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Submission date: 05-Dec-2021 11:20PM (UTC+1100)

Submission ID: 1720938931

File name: Revisi_IJEE_3_Widi_Wulansari.doc (1,022.5K)

Word count: 7121

Character count: 41694



Building Mathematical Concepts Through Traditional Games to Develop Counting Skills for Early Childhood

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ARTICLE INFO

Article history:

25 December 2019

Received in revised form

01 January 2020

Accepted 25 January 2020

Available online 28

February 2020

Kata Kunci:

*Konsep matematika,
Permainan tradisional,
Berhitung*

Keywords:

*Math concepts, Traditional
games, Counting*

ABSTRAK

Kemampuan berhitung pada anak dapat dikembangkan melalui permainan yang tepat. Permainan yang dimaksud adalah permainan tradisional dikarenakan permainan tradisional mampu mengembangkan kemampuan berhitung secara optimal dan mempunyai banyak manfaat. Oleh sebab itu, penelitian ini bertujuan untuk membangun (C5) konsep matematika sederhana dengan permainan tradisional Dakon dan Ular Tangga dalam mengembangkan kemampuan berhitung pada anak berkemampuan berpikir tingkat tinggi dan rendah. Jenis penelitian yang digunakan merupakan penelitian eksperimen semu (*quasi experiment*) dengan desain faktorial 2x2. Subjek dalam penelitian ini adalah anak kelompok B sebanyak 60 anak dari 3 sekolah TK di Kota Kediri. Teknik pengumpulan data yang digunakan dalam penelitian ini adalah tes, dan observasi. Instrumen yang digunakan adalah soal tes, dan lembar observasi dengan menggunakan 5 indikator pengukuran kemampuan berhitung. Analisis data menggunakan uji *Two Way ANOVA*. Hasil dalam penelitian ini yaitu (1) membangun konsep matematika sederhana dengan permainan tradisional dakon untuk mengembangkan kemampuan berhitung pada anak berkemampuan berpikir tingkat tinggi memberikan hasil yang lebih baik daripada permainan tradisional ular tangga dengan nilai Selisih Mean sebesar 1,533 dan nilai Signifikansi 0, 0001, (2)

membangun konsep matematika sederhana dengan permainan tradisional dakon untuk mengembangkan kemampuan berhitung pada anak berkemampuan berpikir tingkat rendah memberikan hasil yang lebih baik dibandingkan dengan permainan tradisional ular tangga dengan nilai Selisih Mean sebesar 2,867 dan nilai Signifikansi sebesar 0,0001. Dengan demikian dapat disimpulkan bahwa permainan tradisional Dakon sangat baik digunakan sebagai sarana untuk membangun konsep matematika sederhana khususnya kemampuan berhitung.

ABSTRACT

The ability to count in children can be developed through the right games. The game in question is a traditional games because they are able to develop counting skills optimally and have many benefits. Therefore, this study aims to build (C5) simple mathematical concepts with the traditional game of Dakon and Snakes and Ladders in developing numeracy skills in children with high and low thinking abilities. The type of research used is a quasi-experimental research (quasi-experimental) with a 2x2 factorial design. The subjects in this study were group B children as many as 60 children from 3 kindergarten schools in the city of Kediri. Data collection techniques used in this study were tests, and observations. The instruments used are test questions, and observation sheets using 5 indicators for measuring numeracy. Data analysis used Two Way ANOVA test. The results in this study are (1) building simple mathematical concepts with traditional dakon games to develop numeracy skills in children with higher order thinking abilities giving better results than the traditional snake and ladder game with a Mean Difference value of 1.533 and a Significance value of 0.0001, (2) building simple mathematical concepts with traditional dakon games to develop numeracy skills in children with low-level thinking abilities gave better results than the traditional snake and ladder game with a Mean Difference value of 2.867 and a Significance value of 0.0001. Thus, it can be concluded that the traditional Dakon game is very well used as a means to build simple mathematical concepts, especially numeracy skills.

