

The effectiveness of the traditional Tapo' Pipit game in stimulating aspects of child development

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Article Information:

Submission : June 11, 2025
Revision : September 15, 2025
Accepted : September 18, 2025
Available Online : September 24, 2025
doi : [10.33086/cej.v7i2.7419](https://doi.org/10.33086/cej.v7i2.7419)

Abstract

This research was motivated by the rapid development of technology which makes children more attracted to digital games. Moreover, change of life style and modern parenting cause children spend more time only at home and have less opportunity to interact to traditional games. This research was aimed to measure and analyze the effectiveness of Tapo' Pipit traditional game in stimulating aspect of early age children development. This research used a quantitative descriptive approach with a one-group pretest-posttest design. Research subject was 22 children of Primanda Kindergarten, Pontianak. The intervention was conducted for 6 meetings with a duration of 60 minutes. The data collection technique used observation on children. Analysis descriptive was used as data analysis, and hypothesis was tested by using pair t-test. The result of this research shows that Tapo' Pipit Traditional Game can stimulate aspect of children development. The contribution of this research was Tapo' Pipit traditional game is an learning model that is interested to be introduced early age children.

Keywords: Traditional Games, Tapo' Pipit, Developmental Aspects, Children

INTRODUCTION

Stimulation for early age children is very important because this period is a sensitive period for children to accept stimulation. The right stimulation becomes the best foundation for early age children's growth and development, and also becomes the key success which can help opening potential brain to form millions of neurons every second during its entire growth period (Yogman et al., 2018). Children can find many wonders in playing, exploring ideas, and being creative. Various strategies can be implemented in a safe and enjoyable way to maximize the children's growth and development (Shaffer and Kipp, 2013).

Development aspects that have to be stimulated from early age children while playing games are religion and moral values (Li et al., 2023). Children need to know religion and do the worship from the early age, such as helpful, honest, polite, respectful of parents, and tolerant (Dehkordi, 2017; Geller, 2013; Marlina, 2016). In maximizing child development, besides the child's religion

and morals, the development of children's social emotional is stimulated by some games in order to be able to increase their effective social ability and mental prosperity, and also decrease emotional problem and risk of mental health.

In the side of language development aspect, children are trained to be able to communicate, to use language in real and meaningful context. Language stimulation for children can be achieved through direct communication, such as listening and understanding conversations, reading picture books, understanding texts, and expressing facial expressions and body language (Dixon et al., 2023; Dobinson and Dockrell, 2021; Havron et al., 2023). Expressive skills are developed through direct communication, while pragmatic skills are fostered by teaching children to use language appropriately in social contexts (Baardstu et al., 2023; Bornstein et al., 2022; Gabbatore et al., 2021). This matter to improve vocabularies through experience and to develop their ability in listening and comprehending language.

In the aspect of motoric, it is also important to be develop because it can help them to increase physical ability, such as locomotor and nonlocomotor ability, improve their confidence and social communication through playing games and interacting with somebody else (Dwiyanti et al., 2023). In the aspect of cognitive, games also have important role in numeracy skill, such as subtraction and addition skills, sharpening analysis, strategizing, finding the cause of problems, and other solutions (Goswami, 2019). All brain networks are connected when children play, but the key is that the play is enjoyable for them, careful consideration is needed so that the game does not use too much android (Bruchhage et al., 2020; Dresch-Langley, 2020).

While numerous studies have investigated the impact of traditional games on specific aspects of child development, such as gross motor skills, socio-emotional development, and cognitive abilities, this study takes a more comprehensive approach. By stimulating all aspects of child development in a holistic and meaningful way, including value development, religious and moral development, socio-emotional development, motor skills, language development, and cognitive development, this study aims to foster a wide range of skills and abilities in children, including religious abilities, empathy, mutual respect, physical strength and endurance, communication skills, interaction, teamwork, critical thinking, and problem-solving.

Beyond the benefits outlined above, traditional games possess a unique strength in that they enable children to engage with and understand conventional games, while also appreciating the historical, philosophical, and cultural significance of these games. This, in turn, fosters a sense of togetherness and community through shared experiences, such as joint prayer, collaborative play, effective communication, and collective problem-solving. It is also crucial to achieve a balance between traditional and modern games, given the prevalent exposure of children to technology-based games, which can have adverse effects. Consequently, children may lose touch with and abandon the traditional games of their forebears. This study seeks to examine the efficacy of the Tapo' Pipit game in stimulating various aspects of early childhood development. Drawing on existing research, the central question guiding this investigation is: "Can the traditional Tapo' Pipit game effectively stimulate child development in kindergarten settings?"

