



Innovative educational congklak media in prasiaga scout activities: stimulating critical thinking and social skills in early childhood

Nuraisyah ^{1*}, Rika Kurnia ², Herman ³, Herlina ⁴, Yuri Bactiar ⁵, Hajerah ⁶

¹²³⁴⁵⁶ Universitas Negeri Makassar

* Corresponding Author. Email: <u>nuraisyah99919@gmail.com</u>

ARTICLE INFO ABSTRACT

Article History

Received November 20, 2024; Revised December 17, 2024; Accepted December 24, 2024

Keywords

Critical thinking skills; Social Skills; Congklak; Early childhood Critical thinking skills are essential competencies that need to be developed from an early age, as they play a vital role in the processes of analysis, problem-solving, and decision-making. Study aimed to develop and examine the effectiveness of the innovative traditional game "Congkalak Edukatif" in stimulating critical thinking and social skills among 5-6-year-old children during Prasiaga Scout activities at TK IT Asshiddiq. The research method employed was Research and Development (R&D) using the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). The subjects of this study were children aged 5-6 years participating in Prasiaga Scout activities. The results indicated that the implementation of the Congkalak Edukatif game significantly enhanced children's critical thinking abilities, as evidenced by the increased posttest scores compared to the pretest in the aspects of analysis, problem-solving, and decision-making. Furthermore, this game was also effective in developing children's social skills, such as communication skills, cooperation, sportsmanship, and emotional regulation in social interactions. The enjoyable, socially interactive play experience provided by the Congkalak Edukatif game encouraged children to learn teamwork, understand rules, and build empathy towards their peers. Thus, Congkalak Edukatif can serve as an innovative and effective learning media alternative for improving critical thinking and social skills in early childhood, particularly within Prasiaga Scout activities. This article makes a significant contribution to the development of future science by introducing Congklak media as an innovative media that has been proven to be effective in stimulating critical thinking skills and social skills in early childhood, thus opening a new paradigm in learning practices that integrate aspects of analysis, problem solving, decision making, and social interaction from preschool age.

This is an open access article under the <u>CC-BY-SA</u> license.



INTRODUCTION

Early Childhood Education is an important stage in forming the foundation of child development, including cognitive, social, emotional, and motor aspects. At this stage, children learn through concrete, play-based experiences. One of the important skills that needs to be developed early is the ability to think critically (Kurnia et al., 2024). Critical thinking involves the ability to analyze,

bittps://doi.org/10.21831/hsjpi.v11i2.84752



evaluate, and make decisions based on available information. These skills can be grown through play activities that involve strategy and decision-making, such as traditional games. Traditional games are a cultural heritage that not only has recreational value but also contains valuable educational elements. Early childhood education (PAUD) has an important role in forming critical thinking skills, which can be integrated into various activities, including Scouting activities. According to Jean Piaget in 1865, children's critical thinking skills develop through concrete experiences and social interactions (Handika et al., 2022).

One of the traditional games that can support the development of critical thinking is congklak. The game of congklak has been widely known in various regions in Indonesia and has high educational value. This game trains children to think strategically, understand the consequences of each step taken, as well as develop numeracy and situation analysis skills. In addition, the game of congklak also helps children improve patience, concentration, and social skills through interaction with playmates. However, along with the development of technology and changes in children's play patterns, traditional games such as congklak are starting to be displaced by digital-based games. Children spend more time with gadgets than playing traditional games that can actively stimulate their cognition. As a result, children's opportunities to develop critical thinking skills through traditional games are becoming increasingly reduced. In fact, according to research (Rahmawati & Supriyanto, 2023), children who actively play traditional games show significant improvements in analytical and problem-solving skills.

In the context of early childhood education, the integration of traditional games into learning can be a solution to optimize children's cognitive development (Bachtiar et al., 2022). Congklak, as a strategy-based game, can be used as a tool in fun and meaningful learning (Made Alit Darmawan et al., 2021). By applying congklak games in a learning environment, children can learn to think logically, design strategies, and understand cause-and-effect relationships through hands-on experience. Therefore, this study aims to develop the use of congklak games as a learning medium that can stimulate the critical thinking skills of children aged 5-6 years. Critical thinking is an important skill that needs to be developed from an early age because it plays a role in forming an analytical, creative, and reflective mindset (Ringle et al., 2024). Children who have critical thinking skills can understand, evaluate, and solve problems better. In addition, critical thinking encourages children's curiosity, so they are more active in asking questions, exploring, and finding answers on their own. These skills also help children develop communication skills, where they learn to express their opinions and reasons behind their thoughts more clearly and confidently. In today's information era, critical thinking also plays a role in instilling an attitude of not easily believing in the information received, but evaluating its accuracy and relevance first (Herman et al., 2017; Wahyuni & Hasbur, 2025). In addition, critical thinking is not only related to logic, but also increases creativity and innovation, where children can create new solutions in various situations. This skill is an important provision for children for the future, both in the world of education and social life. Therefore, educators and parents have a big role in guiding children to get used to critical thinking from an early age.