1. Introduction

Along with the passage of a person's life, mathematics becomes one part in life that will never be separated. We need to realize how important and influential mathematics is in human life. From the results of surveys and research studies on the intelligence level of Indonesian children, the Program for International Student Assessment (PISA) exam system initiated by the Economic Co-operation and Development (OECD) explains the results of a survey conducted in 2015 where the Indonesian state's mathematics score was ranked 63rd. from 71 countries in the world (Gurria, 2018; Nusantara et al., 2021). So it is very important to introduce simple mathematical concepts starting at an early age. This is expected to be a person's initial foundation for obtaining basic mathematical concepts, and subsequent or more complex mathematical concepts. The importance of introducing early mathematical concepts to early childhood greatly affects a person's mindset and ability to analyze and solve a problem in his future life. This of course makes mathematics the basis for forming one's logical way of thinking. The introduction of mathematics in children from an early age is able to stimulate their ability to think logically, analytically, systematically, critically and creatively in the ability to work together (Fitria, 2013; Putri & Suparno, 2020).

Logical thinking is the process of thinking consistently to get to a conclusion. The ability to think logically is an ability that is expected to be one of the abilities that needs to be possessed and developed by someone after taking education. The ability to think logically consists of understanding, relationships, communication, and problem solving. Mathematical logical intelligence is an ability that can be mastered by a child in solving various problems he faces in everyday life (Ahmar et al., 2018; Citrowati, 2019). This relates to patterns, sequences, classifications, sizes, concepts, numbers, one-to-one correspondence, concepts of geometric shapes, estimation and data processing by manipulating and using concrete media before operating abstract symbols. In other words, it can be stated that mathematical intelligence can be interpreted as logical intelligence and reasoning, which is the basis for problem solving by understanding the principles underlying cause and effect or manipulating numbers, quantities, and operation (Hanifah & Alam, 2019; Lestarinigrum & Handini, 2017). The ability to think logically is also very important to support the development of learning science and mathematics. Therefore, one's ability to think logically must be formed from early childhood education.

Early childhood education, especially at the Kindergarten level, has programs to stimulate and develop children's potential in various aspects of development such as cognitive, language, social emotional, physical motor, religious moral values, and art. Of the six aspects, cognitive is one of the most important aspects in early childhood development in the intellectual field. Cognitive development is closely related to logical-mathematical and naturalist intelligence. Stimulation of logical-mathematical intelligence can improve cognitive development, especially in terms of logical thinking, basic concepts, information processing, and problem solving (Nur et al., 2018; Wati & Wulansari, 2021). Simple mathematics is a part of cognitive development. Mathematics is an exact science that is the basis of other sciences, so that Mathematics is interrelated with other sciences. It would be better if interactions and activities that are closely related to mathematics are challenging, interesting, and become a necessity that is forced or because of compulsion. The content of learning mathematics for early childhood is different from the level of primary school education. The National Council of Teachers of Mathematics (NCTM) states that the materials of mathematics for children include the introduction of number, geometry, measurement, algebra, and data presentation. It cannot be denied that all of them are related to children's daily life and can be found around them. So the methods and strategies used in learning simple mathematical concepts must be adapted to the nature and characteristics of early childhood. In simple mathematics learning that is packaged in creative learning (playing) is a mathematics learning activity that is packaged through creative, stimulant activities and directly experienced by children (Hands on Experiences) who are able to give positive feelings towards mathematics in the long term (Mirawati, 2017; Nurhayati & Rasyid, 2019).

In fact, in Indonesia the learning process for kindergarten children is still a problem in recent years. This is because learning patterns tend to be academically oriented and assume that the concepts that exist in children do not develop spontaneously but must be instilled and absorbed by children through adult treatment, where the teacher is the subject and the child is the object of the learning process. Currently there are many elementary schools, especially superior elementary schools that use reading, writing, and counting ability as a test for screening new students entering elementary school (Asiah, 2018; Lisa, 2017). This encourages educational institutions providing PAUD as well as parents to actively teach reading, writing, and counting abilities by means of learning in elementary schools that are not in accordance with the child's developmental stages. In recent years, fun learning methods have almost disappeared from

school classrooms, and there is a reduction in active, creative play time, both at home and outside the home. It is important for an educator to make play as a learning method that can develop children's abilities, especially in the fields of science and mathematics. Learning with the play method will be able to provide encouragement to children so that they bring out and improve certain creativity, especially science and math skills (Bergen, 2009; Holmes & Geiger, 2002).