METHOD

This research used a quantitative approach with a one-group pretest-posttest design (Creswell and Creswell, 2017). The writer develops the instrument given to the sample by herself. There are 4 steps in this research procedure: (1) doing pre-research by interviewing kindergarten teachers. (2) giving pre-test through free games (3) taking action by giving tapo' pipit traditional games, and (4) giving post-test. The subject in this research is children of Group B in Primanda Kindergarten Untan Pontianak, Kalimantan Barat. The experimental class is given pre-test, tapo' pipit game and post-test.

The design is below

O1 x O2

Figure 1. One group pretest posttest design



Figure 2. Research flow

Table 1. Indicator aspect of child development

Indicator	Sub Indicator	Number of items
Aspect of Child development	Development of religious and moral values: introduction to the concept of divinity, development of moral awareness, awareness of prayer, self-awareness, and respect.	9
	Social, emotional development: Ability to empathize, work together, build relationships, ability to manage emotions, develop self-awareness, patience	8
	Language development: Receptive, expressive, and pragmatic aspects	9
	Gross motor development: Locomotor, non-locomotor, manipulative abilities, balance and coordination abilities	9
	Cognitive development: Development of knowledge, thinking, memory, and attention	8
Total		43

Table 2. The meetings during the research

Num	Meeting	Treatment at Every Meeting
1	Meeting 1	Gathering pre-test data through observation and interviews with kindergarten teachers. The teacher explains the gameplay rules of Tapo' Pipit and subsequently establishes an agreement with the students to designate a safe and comfortable playing area.
2	Meeting 2	
3	Meeting 3, 4 & 5	Children play Tapo' Pipit in the schoolyard, with the cat team evading the mouse team. The cat and mouse teams take turns hiding and seeking, following the traditional rules of Tapo Pipit.
4	Meeting 6	Post-test data was collected through observational methods and interviews.

Below are the steps in the traditional Tapo' Pipit game

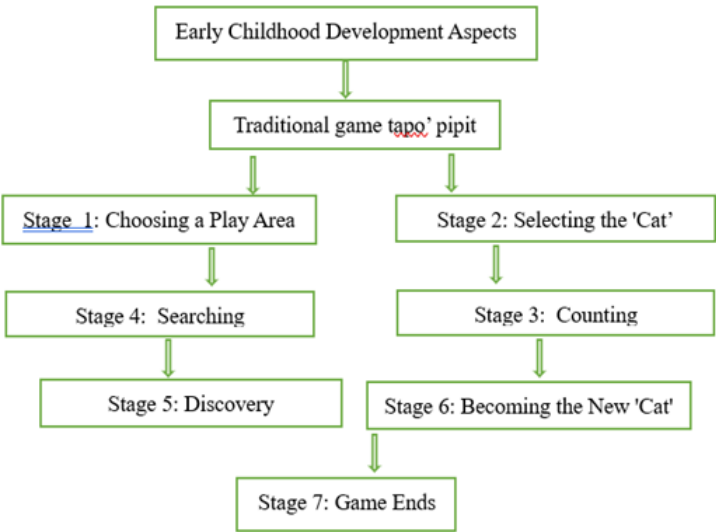


Figure 3. The stages of playing Tapo' Pipit traditional game

Before the children were given the traditional Tapo' Pipit game, they were given free play to observe their developmental aspects. After observing that the children's developmental aspects were still lacking, the game was administered 6 times with a duration of 60 minutes. This study was conducted at Primanda Untan Kindergarten with 22 children. Observation and documentation (literature study) were employed as data collection techniques. Before the questionnaire was used for data collection, a validity test was conducted first to ensure that the data obtained was truly valid and reliable. The child development aspect instrument in this study was validated by three (3) expert validators, including two Master's in PAUD and a Doctorate in Education. The validation results reveal that the aspects of child development that will be measured are valid and very good. The data analysis techniques include: normality test and t-test.

RESULT AND DISCUSSION

Result

In Pretest data was given to 22 children at Primanda Untan Kindergarten, 14 girls and 8 boys. Data was collected through observation and free-play activities. Participants' demographic data, namely age and gender, were obtained.