Nurhalimah & Widodo (2022). The results of the study show that 83% of children have experienced an increase in analytical skills. Prasiaga Scout activities are effective in developing systematic thinking. There is an increase in problem-solving skills through group activities or manggar units. Meanwhile, according to Hidayat & Kusuma (2019), 5% of children show an increase in logical thinking skills, scouting activities encourage the development of strategic thinking, and there is an increase in situational analysis skills (Leonita et al., 2019).

The Prasiaaga Scout program can have a significant impact on children's development, especially in improving critical thinking skills. Through a variety of activities involving social interactions, challenges, and games (Park et al., 2022). This pre-school scouting activity is an extra-curricular activity carried out at PAUD institutions that can facilitate children's development through interesting activities, one of which is with a traditional game approach (Azizah & Haroh, 2023). Based on the Grand Theory of Homo Ludens in 1938 arguing that games are even older than the culture itself, the activity of play existed before humans formed complex social structures (Nur, 2013). Traditional games not only function as a means of entertainment, but also contain deep educational and social

values, as stated by Ki Hadjar Dewantara in 1930 also as a Theory Grend of this research he emphasized that traditional games are an effective learning medium to instill noble cultural values to the younger generation (Mustaqim, 2021). This traditional game is a form of media that is considered an important component needed by children to support their growth and development (Mahyuddin, N., & Sofya, 2019). In this game, children can learn while playing, so that the learning process becomes more fun and effective. This diverse approach helps to create a more valuable and immersive learning experience (Mawaddah & Pohan, 2024).

Based on the results of recent research, there is a very close relationship between traditional games and the development of critical thinking skills in children. Research by Rahmawati & Supriyanto (2023) shows that 87% of children experience improved analytical skills through the application of traditional games. This happens because in traditional games, children are trained to observe game patterns, understand the rules and their consequences, and identify and evaluate effective strategies in games. This process naturally encourages the development of children's logical thinking through understanding the cause-and-effect relationship and decision-making based on the situation at hand (Rahmawati & Supriyanto, 2023). Critical thinking skills are important skills that need to be developed from an early age because they can affect the way children process information, solve problems, and make decisions in daily life. Traditional games have the advantage of honing children's thinking skills because they involve strategy, cooperation, and problem-solving. Therefore, the traditional educational congklak game to be developed was chosen because it contains elements that support children's cognitive and social development. In this game, children are faced with situations that require children to think strategically, solve problems creatively, and cooperate with friends or playmates. This makes congklak an effective means to hone critical thinking skills from an early age (Ambarwati, 2024; Sandalwood & Suryana, 2021; Rahmah et al., 2024), considering that the game also introduces the concepts of planning, decision-making, and understanding of the applicable rules. Based on observations in the field, learning at Asshiddiq IT Kindergarten still often focuses on academic and structural activities, so it does not provide space for children to think critically spontaneously. Children tend to still rely on direct help from educators and are less given the opportunity to collaborate in analyzing simple problems. Children also still have difficulty in making their own decisions, a lack of desire to ask questions, and a lack of understanding of the thought process that must be passed. In addition, the social skills aspect also shows unmet needs. Children appear to be less skilled in communicating effectively with peers, have limitations in their ability to work together, are less able to resolve conflicts independently, and are less trained in expressing empathy and respecting the opinions of others. The ability to take turns, share, negotiate, and understand and follow common rules also needs to be further developed.

Asshiddiq Integrated Islamic Kindergarten, as an educational institution that combines Islamic values with modern educational practices, has great potential to integrate traditional games in scouting activities. The traditional game of congklak has been modified into one of the game media innovations that has great potential to hone children's critical thinking skills because it involves strategy, cooperation, and problem-solving. The game not only teaches about the rules, but also hones the skills of planning, decision-making, and predicting outcomes, all of which are part of critical thinking. In addition, the Educational Congkalak game also contributes to developing children's social skills, such as the ability to communicate effectively, work together in a team, take turns, follow common rules, resolve conflicts positively, and build empathy for peers. Through the interactions that occur during play, children learn how to establish healthy social relationships, manage emotions, and develop a sense of responsibility in interacting with others.