In the learning process in early childhood, it should be carried out with the aim of providing basic concepts that have meaning for children, which can be done through playing or providing real experiences that will allow children to show activity and curiosity optimally. This is because meaningful learning for early childhood is learning while playing. The thinking process in children aged 5 (five) to 8 (eight) years is a period of transition from understanding concrete thinking to the introduction of abstract symbols, where concrete objects or activities are still present and the forms of symbols are introduced, especially in the development of abilities. simple math. Based on Piaget's cognitive theory that in the pre-operational phase children still think symbolically, children begin to be able to present objects that are not present, begin to use reasoning and have high curiosity (often asking questions) (Fatoni et al., 2015; Sriningsih, 2009). Children's instincts naturally always want to know everything, they explore the concept of thinking (reasoning) when interacting with their environment. The introduction of simple mathematical concepts (counting) through play activities and also in the process of scientific learning activities by providing opportunities for children will have a positive impact on children's thinking abilities and insights when they continue their education to a higher level. Play activities are the needs of early childhood that must be met. Because the game is a tool for children to channel their energy, satisfy their passions and fantasies and intellectuals. The world of children is playing, children understand the world through the process of playing. This is because early childhood has characteristics that still like playing activities as the main part of learning (Harris & Petersen, 2019; Suryaningsih & Rimpiati, 2018), Trisniawati et al., 2018). Playing for children can provide joy and also make the learning process more developed (Dwiyantri et al., 2018). The teaching and learning process for early childhood also emphasizes the principle of learning while playing and playing while learning. Such learning makes children's cognitive abilities emerge and develop through playing activities using game tools that contain educational elements or values (Aisyah et al., 2019; Dwiyantri et al., 2018; Muloke et al., 2017). The game itself is divided into two, namely Traditional Games and Modern Games.

Traditional games are games inherited by ancestors and need to be preserved because they contain local wisdom values, "good", "positive", "worth", and "desired" values. Traditional games for children in every region and community are shaped by local culture and the local environment (Sulistyaningtyas & Fauziah, 2018; Zayyadi et al., 2018). There are many kinds of traditional games, both from local areas and traditional games from the archipelago. Each traditional game has its own level of difficulty, so it is necessary to pay attention to the implementation of the game at its age stage, especially for early childhood. It must also be understood as parents, and education practitioners that traditional games have many benefits for various aspects of children's development. Not only in the physical aspects of motor, but also in other aspects. One of these aspects is cognitive, especially in the introduction of simple mathematics, namely the ability to count. One of the traditional games that are suitable to be played for early childhood in group B Kindergarten, especially in early arithmetic skills are Congklak (Dakon) and Snakes and Ladders. The Dakon/Congklak game is a traditional board game that was quite popular in ancient times. Dakon can be played at leisure on the terrace of the house or under a tree. Congklak/dakon is a traditional game, consisting of a congklak board and congklak/dakon seeds, which is played by 2 (two) people to determine the winner. The congklak board consists of 14 small holes, each of which is lined up and opposite, and one large hole (lambung) each on the right and left sides of the congklak board. Another opinion states that learning and playing activities using congklak media are very interesting and fun, by playing children find new things, practice skills and interest in learning mathematical concepts (Muslihatun et al., 2019; Putra & Hasanah, 2018; Yenti, 2015). While the Snake and Ladders game is a traditional game with a concept, namely this game is played by two or more children by throwing dice consisting of several boxes in which there are pictures. In this game there are also pictures of snakes and ladders. If in the game getting a ladder means the player goes up according to the ladder, and if he gets a snake, the player must go down according to the snake's path. The player is declared to win if he reaches the finish first (Afandi, 2015; Nawafilah & Masruroh, 2020). It was further explained that the game of snakes and ladders is a game that uses a picture board in the form of boxes bearing the numbers 1-100, but the creation of pawns can be adjusted according to the function and purpose of the game and there are no definite rules (Ningtyas, 2014; Sibuea & Sinaga, 2018). This game is not only easy to implement in early childhood, this game also provides numeracy experience to children directly through play activities where children can be directly involved and assisted with concrete objects to provide an overview of numbers and symbols. Another opinion states that traditional game that based on physical activity is important to

13 develop children muscle. Since traditional games usually utilizing handmade equipment, it can develop children brain creativity (Eskasasnanda, 2017; Nugraha et al., 2018).