Table 3. Participant demographics

Gender and Age	N (%)	Mean	Median	SD	R
G: Male	8 (36.3)	1.00	1.00	0.000	0
G: Female	14 (63.6)	2.00	2.00	0.000	0
A: Male, 5 years	2 (25)	1.00	1.00	0.000	0
A: Male, 6 years	6 (75)	2.00	2.00	0.000	0
A: Female, 5 years	5 (35)	1.00	1.00	0.000	0
A: Female, 6 years	9 (64)	2.00	2.00	0.000	0

Table 3 above shows 22 respondents consisting of 8 men and 14 women. Next, categories of differences in children's development levels before and after treatment are presented. In the table below, child development description are presented.

Table 4. Data description

Num	Information	Before	After
1	N Valid	22	22
2	Mean	122.57	139.50
3	Median	33.00	35
4	Std. Deviation	6.925	8.283
5	Range	50	51
6	Minimum	102	148
7	Maximum	165	187

Based on the data tabulation above, table 6 shows 22 participants in the sample; the mean was 122.57, 139.50, the median was 33.00, 35.00, and the standard deviation was 6,925, 8.283 after treatment. The range before treatment was 50 and after 51. The minimum average pre-test score before treatment was 102, and the maximum was 148; after treatment, the minimum score was 165, and the maximum was 187. Below is a normality test table. The normality test data were obtained asymp.Sig value. (2-tailed) = 0.200 > 0.05. It can be concluded that it is normal test can be proceeded with.

Table 5. Uji normality

N		22
Normal para ab	Mean	0.000000
	St. dev	3.28138076
Most extreme dif	Absolute	0.099
	Positive	0.099
	Negative	-0.006
Test statistic		0.098
Asymp. Sig. (2 t)		-200cd

The normality test data were obtained asymp.Sig value. (2-tailed) = 0.200 > 0.05. It can be concluded that it is normal, and then the homogeneity test can be proceeded with. Next, categories of differences in children's development levels before and after treatment are presented. In the table below, child development categories are presented.

Table 6. Child development categories

Before treatment			After treatment		
Category	Amount	%	Category	Amount	%
Low	10	45	Low	5	23
Middle	8	36	Middle	10	45
High	4	18	High	7	32
Total	22	100	Total	22	100

Judging from the categorization in table 6 above, before treatment 10 children are in the low category (45%) in developmental aspects, and 8 children (36%) are in the middle category 8 children (36%) and high category 4 children (18%). However, after being treated with the Tapo’ Pipit game, 5 children in the low category (23%), middle category 10 children (45%), and high category 7 children (32%). This proves there has been an increase in aspects of child development after traditional tapo’ pipit.

The table below presents the results of a comparative test conducted before and after the intervention using the traditional Tapo’ Pipit game, analyzed using a t-test.

Table 7. Description Uji t

Pair 1	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pretest								
Posttest	-5.000	4.534	1.008	-7.909	-3.901	-4.901	21	0.000

From the output box above, it can be seen that the pre-test and post-test mean scores are -5000, with a standard deviation of 4.534, a standard error of the mean of 1.008, a lower bound of -7.909, and an upper bound of -3.987. The t-test results show a significance value of 0.000, indicating that there is a significant difference in the aspects of child development before and after playing Tapo’ Pipit. Interviews with several kindergarten teachers revealed that with the introduction of the traditional game Tapo’ Pipit, children showed enthusiasm in reading prayers, were able to work together as a team, build harmonious relationships during play, manage their emotions without getting angry, use proper language, and demonstrate patience. Additionally, the language development aspect revealed that children are able to use pragmatic language effectively in different situations. In terms of physical development, they demonstrated the ability to perform locomotor, non-locomotor, and manipulative movements, maintaining balance and coordination during play. Cognitively, they showed an understanding of knowledge, thinking, memory, and attention.

Discussion

Early childhood development is crucial to be stimulated so that all aspects of development can be optimal. Appropriate stimulation can help children develop cognitive, language, motor, social, and emotional abilities well. Some ways to stimulate early childhood development include interactive play (both with and without media), reading books together, singing and playing music. Additionally, teaching basic concepts (numbers, letters, colors), developing gross motor skills (running, walking, climbing) and fine motor skills (batik-making, weaving, drawing, coloring). Furthermore, for language development, effective communication, and teaching social and emotional values.