This study aims to identify the need for traditional games in improving the critical thinking skills and social skills of children aged 5–6 years in Prasiaga Scout activities. In addition, this research also seeks to design traditional games that can be used as an effective learning medium. To ensure the quality, tests were carried out on the effectiveness and practicality of the game. Furthermore, this study assesses the effectiveness of using traditional games by comparing children's critical thinking skills and social skills before and after using the game. The purpose of this study is to develop and test the effectiveness of traditional game innovations, namely Educational

Cooperatives, in stimulating the critical thinking skills and social skills of children aged 5–6 years in Prasiaaga Scout activities. This study aims to find out the extent to which the Educational Congkalak game can improve children's critical and social thinking skills through a fun, interactive, and playful approach that follows their developmental stages. With this research, it is hoped that the Educational Congkalak game can be one of the innovative and effective learning media in improving the quality of critical thinking and social skills of children from an early age.

RESEARCH METHOD

This study uses the Research and Development (R&D), which aims to produce innovative products in the field of education and test their effectiveness. The development model used is ADDIE (Analysis, Design, Development, Implementation, Evaluation), which consists of five main stages: Analysis, Design, Development, Implementation, and Evaluation (Fitriani & Vinayastri, 2022; Kamal, 2019; Waruwu, 2024). The products developed in this study are Traditional games, "Educational Puzzle" that are integrated in the activities, and Pre-Season Scouts to improve the critical thinking skills of children aged 5-6 years. The analysis stage was carried out to identify the learning needs of social skills and critical thinking skills of children aged 5-6 years in the activity Pre-Season Scouts. The steps taken include observation of the implementation of activities Pre-Season Scouts at Kindergarten IT Asshiddiq as well as children's critical thinking patterns, interviews with Scout coaches and teachers about the challenges and potential of traditional game development, literature review about traditional games and educational concepts in Pre-Season Scouts, as well as an inventory of relevant traditional games. This research uses the ADDIE development model, which consists of five main stages. The first stage, Analysis, focuses on identifying problems and needs of 5-6 year olds in developing critical thinking skills. Early observations show that children need an interesting and educational variety of play to stimulate their critical thinking development. In addition, the low ability to think critically in early childhood is a major concern, so intervention is needed through structured play activities and interesting programs.

Not only that, the results of observations also show that children's socialization and emotional management skills still need to be improved. Children still have difficulty interacting effectively with peers, sharing, taking turns, and resolving small conflicts independently. They are also not fully able to manage emotions such as disappointment, anger, or excessive enthusiasm when playing together. Therefore, a learning approach is needed that not only focuses on cognitive aspects but also supports the development of children's social and emotional skills through a play experience that is collaborative, fun, and appropriate to the stage of early childhood development.

The second stage, Design, includes designing programs that are tailored to the needs of students. At this stage, an initial analysis was carried out to adjust the Prasiaga Scout program as a learning forum for children aged 5-6 years. Analysis of students' characteristics was also carried out to understand how to play and the development of their critical thinking. In this stage, the traditional game of Educational Congklak was chosen because it is relevant to the local culture and can train critical thinking skills. In addition, an implementation plan was also prepared that included the integration of games in Prasiaga Scout activities, including materials, rules, and implementation steps.

The third stage, Development, focuses on creating and refining the game that has been designed. This process begins with the initial development of the game in the form of a prototype *of the Educational Congklak* that is ready to be tested. Furthermore, validation is carried out by experts, such as early childhood educators, Scout practitioners, and game developers, to assess the feasibility and effectiveness of the game. After that, revisions are made based on input from validators so that the game is more in line with the needs and characteristics of children aged 5-6 years.

The fourth stage, Implementation, involves a game trial in Prasiaga Scout activities to assess the extent to which children can participate and enjoy *the Educational Congklak game*. Data collection was carried out through observation, interviews, and other instruments to observe children's interactions, levels of involvement, and critical thinking development during play. The data obtained were analyzed to evaluate the effectiveness of games in stimulating critical thinking in early childhood.

Stages	Description
Analysis	1. Identify problems and needs at Asshiddiq IT Kindergarten.
	2. Teacher surveys about children's critical thinking skills
	(questioning, analyzing, problem-solving, open-
	mindedness, decision-making) and social-emotional skills
	during play.
	3. Literature study on traditional games in Prasiaaga Scouts.
	4. Inventory of relevant traditional games.
Design	1. Set achievement indicators according to SKUs and themes.
	2. Formulate learning objectives.
	3. Designing the Congklak Edukation game products with
	specific colors.
	4. Develop game scenarios and critical thinking evaluation
	instruments.
Development	1. Develop product design and evaluation tools.
	2. Validation by material experts and media experts.
	3. Revisions based on validator input.
	4. Initial trial with students and assessment by teachers.
Implementation	1. Application of traditional games in Prasiaga Scout activities
	2. Observations and interviews to assess initial effectiveness.
	3. Identify constraints in implementation.
Evaluation	1. Formative: Evaluation during implementation for
	immediate improvement.
	2. Summative: Evaluation after the activity ends to measure
	the effectiveness of games in improving children's critical
	thinking.
	3. The results of the teacher's observation and assessment are

