social interaction can accelerate children's cognitive development. Games such as Snake and Ladder and Congklak, which were used in this study, align with cognitive development theory because they combine physical activity, number counting, and simple problem-solving. In addition, Bronfenbrenner's theory of child developmental ecology emphasizes that collaboration between teachers, parents, and the social environment is essential in creating effective learning. In this study, collaboration between teachers and parents creates a synergistic learning environment, where learning at school is reinforced by play activities at home.

Research by Widiasavitri et al. (2020), Puspitasari & Utami (2023) and Ratnasari et al. (2022), demonstrates that traditional games support not only numerical skills but also foster character values like cooperation and honesty. Traditional games are important for helping children grow and develop in many ways. Teachers play a central role as the primary facilitator in the traditional game-based learning process. They are tasked with explaining the game's rules in detail, ensuring that children understand the necessary

steps, and guiding the counting process during the game. Teachers also show creativity in adapting traditional games, such as adding educational elements in numerical questions before children can continue the steps in the snake and ladder game or adding challenges to the Congklak game. This approach helps to maintain children's interest and increase their involvement in learning activities. In addition, teachers give individual attention to each child, ensuring that each child receives guidance according to their level of understanding and ability. They use verbal praise or direct support to increase the motivation of children who face difficulties.

On the other hand, parents play a supporting role that complements the teachers' efforts at home. Parents involve themselves by playing traditional games with their children and use these games to strengthen children's communication and understanding of numerical concepts. This activity helps to create a fun learning atmosphere at home and strengthens the emotional bond between parents and children. Some parents also reported that they used this game as a way to motivate children to learn numbers outside of the school environment. However, parents' leading challenge is time constraints due to work commitments, so some involve other family members to accompany the children to play. Parents support learning through similar activities at home, such as playing congklak or snake and ladder with their children. This support helps children strengthen their numerical skills and strengthens the emotional bond between parents and children. Some parents also report that they use these games as a means to improve children's communication and understanding of simple numerical concepts. However, time constraints are often an obstacle faced by some parents.

CONCLUSION

Children's responses to traditional games reflect a combination of enthusiasm, challenge and learning. Children enjoy these activities and progress in numerical abilities and social skills. Teacher and parent support is crucial for maximizing the benefits of a play-based approach in overcoming the challenges children face. Learning through traditional games creates effective and meaningful experiences for children.

Traditional games are highly effective in fostering early childhood numerical skills. Teachers and parents play important roles in this approach. Recent recommendations suggest that educators should consider adapting traditional games for educational purposes. Additionally, parents are encouraged to actively engage in their children's playtime at home. Furthermore, there is a need for more Research to explore the role of traditional games in fostering advanced math skill development.

With this approach, numerical learning in early childhood can be fun, practical and meaningful. The ladder snake trains children to count steps forward and backward and recognize numbers in sequence. In addition, the game motivates children to think strategically, such as choosing a path that avoids the decline caused by the snake. Congklak teaches simple addition through counting seeds, encourages children to understand the concept of number distribution and trains hand-eye coordination. Engklek, on the other hand, introduces numbers through physical movements, such as jumping onto squares in numerical order. The game also improves children's gross motor skills and balance while strengthening their numerical understanding.

BIBLIOGRAPHY

Astarina, A. N., Zuraida, I., Hendar, H., Heryono, H., & L. Sujatna, M. (2023). Sundanese Traditional Games As Media for Promoting Children'S Cognitive, Affective and

Psychomotor Development in Cikaum Subang. *Journal Sampurasun : Interdisciplinary Studies for Cultural Heritage*, *9*(Vol. 9 No. 1 2023), 33–44. https://doi.org/10.23969/sampurasun.v9i1.7301

Bandura, A. (1977). *Self-efficacy: Toward a Unifying Theory of Behaviorial Change* (Vol. 84, Issue 2). https://educational-innovation.sydney.edu.au/news/pdfs/Bandura 1977.pdf

Benavides-Varela, S., Butterworth, B., Burgio, F., Arcara, G., Lucangeli, D., & Semenza, C. (2016). Numerical activities and information learned at home link to the exact numeracy skills in 5-6 years-old children. *Frontiers in Psychology*, *7*(February). https://doi.org/10.3389/fpsyg.2016.00094

Creswell, J. W., & Creswell, J. D. (2023). Research Design, Qualitative, Quantitative and Mixed Methods Approaches. In *SAGE Publications,Inc.: Vol. Sixth Edit* (Issue 1). https://medium.com/@arifwicaksanaa/pengertian-use-case-a7e576e1b6bf

Dillon, M. R., Kannan, H., Dean, J. T., Spelke, E. S., & Duflo, E. (2017). Cognitive science in the field: A preschool intervention durably enhances intuitive but not formal mathematics. *Science*, *55*(July), 47–55.