The world of children is play, because through play, their brains are well-stimulated. There are many types of games, including modern games and traditional games, all of which will bring about positive changes in improving learning outcomes (Cheung and Ng, 2021; Rosanes, 2024). Before playing traditional games of tapo’ pipit, they prayed earnestly, asking God for the game to run smoothly. During the game, they show moral awareness, distinguish and understand how to do good and right actions. In addition, they show mutual respect and appreciation by not hurting each other, obeying teacher corrections, showing discipline, and playing well.

Prior to engaging in the traditional Tapo’ Pipit game, the children would gather in the classroom to say a collective prayer, seeking divine guidance, health, and success in their play, while also expressing gratitude for the blessings they have received. Play is indeed crucial in children’s lives, as it has a significant impact on their future. Play, drama, and experiments conducted by teachers significantly enhance preschool children’s curiosity about religious and moral issues, thereby stimulating their moral and religious development (Koç, 2023). Another research finding suggests that storytelling

about God can significantly stimulate preschool children's moral and religious development (Van der Merwe, 2020).

Children can show politeness, respect, and appreciation towards their friends and teachers while playing (Shaffer and Kipp, 2013). The development of character values in early age children is very important (Yogman et al., 2018). Below, documentation of children playing the traditional game Tapo' Pipit is presented.



Figure 4. Children line up before playing



Figure 5. Children running to find a hiding place

Prior to commencing the game, the children assemble in the room and recite a collective prayer, seeking a smooth and enjoyable experience. The children agree on a set time for the game, and then they play a round of hompimpah to determine the starting order or other game parameters. There are Group A and Group B, where Group A plays the role of the cat (guard) and Group B plays the role of the mouse (hider). The roles can change depending on the outcome of the game, with the winner and loser switching roles. The game can also be modified by adding additional rules, such as restrictions on hiding spots or extra time to find hidden players.



Figure 6. Children close their eyes as guards

In the picture above, the guard team (cat) closes their eyes against the pole and starts the game by counting from 1 to 10, while the hiding team (mouse) runs to find a safe hiding spot. After finishing the count to 10, the seeker team (cat) will search for the hiding team (mouse). If a seeker successfully touches a hidden player, that player will become a guard in the next round. And vice versa the game continues until it is deemed finished according to the initial agreement and time adjustment.

Children play the traditional Tapo' Pipit game, teamwork and the application of disciplinary values are clearly visible. Not only that, but good and solid interaction among team members is also evident, demonstrating the success of the game offered. The findings of this study are in line with previous research. Traditional games can be an effective means to instill values such as compassion, honesty, discipline, and many more (Maithreyi, 2019). Early childhood social-emotional development is critical, shaped by nurturing interactions and culturally responsive policies (Ramos et al., 2020; Williamson et al., 2019). Play and toys play a crucial role in children's education as they help them understand the real world by trying out various social roles. Clearly, the relevance of cooperative-creative play in child development is significant, including traditional games (Garaigordobil et al., 2022). Appropriate games for young children can also stimulate social-emotional development aspects. Significant improvements also occur in aspects of social emotional development such as children starting to get used to queuing when they are going to do "eeny, meeny, miny, moe", forming orderly lines, not cheating when being a guard or an opponent, and showing empathy and appropriate emotions.

Teacher-child interaction is crucial in reducing emotional challenges. Educators should choose effective learning strategies, such as play-based approaches, to create a comfortable environment. Mindfulness strategies can also help educators manage their own emotional challenges (Purper et al., 2023). This study supports earlier findings that play fosters awareness, empathy of discipline and orderliness (Muravevskaia et al., 2023; Muravevskaia and Gardner-McCune, 2022; Ortega et al., 2020). Social emotional development can be trained by playing Tapo' Pipit, children become responsible when chosen as guards. When children play, a sense of togetherness, good cooperation, self-confidence, and a caring attitude will be formed (Cohen, 2018; Guirguis, 2018; N, 2023). Furthermore, previous research also revealed that games played by children with a happy and enjoyable heart will improve ability to work together, build relationships, ability to manage emotions, develop self-awareness, and patience.

These findings reinforce the results of previous studies that revealed that the game shows that children are more competitive, fosters good cooperative, prosocial behavior, and multi-directional

communication (Li et al., 2023; Liu et al., 2021; Putra and Hasanah, 2018). Social emotional stimulation is important to do from an early age because it will strengthen children's self-confidence to face challenges in the future. Educational games can facilitate the development of social emotional skills in children so that children become more empathetic and care about the environment (Dix et al., 2019; Ignatova et al., 2024; Murni, 2019; Wang et al., 2022).