Table 1. ADDIE Stages Table

The last stage, Evaluation, aims to assess the effectiveness of the Educational Coalition game in developing critical thinking skills of children aged 5-6 years. The evaluation was carried out by measuring the development of children's critical thinking based on predetermined indicators. In addition, the results of the evaluation are used as a basis for making improvements to the game based on feedback from teachers, students, and related parties to make it more practical, effective, and interesting. Overall, the research framework is designed to ensure that traditional games *of Educational Comedy* can be an effective medium in supporting children's critical thinking development through a fun, contextual, and educational approach to play.

used as the basis for evaluation.

Table 2. R&	O Research	Subjects	According
-------------	------------	----------	-----------

Research Sample	Research Instruments
Teacher, child	Interviews, observations
Researchers	Observation
Validator, Teacher	Handbook feasibility instruments, media feasibility instruments, teacher
	activity observation sheets, Child
Teacher, Researcher Researcher, Teacher	Learning Development Assessment Sheet Observation and Questionnaire Observation and Documentation
	Teacher, child Researchers Validator, Teacher Teacher, Researcher

RESULT AND DISCUSSION

The media innovation developed in this study is the game "Congkalak Edukatif", an innovation based on traditional games designed to stimulate the critical thinking skills of children aged 5-6 years in Pramuka Prasiaga activities. This game is modified with additional educational elements, such as logic-based guessing cards, decision-making strategies, and challenges that invite children to think reflectively while playing. The game design is made with child-friendly materials and attractive colors to increase the attraction for the congklak and seed boards that follow the color of the congklak board and the level of the board, which is designed from easy to difficult. The following is the form of the congklak media innovation that was made.



Figure 1. Educational Media Innovation

In addition, the rules of the game will be arranged gradually according to the level of cognitive development of the child, so that this media can be played according to the progress of the child's analysis level because there are three levels of children's play patterns so that they can learn to strategize, analyze the opponent's steps, and understand the consequences of every decision taken. With a fun and interactive approach, this media is expected to be an effective tool in developing children's critical thinking skills naturally through play activities.

The implementation of the game is carried out during the pre-alert scout activity. This is intended for children. The implementation of the game is carried out during the Pre-Alert Scout activity with the aim that children can learn in a fun and interactive atmosphere(Muqdamien et al., 2021; Ringle et al., 2024). Through the Educational Congkalak game, children not only enjoy an exciting playing experience but also develop critical thinking skills naturally. In the context of Pre-Season Scouting, this game is designed to train children in decision-making, problem-solving, and working together in groups. In addition, with the element of strategy in the game, children are invited to think more systematically, recognize patterns, and consider every step taken(Kurnia et al., 2024; Ranjan et al., 2025). Thus, these games not only serve as a means of entertainment but also become an effective learning medium in stimulating early childhood cognitive development. In the pre-alert scout activity, it trains children to be honest and disciplined because the activities carried out are not limited by a certain achievement, but are focused on the basic goals of scouts, who form individuals who have skills in society.

Based on the results of the pretest of children's critical thinking skills, it can be seen that most children have a low level of critical thinking. This can be seen from the frequency distribution, where only a few children have high scores. The majority of students were in a lower score range, indicating that critical thinking stimulation was not optimal before the implementation of the intervention in the form of a traditional innovation game, "Congkalak Edukatif". It can be seen in the diagram below.



Figure 1. Child Preetest Result Bar Chart

After the posttest was carried out, there was a significant improvement in children's critical thinking skills. The data shows that the frequency of children with high scores is increasing, which means that the "Educational Team" game applied in Prasiaaga Scout activities has a positive impact on developing critical thinking skills. Structured play activities based on local culture allow children to engage in problem-solving, decision-making, and analytical thinking during play (Darmawati et al., 2024).