Fajri, Z., Mutmainah, N., & Sajuri. (2023). Peningkatan Kemampuan Berhitung Menggunakan Pembelajaran Kooperatif Berbantuan Media Permainan Ular Tangga Di KB AN Nawawi Bondowoso. *Jurnal Tarbiyah Islamiyah*, *8*(April), 79–102.

Furió, D., Juan, M. C., Seguí, I., & Vivó, R. (2015). Mobile learning vs. traditional classroom lessons: A comparative study. *Journal of Computer Assisted Learning*, *31*(3), 189–201. https://doi.org/10.1111/jcal.12071

Ginsburg, K. R., Shifrin, D. L., Broughton, D. D., Dreyer, B. P., Milteer, R. M., Mulligan, D. A., Nelson, K. G., Altmann, T. R., Brody, M., Shuffett, M. L., Wilcox, B., Kolbaba, C., Noland, V. L., Tharp, M., Coleman, W. L., Earls, M. F., Goldson, E., Hausman, C. L., Siegel, B. S., Smith, K. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics*, *119*(1), 182–191. https://doi.org/10.1542/peds.2006-2697

Harahap, D. P. (2023). Cognitive behavioral therapy and traditional cooperative games in improving social skills: A single-subject experimental study. *INSPIRA: Indonesian Journal of Psychological Research*, *4*(1), 29–40. https://doi.org/10.32505/inspira.v4i1.5434

Iswinarti. (2022). The effect of traditional game Congklak Lidi with BERLIAN method to improve honest attitude to the children. *Psychological Journal: Science and Practice*, *1*(2), 61–67. https://doi.org/10.22219/pjsp.v1i2.19615

Junaidi, R. (2020). Persekitaran Kanak-kanak: Satu Penelitian Terhadap Novel Kanak-kanak Terpilih. *Pendeta Journal of Malay Language, Education and Literature*, *11*(1), 1–17. https://doi.org/10.37134/pendeta.vol11.1.1.2020

Kumala, I. A. M. W., Sueca, I. N., & Parsua, G. R. (2021). Pembentukan karakter Anak Melalui Permainan Tradisional Goak Maling Taluh Di Tk Werdhi Kumara Punggul Badung. *PRATAMA WIDYA: Jurnal Pendidikan Anak Usia Dini*, *Spesial*(Desember), 32–37.

Lestari, F., Djamil, M., & Wiyatini, T. (2022). Development of the Traditional Engklek Game Model to Improve Dental and Oral Disease Prevention Behavior in Elementary School Children. *Journal of Drug Delivery and Therapeutics*, *12*(5), 98–102. https://doi.org/10.22270/jddt.v12i5.5667

Lestari, P. I., & Prima, E. (2017). The Implementation of Traditional Games to Improve the Social Emotional Early Childhood. *Journal of Educational Science and*

Technology (EST), *3*(3), 178–184. http://ojs.unm.ac.id/index.php/JEST/article/view/4212/pdf_54

McMillin, S. E., Hall, L., Bultas, M. W., Grafeman, S. E., Wilmott, J., Maxim, R., & Zand, D. H. (2015). Knowledge of child development as a predictor of mother-child play interactions. *Clinical Pediatrics*, *54*(11), 1117–1119. https://doi.org/10.1177/0009922815581763

Melianasari, H., & Suparno, S. (2018). The Importance of Traditional Games to Improve Children's Interpersonal Skill. *4th International Conference on Early Childhood Education. Semarang Early Childhood Research and Education Talks (SECRET): Advances in Social Science, Education and Humanities Research*, *249*, 181–186. https://doi.org/10.2991/secret-18.2018.29

Montessori, M. (1912). *The Montessori Method, Scientific Pedagogy as Applied to Child Education in "The Children's Houses" with Additions and Revisions by The Author. (A. E. George, Trans)* (2nd ed.). Frederick A.Stokes Company (Original Work Published 1912). https://perso.telecom-paristech.fr/rodrigez/resources/PEDAGO/montessori_works.pdf

Muammar Qadafi, Nani Husnaini, & Leni Sasriani. (2023). Penanaman Nilai Karakter Anak Melalui Permainan Tradisional Sumbawa Di Tk Pgri Ongko. *Pratama Widya: Jurnal Pendidikan Anak Usia Dini*, *8*(1), 1–14. https://doi.org/10.25078/pw.v8i1.2208

Muthmainah, F. (2022). Increasing Early Childhood Creativity and Fine Motor Abilities Using Traditional Games (Bermain Lempung) in The Digital Age. *KnE Social Sciences*, *2022*(ICoPsy), 34–42. https://doi.org/10.18502/kss.v7i18.12375

Nariati, N. K. S., & Cahyani, N. M. Y. D. (2024). Bakiak Games in Developing Social - Emotional Children in Early Childhood. *Pratama Widya: Jurnal Pendidikan Anak Usia Dini*, *9*(1), 75–84.