Furthermore, in the language aspect, there are a lot of vocabularies appear while playing Tapo' Pipit. Children can express happiness, comprehend instruction, and ask and answer questions. It strengthens the result of previous research that game is able to provide positive influence toward children' language development (Reitenbach et al., 2013; Taouririt and Chacha, 2023). Storytelling activities stimulate language and problem-solving skills (Bohanek et al., 2025; Engliana et al., 2021). Early childhood language development through play-based activities aligned with their developmental levels is supported by research findings that show it is important to train children's language skills with various interesting and fun strategies, the example music games, traditional games (Bao and Boonsrianan, 2024; Dehkordi, 2017; Rosanes, 2024; Wananda et al., 2024).

Traditional Tapo' Pipit Game, physical development can be observed through walking while playing, include walking forward, backward, or in various directions. Children can run in various directions to find their opponents. Children also demonstrate manipulative skills, such as moving small objects with their hands, fingers, or other tools while hiding and looking for opponents. From the findings of this study, many previous studies have revealed that traditional games are able to stimulate and optimize children's gross and fine motor skills (Saefullah et al., 2024; Zeng et al., 2017). During play, children also demonstrate the ability to maintain balance in various positions and situations, and coordinate their eyes and hands when hiding behind slides and school pillars. Manipulative and balance skill of early age children can be stimulated through various interesting media.

As a tool of learning, Tapo' Pipit traditional game has given big enough impact toward children cognitive development, such as increasing children' problem solving and imagination skill. In addition, children can improve their critical thinking skills and problem-solving capacity. Similar findings were also revealed by previous researchers that educational games, whether using modern or traditional media, can improve cognitive abilities such as problem-solving and creative thinking (Lei, 2024; Poonsawad et al., 2022; Sampedro-Martín et al., 2023). Through play, children can also improve their ability to remember (Hähkiöniemi et al., 2016), pay attention, and imagine, creating and innovating objects into something valuable (Mattoon et al., 2015). Furthermore, there is another study which reveals that playing outbound activities can improve children's cognitive abilities (Syafdaningsih et al., 2023). All these abilities involve complex cognitive processes. Play, both structured and unstructured, fosters cognitive control, creativity, and problem-solving skills in children (Ortega et al., 2020; Peet et al., 2015).

CONCLUSION AND RECOMMENDATION

The traditional Tapo' Pipit game is useful to increase children development either in religion value or moral value, such as they can pray before playing and differentiate God's creatures. In the social emotional aspect, children can queue, take care, respect friends, build relationships, work together, and be empathetic, patient, and independent. In terms of children's language, it is observed that children can understand receptive, expressive, and pragmatic language. Furthermore, in terms of hard motoric skills, children can do locomotor and non-locomotor activities and the ability to manipulate, balance, and coordinate. Meanwhile, in terms of cognitive skills, children can distinguish between opponents and friends, count, sort numbers, classify, find solutions, and think creatively. Finding from the tapo' pipit game shows that children get satisfaction and pleasure from playing, so they appear enthusiastic in playing.

This study makes a significant contribution to early childhood learning theory by highlighting the integral role of traditional games tapo' pipit in the learning process, furthermore the results of this research provide a valuable reference point for the development of learning programs that incorporate traditional games. This study suggests that teachers use the traditional tapo' pipit game to stimulate children's development. This game can maintain traditional games as a learning medium and improve developmental aspects in the modern era.

AUTHOR CONTRIBUTION STATEMENT

HD contribute to the background, problem analysis and research methodology conducted in this study. LH conducted an analysis of the research results and provided reference reinforcement with a strong theoretical framework. AR assisted in developing the discussion analysis and research implications in this article. FKF helped to translate and proofread so that the article writing has clear readability such as spelling, punctuation, and format. All authors contributed to compiling this research article. Child Education Journal

DECLARATION

The authors of this study state that they have NOT affiliation with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in the speaker's bureau; membership, employment, consulting, stock ownership, or other equity interests; and expert testimony or patent licensing arrangements), or non-financial interests (such as personal or professional relationships, affiliations, knowledge or belief) in the subject matter or material discussed in this manuscript.

DATA AVAILABILITY

The dataset generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

ACKNOWLEDGMENT

We would like to thank all respondents involved in this research project. We would also like to thank FKIP Untan for supporting the funding of this research.

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