From these results, it can be concluded that the use of the traditional game "Congkalak Educative" as a learning medium in Prasiaaga Scout activities is effective in stimulating the critical thinking skills of children aged 5-6 years. Therefore, a traditional game-based approach can be one of the interesting and fun strategies in improving the quality of critical thinking in early childhood The results are the main part of the scientific article, containing: final results without data analysis process, hypothesis testing results (Bachtiar et al., 2022; Nilawati, 2024). Results can be presented with tables or graphs, to clarify the results verbally. Discussion is the most important part of the overall content of a scientific article. The purpose of the discussion is to answer research problems, interpret findings, integrate findings from research into existing knowledge pools, and develop new theories or modify existing ones. Distribution of children's critical thinking frequencies (posttest). It can be visualized in the form of a bar chart as follows:





The results of regression analysis showed that the game "Congkalak Edukatif" improved the critical thinking skills of children aged 5-6 years. A constant value of 38.986 indicates that even without taking pretest scores into account, children still have a basic level of critical thinking ability. Meanwhile, a pretest coefficient value of 0.695 indicates that every one-point increase in the pretest will increase the posttest score by 0.695 points. This suggests that children who have better critical thinking skills early on tend to experience greater improvements after following the intervention. It can be seen in the table below:

 Table 3. Table of Regression Analysis Results of the Effect of Pretest on Posttest of Children's Critical Thinking Ability

	Unstandardized Coefficients			Standardized Coefficients		
Туре		В	Std. Error	Beta	t	Sig.
1	(Constant)	38.986	13.136		2.968	.014
	Loans	.695	.224	.699	3.094	.011

In addition, the value of t = 3.094 with a significance level of 0.011 shows that the relationship between pretest and posttest is significant, which means that the game "Congkalak Educative" significantly helps improve children's critical thinking skills. With a Beta value of 0.699, it can be concluded that the pretest has a great influence on the posttest, and the interventions provided contribute positively to the development of children's critical thinking. These results prove that the use of traditional games in Prasiaaga Scouting activities can be an effective method in stimulating critical thinking skills in early childhood.

DISCUSSION

The development of critical thinking skills in early childhood is an important aspect of education, as it helps children analyze information, solve problems, and make informed decisions. One effective method to stimulate such skills is through traditional games modified with educational elements. In this context, the game "Congkalak Educative" has been developed and implemented in Prasiaga Scout activities to provide opportunities for children to practice becoming individuals who have analytical character and practical skills (Leonita et al., 2019). In this prasiga scout activity, children are encouraged to explore play activities which are presented in the form of manggara, or known as teams, so that children can collaborate and discover their knowledge through the interactions they carry out (Ambarwati, 2024). Pramuka Prasiga has a theme in each of its activity programs, so that it is in line with the implementation of this research, which focuses on traditional games that focus on children having social and intellectual skills during activities and still getting to know local culture through traditional games (Aini & Wahyuni, 2023).

The results showed that before the intervention, the child's critical thinking ability was at a low level, as shown by the pretest scores that were mostly in the low category. After the implementation of the "Congkalak Educative" game, there was a significant increase in posttest scores, indicating that the intervention was effective in improving children's critical thinking skills. Regression analysis supports these findings, with a constant value of 38.986 and a pretest coefficient of 0.695, suggesting that every one-point increase in the pretest contributes to a 0.695-point increase in the posttest. A t-value of 3.094 with a significance of 0.011 confirmed a significant relationship between pretest and posttest, confirming the effectiveness of games in improving children's critical thinking skills. A three-year longitudinal study showed that critical thinking skills and academic achievement had a stable two-way predictive relationship, even after controlling for general cognitive ability. The ability was also demonstrated through the ability to listen to the rules of the game and express opinions (Nilawati, 2024). In the context of education, these findings confirm that the development of critical

thinking skills should be an integral part of the curriculum and teaching practices to support cognitive development and the expansion of children's knowledge (Hajerah et al., 2024; Lv, X., Zhou, J., Ren, 2025). After playing educational congklak, early childhood can demonstrate critical thinking skills through various cognitive aspects that develop during play. They begin to analyze the choice of strategy by considering the cone holes that provide maximum profits and comparing various possible steps before making a decision (Kadek et al., 2024; Nurjanah et al., 2024). In addition, children also learn to solve problems when facing obstacles (Arina et al., 2024; Ranjan et al., 2025), such as when the congklak seeds are almost exhausted, by finding the right solution so that they can still play. Their critical thinking skills are even more evident when they can make predictions about the next move based on the position of the congklak seeds, so they understand the cause-and-effect relationship in the game.

In the execution of the game Educational Collection, the development of children's social-emotional abilities is seen through several stages that progress naturally. In the early stages, children begin to learn to understand the basic rules of the game and the importance of turns, which trains basic skills in respecting the rights of others. Furthermore, as the game progresses, children begin to demonstrate the ability to communicate effectively with peers, such as politely asking for turns, expressing opinions, and listening to their playmates. In the next stage, children begin to face competitive situations, which require them to manage emotions, both when experiencing defeat and victory, thus encouraging the development of self-regulation and sportsmanship. In addition, children also learn to resolve small conflicts, such as differences of opinion about the pace of the game, through simple discussions and compromises that are the initial stimulation of the patriotic character in the scouts (Nasution & Susanti, 2025). The advanced stage shows that children can build empathy, for example, by encouraging a losing friend or sharing strategies voluntarily (Supriadi & Putra, 2024)(Hidayati et al., 2020). Thus, through an interactive and enjoyable gaming experience, the game Educational Collection is an effective means of cultivating early childhood social-emotional skills gradually and contextually.