Ongoren, S., & Gundogdu, S. (2021). Mathematical Skills in Traditional Children's Games in Early Childhood. *Kastamonu Eğitim Dergisi*, *29*(5), 1052–1064. https://doi.org/10.24106/kefdergi.735687

Piaget, J. (1952). The origins of intelligence in children. In M. Cook (Ed.), *The origins of intelligence in children.* W W Norton & Co. https://doi.org/10.1037/11494-000

Piaget, J. (1999). *Play, Dreams and Imitation in Childhood*. Psychology Press.

Puspitasari, P. E., & Utami, R. D. (2023). Analysis Of Teachers Readiness In Implementing The Independent Curriculum In Elementary Schools. *Didaktika Tauhidi: Jurnal Pendidikan Guru Sekolah Dasar*, *10*(2), 145–156. https://doi.org/10.30997/dt.v10i2.9761

Qadafi, M., Husnaini, N., & Sasriani, L. (2023). Penanaman Nilai Karakter Anak Melalui Permainan Tradisional Sumbawa Di Tk Pgri Ongko. *Pratama Widya: Jurnal Pendidikan Anak Usia Dini*, *8*(1), 1–14. https://doi.org/10.25078/pw.v8i1.2208

Ratnasari, P., Prima, E., & Poerwati, C. E. (2022). Upaya Meningkatkan Kemampuan Sosial Emosional Melalui Permainan Tradisional Bakiak Untuk Anak Kelompok B1 Paud Pelita Kasih. *Pratama Widya: Jurnal Pendidikan Anak Usia Dini*, *7*(2), 106–115. https://doi.org/10.25078/pw.v7i2.1864

Rekysika, N. S., & Haryanto. (2019). Media Pembelajaran Ular Tangga Bilangan Untuk Meningkatkan Kemampuan Kognitif Anak Usia 5-6 Tahun. *Cakrawala Dini: Jurnal Pendidikan Anak Usia Dini*, *10*(1), 56–61. https://doi.org/10.17509/cd.v10i1.16000

Sari, D. A. M. (2025). The Role Of Traditional Games In Improving Early Childhood Social Skills. *Majority Science Journal (MSJ)*, *3*(1), 21–29.

https://doi.org/https://doi.org/10.61942/msj.v3i1.303

Simatupang, N. D., Sholichah, S. A., & Simanjuntak, I. A. (2023). Introduction to Counting Symbols in Early Childhood with Stick Math (STIKMA) Educational Tool Games. *JPUD - Jurnal Pendidikan Usia Dini*, *17*(2), 297–311. https://doi.org/10.21009/jpud.172.08

Spradley, J. K. (1979). *The Ethnographic Interview*. Holt, Rinehart, Winston, Inc.

Srinivasan, K. (2019). Snake and Ladder Games in Cognition Development on Students with Learning Difficulties. *Indian Journal of Dental Advancements*, *10*(4), 160–170. https://doi.org/10.5866/2018.10.10160

Sulistyaningtyas, R. E., & Fauziah, P. Y. (2019). *The Implementation of Traditional Games for Early Childhood Education*. *326*(Iccie 2018), 431–435. https://doi.org/10.2991/iccie-18.2019.75

Sulistyorini, Y., & Sumajaya, A. S. (2024). Pengembangan Media Pembelajaran Permainan Ular Tangga dalam Pembelajaran Literasi dan Numerasi. *Cakrawala*, *3*(1), 36. https://doi.org/10.28989/cakrawala.v3i1.2200

Tatminingsih, S. (2020). *A Learning Model based on Comprehensive Games (Study on Conceptual Learning Model to Improve Early Childhood Abilities)*. *449*(Icece 2019), 93–96. https://doi.org/10.2991/assehr.k.200715.018

Tripuspa, A., Mujtaba, I., & Damayanti, A. (2024). Upaya Meningkatkan Keterampilan Motorik Halus Melalui Kegiatan Finger Painting pada Anak Usia 5-6 Tahun di KB TK Lab School Fakultas Ilmu Pendidikan Universitas Muhammadiyah Jakarta. *Universitas Muhammadiyah Jakarta*, 1429–1437.

Vygotsky, L. S. (1978). *Mind in Society: Development of Higher Psychological Processes*. Harvard University Press.

Warmansyah, J., Zulhendri, Z., & Amalina, A. (2021). The Effectiveness of Lore Traditional Games Towards The Ability to Recognize The Concept of Numbers on Early Childhood. *Ta'dib*, *24*(2), 261. https://doi.org/10.31958/jt.v24i2.2685

Widiasavitri, P. N., Agustini, N. M. Y. A., Astiti, D. P., Suarya, L. M. K. S., & Haryati, T. (2020). Traditional Games as Alternative Activities for Children Stimulation. *Journal of Psychology and Instruction*, *4*(1), 1–9. https://doi.org/10.23887/jpai.v4i1.23010