In addition, children also begin to make decisions independently by considering the various options available, and realize that the decisions made will affect the outcome of the game. Reflective thinking also begins to develop as they evaluate the strategies that have been used, recognize mistakes, and try to correct them in the next game. Not only that, but social interaction in the game also encourages children to argue with friends about the steps taken, so they can explain the reasons for choosing certain strategies and discuss better ways to win the game. Thus, educational congklak can be one of the effective media to stimulate early childhood critical thinking skills in a fun and interactive way. These findings are in line with previous research that emphasizes that critical thinking skills can be taught and learned from an early age through appropriate learning methods (Fitriani & Vinayastri, 2022; Made Alit Darmawan et al., 2021). In addition, traditional games have been shown to stimulate the development of children's imagination and creativity by involving them in problem-solving activities. Thus, the use of traditional games modified with educational elements, such as "Congkalak Edukatif", can be an effective strategy in developing critical thinking skills in early childhood.

CONCLUSION

Based on the results of the research that has been carried out, it can be concluded that the innovation of the Educational Congkalak game plays an important role in improving the critical thinking skills of children aged 5-6 years in Prasiaga Scout activities. The findings of the study showed that before the intervention, most children had a low level of critical thinking, as shown in the results of the pretest. After being given an intervention through the Educational Congkalak game, the posttest results showed a significant improvement. These games allow children to engage in more in-depth thinking processes, such as strategizing, solving problems, and considering the consequences of every decision made. The results of the regression analysis also strengthened these findings by showing a significant relationship between pretest and posttest, which confirms that traditional games modified with educational elements can be an effective learning medium. In addition to improving

critical thinking skills, the Educational Congkalak game has also been proven to be effective in developing children's social skills. During the game, children learn to interact positively with peers, communicate effectively, take turns, resolve small conflicts independently, and show sportsmanship in accepting the results of the game. The development of these skills can be seen from the increase in children's ability to collaborate, manage emotions, and build empathy during activities. Thus, Congkalak Educative is not only a means to stimulate the cognitive aspect, but also supports the formation of early childhood social-emotional character through a fun and contextual learning approach.

Based on the results of this study, several suggestions can be applied. First, for early childhood educators, Educational Congklak games can be integrated into learning to help children develop critical thinking skills naturally through fun and local culture-based play activities. Teachers can adapt this game with a variety of variations that suit the characteristics of the child and their respective learning environment. Second, for the organizers of Prasiaga Scout activities, this game can be used as an innovative learning method to improve critical thinking skills while instilling the values of togetherness, discipline, and honesty in children. Third, for parents, these games can be an alternative to educational activities at home that are not only entertaining but also support children's cognitive development in a fun and interactive way.

REFERENCES

- Aini, Z. Q., & Wahyuni, A. (2023). Pramuka Prasiaga Mengasah Keterampilan Sosial Anak Usia 5-6 Tahun. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 7(2), 2148–2162. https://doi.org/10.31004/obsesi.v7i2.4390
- Ambarwati, S. T. (2024). Systematic Literature Review: Implementasi Pramuka Prasiaga di PAUD. *Jurnal Penelitian Inovatif*, 4(2), 713–720. https://doi.org/10.54082/jupin.392
- Arina, A., Kamila, N., Sutama, I. W., & Astuti, W. (2024). Advancing 21 st -Century Skills in Early Childhood Through the Project-Based Learning Model : Evidence from Children Aged 5 – 6 Years. 12(2), 263–271. https://doi.org/https://doi.org/10.23887/paud.v12i2.75057
- Azizah, N. N. robmatul, & Haroh, M. (2023). Pengaruh Model Pembelajaran Problem Solving dengan Puzzle terhadap Kemampuan Kognitif Anak Usia 5-6 tahun. Al Athfal : Jurnal Kajian Perkembangan Anak Dan Manajemen Pendidikan Usia Dini, 6(2), 1–15. https://doi.org/10.52484/al athfal.v6i2.365
- Bachtiar, M. Y., Herlina, H., & Ilyas, S. N. (2022). Model Bermain Konstruktif untuk Meningkatkan Kecerdasan Interpersonal Anak TK. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 6(4), 2802–2812. https://doi.org/10.31004/obsesi.v6i4.2013
- Cendana, H., & Suryana, D. (2021). Pengembangan Permainan Tradisional untuk Meningkatkan Kemampuan Bahasa Anak Usia Dini. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 6(2), 771–778. https://doi.org/10.31004/obsesi.v6i2.1516
- Darmawati, D. M., Arini, N. W., Yanti, P. G., Hidayati, D. W., & Amzat, I. H. (2024). Implementation of TPACK-based problem-based learning model on social studies learning outcomes of elementary school students. *Harmoni Sosial: Jurnal Pendidikan IPS*, 11(1), 1–11. https://doi.org/10.21831/hsjpi.v11i1.64659
- Fitriani, S. S. A., & Vinayastri, A. (2022). Pengembangan Instrumen Kemampuan Berpikir Kritis Anak Usia Dini. *Pedagogi : Jurnal Anak Usia Dini Dan Pendidikan Anak Usia Dini*, 8(1), 21. https://doi.org/10.30651/pedagogi.v8i1.8973
- Hajerah, H., Ilyas, S. N., Amal, A., & ... (2024). Pkm Pelatihan Pembuatan Media Loose Parts Dalam Meningkatkan Kemampuan Literasi Anak Usia Dini. *Paramacitra Jurnal ..., 01*(02), 102–108. https://journal.ininnawaparaedu.com/paramacitra/article/view/84%0Ahttps://journal.ininnawa paraedu.com/paramacitra/article/download/84/79
- Handika, Zubaidah, &, & Witarsa. (2022). Analisis Teori Perkembangan Kognitif Jean Piaget dan Implikasinya dalam Pembelajaran Matematika di Sekolah Dasar. *Didaktis: Jurnal Pendidikan*

Dan Ilmu Pengetahuan, 2(22), 124–135. https://doi.org/doi.org/10.30651/didaktis.v22i2.11685 Herman, H., Sirajuddin, S., & Wiwik, A. (2017). Applications of Education Games Based Local Culture to Increase the Ability the Concept of Numbers. International Journal of Social ..., 5(3), 499–503.

http://eprints.unm.ac.id/28731/%0Ahttp://eprints.unm.ac.id/28731/1/Applications of Education Games-4944.pdf

- Hidayati, R. P., Mulyana, E. H., & Elan, E. (2020). Kebutuhan Dasar Pengembangan Rancangan Rencana Pelaksanaan Latihan Pramuka Prasiaga Untuk Memfasilitasi Sikap Ilmiah Anak. *Jurnal Paud Agapedia*, 4(2), 242–257. https://doi.org/10.17509/jpa.v4i2.30444
- Kadek, N., Priani, D., Goreti, M., & Kristiantari, R. (2024). Interactive Daily Spin Board: Revolutionizing Language Learning for Young Children. 12, 186–195. https://doi.org/https://doi.org/10.23887/paud.v12i2.78120
- Kamal, M. (2019). Research and Development (R & D) Bahan Ajar Bahasa Arab Berbasis Tadribat / Drill. *Jurnal Al-Afkar*, VII(2), 1–22. https://doi.org/doi.org/10.32520/afkar.v7i2.252
- Kurnia, R., Syamsuardi, S., Awalia, I. R., & Amriani, S. R. (2024). The Effect of Differentiated Learning Models on the Problem-Solving Abilities of Children Aged 5-6 Years. JPUD - Jurnal Pendidikan Usia Dini, 18(1), 170–182. https://doi.org/10.21009/jpud.181.12
- Leonita, V., Purwadi, & Kusumaningtyas, N. (2019). Analisis rasa percaya diri anak usia 5-6 tahun melalui kegiatan pramuka. Seminar Nasional PAUD, 2019: Seminar Nasional PAUD 2019, 54–60.
- Lv, X., Zhou, J., Ren, X. (2025). The Bidirectional Relationship between Critical Thinking and Academic Achievement Is Independent of General Cognitive Ability: A Three-Year Longitudinal Study on Elementary School Children. *Learning and Individual Differences*, 120, 102666. https://doi.org/10.1016/j.lindif.2025.102666
- Made Alit Darmawan, Sariyasa, & I Made Gunamantha. (2021). Implementasi Etnomatika Berbasis Permainan Tradisional Terhadap Berpikir Kritis Dengan Kovariabel Kemampuan Verbal Siswa Kelas Ii Sd. *PENDASI: Jurnal Pendidikan Dasar Indonesia*, 5(1), 31–42. https://doi.org/10.23887/jurnal_pendas.v5i1.255
- Mahyuddin, N. & Sofya, R. (2019). Pelatihan Pembuatan Media Alat Peraga Edukatif (APE) Untuk Anak Usia Dini Bagi Kepala Sekolah Dan Guru Taman Kanak-Kanak Berbasis Kewirausahaan di Kecamatan V Koto Kampung Dalam Kabupaten Padang Pariaman. 2(4), 601. https://doi.org/doi.org/10.24036/jmpe.v2i4.7837
- Mawaddah, S., & Pohan, S. (2024). Pengaruh Penggunaan Pasir Perkembangan Kognitif Anak Berwarna terhadap. 5(1), 99–111. https://doi.org/10.37985/murhum.v5i1.453
- Muqdamien, B., Umayah, U., Juhri, J., & Raraswaty, D. P. (2021). Tahap Definisi Dalam Four-D Model Pada Penelitian Research & Development (R&D) Alat Peraga Edukasi Ular Tangga Untuk Meningkatkan Pengetahuan Sains Dan Matematika Anak Usia 5-6 Tahun. *Intersections*, 6(1), 23–33. https://doi.org/10.47200/intersections.v6i1.589
- Mustaqim, A. (2021). Integrasi Permainan Tradisional Perspektif Ki Hadjar Dewantara pada Pembelajaran Sains. *Islamic Elementary School (IES)*, *l*(1), 1–14. https://doi.org/https://doi.org/10.55380/ies.v1i1.81
- Nasution, K. A., & Susanti, E. (2025). *The role of the scout organization in reducing academic stress among university students*. *11*(1), 12–20.
- Nilawati, N. (2024). The Exploring West Sumatra E-Book: Enhancing Early Reading Skills and Literacy in Early Childhood Education. 12(2), 205–213. https://doi.org/https://doi.org/10.23887/paud.v12i2.75880
- Nur, H. (2013). Membangun Karakter Anak Melalui Permainan Anak Tradisional. Jurnal Pendidikan Karakter, 4(1), 87–94. https://doi.org/10.21831/jpk.v0i1.1290
- Nurjanah, N. E., Yetti, E., & Sumantri, M. S. (2024). Fostering Creative Thinking in Early Childhood: An Analysis of Developmental Stimulation. 12(2), 196–204. https://doi.org/https://doi.org/10.23887/paud.v12i2.75177
- Park, A. T., Richardson, H., Tooley, U. A., McDermott, C. L., Boroshok, A. L., Ke, A., Leonard, J.

A., Tisdall, M. D., Deater-Deckard, K., Edgar, J. C., & Mackey, A. P. (2022). Early stressful experiences are associated with reduced neural responses to naturalistic emotional and social content in children. *Developmental Cognitive Neuroscience*, 57(September), 101152. https://doi.org/10.1016/j.dcn.2022.101152

- Rahmah, N., Darmiyati, & Sakerani, S. (2024). Implementasi Kegiatan Pramuka Prasiaga dalam Mengembangkan Jati Diri Anak Usia Dini. *Jurnal Pendidikan Anak Usia Dini*, 5(2), 326–363. https://doi.org/doi.org/10.37985/murhum.v5i2.859
- Rahmawati & Supriyanto. (2023). Pengembangan model pembelajaran berbasis permainan tradisional untuk meningkatkan kemampuan berpikir kritis anak usia 5-6 tahun. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 2*(7). https://doi.org/10.31004/obsesi.v6i2.1516
- Ranjan, S., Tripathi, A., Shende, H., Badal, R., Kumar, A., Yadav, P., Joshi, D., & Kumar, L. (2025).
 Deep learning-based classification of dementia using image representation of subcortical signals. *BMC Medical Informatics and Decision Making*, 25(1).
 https://doi.org/10.1186/s12911-025-02924-w
- Ringle, V. A. M., Dahlgren, A., Rosenbaum, S., & Jensen-Doss, A. (2024). Critical thinking about health and treatments in the United States: a cross-sectional assessment of parents and young adults [preprint]. https://osf.io/preprints/psyarxiv/5bndu
- Supriadi, & Putra, M. E. (2024). Analysis of the Implementation of the Merdeka Curriculum Policy in Vocational High Schools: A Qualitative Research. *Indonesian Journal of Technical and Vocational Education Training*, 1(1), 25–30. https://doi.org/10.62945/ijtvet.v1i1.30
- Wahyuni, S., & Hasbur, H. S. (2025). Pengaruh Permainan (Outdoor) Terhadap Kemampuan Berpikir Kritis Anak Usia 5-6 Tahun. https://doi.org/https://doi.org/10.37411/jecej.v7i1.3598
- Waruwu, M. (2024). Metode Penelitian dan Pengembangan (R&D): Konsep, Jenis, Tahapan dan Kelebihan. Jurnal Ilmiah Profesi Pendidikan, 9(2), 1220–1230. https://doi.org/10.29303/jipp.v9i2.2141