Modern games are games that are carried out using technological tools that have developed in the community and can be played by approximately two people and can even be done alone without a playmate, so that with the development of the times and technology the growth of children is growing so that the value of the child's character is getting lost (Novrialdy, 2019; Saputra & Ekawati, 2017; Syafryadin et al., 2021). The types of modern games such as, Playstation, Nintendo Wii), Smartphone Games, PC Games (Personal Computer), Gameboy, and so on.

The results of field observations show that children, especially at an early age, are more fond of modern games than traditional games. Though it should be noted that traditional games have many benefits, especially in improving developmental aspects. In fact, many parents find that quality games are the types of games made of expensive materials, and parents will feel proud if they can buy their children's games from abroad or imported toys (Lestaringrum, 2018; Munawaroh, 2017). Other than that children are now more fond of modern games using gadgets, with various applications and games that are easily accessible to children through their gadgets. Not many parents are aware that gadgets have a negative impact especially for early childhood, but it is undeniable that wise use of gadgets also has a positive impact along with awareness and progress in an all-digital era. Some of the negative impacts when children are now more happy with games using gadgets, including children being indifferent to the environment or people around them; Then all sensory and motor activity that children usually get when playing also decreases and the brain, eyes and fingers work more. In addition, the ability to recognize children's simple concepts is no longer obtained through real experience but is obtained from content presentations on devices and the happiness that children used to get when playing with friends is now changing with the feelings of children being made pounding, with ambition to always win and angry/depressed when losing while playing.

Therefore, our research aims to build simple mathematical concepts with the traditional game of Dakon and Snakes and Ladders in developing numeracy skills in children with higher-order thinking abilities and children with lower-order thinking abilities.

2. Method

This study uses experimental research methods with research variables including two independent variables, namely the method of playing with traditional games (Snakes and Ladders, and Dakon) and simple mathematical concepts (high level and low level), and one dependent variable, namely the ability to count, with the following indicators: 1) Children are able to name numbers 1-20; 2) the child is able to count numbers; 3) the child is able to add numbers correctly; 4) the child is able to reduce numbers correctly; 5) children are able to solve problems. The experimental design used is a 2x2 factorial design. In this design, there are two groups, each of which is randomly selected. The first group is the experimental group who learns through the method of playing with the traditional game of snakes and ladders. The second group is the experimental group who learns through the method of playing with traditional dakon games. The data matrix can be seen in the following table:

Table 1. Factorial Research Design 2x2

Counting Ability (B)	Traditional Games (A)	
	Dakon (A1)	Snake and Ladders (A2)
High Thinking Ability (B1)	A1B1	A2B1
Low Thinking Ability (B2)	A1B2	A2B2

(Alfulaila et al., 2019; Lestaringrum, 2018)

57 Sampling in this study was carried out by the method of stratified random sampling (Stratified Random Sampling). This is because this study takes samples based on a certain level, namely children who have high and low levels of simple mathematical concepts so that the sample used is group B kindergarten students from 3 schools in Kediri City as many as 60 children.

The data collection technique used in this research is a matter of test (pretest and posttest), and observation. Test questions and observations were used to determine the child's numeracy skills using the traditional game method Snakes and Ladders and Dakon. The instruments used are test questions and observation sheets that have been consulted with experts and experienced kindergarten teachers. The

ability to count in children is divided into 2, namely high thinking ability and low thinking ability by using the following formula (Djemari Mardapi, 2012; Suprananto & Kusaeri, 2012):

High Thinking Ability $Mean \leq Skor \leq 1 \times St.Deviasi$

Low Thinking Ability $Mean > Skor \geq 1 \times St.Deviasi$

The grid of instruments used in this study are as follows:

Table 2. Research Instrument Grid

No.	Indicator	Number
1	Mention the numbers 1-20	1, 2
2	Counting numbers	3, 4
3	Add up numbers	5, 6
4	Reduce numbers	7, 8
5	Solve problems	9, 10

Data analysis was conducted to find out and test the truth of the proposed hypothesis. This research is a quasi-experimental research with a 2x2 factorial design. Thus, the data analysis used the Two Way ANOVA test. This analysis is appropriate to be used to compare the effects of giving different treatments, whether there are significant differences or not. In general, the main analysis in factorial experimental designs is to compare the interaction effects between factors. If there is a difference in the interaction effect, then a simple effect analysis is carried out, and if there is no difference in the interaction effect, a main effect analysis is carried out. In order for the hypothesis test to be carried out, the analysis prerequisite test must first be carried out, which includes the normality test and homogeneity test. The normality test is intended to determine whether the samples taken in this study come from a population that is normally distributed or not. For the normality test, the Kolmogorov-Smirnov test was carried out, while the data homogeneity test was used the Levene test.

3. Results and Discussion

Result

Observation Result

Dakon

The children play dakon starting with a high five (determining who plays first) then the winning child takes the kecil and is placed one by one in the dakon hole. Through traditional dakon games, children can develop their numeracy skills. This is because, the concept of the Dakon game uses the concept of addition and subtraction when filling items one by one into the hole that is passed including our own master plan hole (left) except for the opponent's master plan hole. Other than that, traditional Dakon games also train fine motor manipulation skills, train concentration, educate children's sportsmanship, and also practice strategy skills (Zayyadi et al., 2018; Zayyadi & Subaidi, 2017).



Picture 1. Traditional Games Dakon

Snake and Ladders

The children started playing snakes and ladders with a high five (determining who played first). Then the child chooses the person to run (red/blue/yellow). After that the child shakes the dice and runs according to the number of dots on the dice. The game of snakes and ladders can improve the ability to count in children because in this game the child is assigned to count each step taken. This game also develops related mathematical abilities with communication, problem solving, understanding, and creative thinking (Atmoko et al., 2017; Nawafilah & Masruroh, 2020; Sibuea & Sinaga, 2018).



Picture 2. Traditional Games Snake and Ladders

Assumption Test

Prior to the Two Way ANOVA test, assumptions were first tested which included normality and homogeneity tests with a sample of 60 children. The normality test is used to see whether the sample used in this study comes from a population that is normally distributed or not, while the homogeneity test is used to see whether the sample has the same variance or can be said to be homogeneous data. The results of the normality and homogeneity test with the help of the SPSS program show that the sig value for the normality test is 0.204 and the sig value for the homogeneity test is 0.803. Based on the test result, it can be said that the samples taken in this study were normal and homogeneous.

Interaction Analysis between Traditional Game Types and Thinking Ability on Counting Ability of Early Childhood

After the assumption test can be met, interaction analysis can be carried out. This analysis is used to see whether the interaction between traditional games and simple mathematical concepts has the same effect on early childhood numeracy skills.

Table 3. Interaction Analysis Results

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	252.667 ^a	3	84.222	94.835	.000
Intercept	16137.600	1	16137.600	1.817E4	.000
Games	72.600	1	72.600	81.748	.000
SMC	173.400	1	173.400	195.249	.000
Traditional _games* TA	6.667	1	6.667	7.507	.008
Error	49.733	56	.888		
Total	16440.000	60			
Corrected Total	302.400	59			

Based on the table, it can be seen that by using the F test for the interaction of traditional games and simple mathematical concepts, the value is 7.507 with a Sig value of 0.008. Because the value of Sig is smaller than the predetermined alpha of 0.05, the decision taken is to reject H0. So it can be concluded that there is an interaction between traditional games and thinking ability (TA). In other words, it can also be said that not all interactions between traditional games and simple mathematical concepts have the same effect on early childhood numeracy skills.

Because there are interaction factors, the next analysis is simple effect analysis. This analysis is to answer more clearly "What types of traditional games are suitable for each level of thinking ability (TA); and conversely, what level of thinking ability (TA) is most suitable for each traditional game".

Simple Effect Analysis on the Traditional Game of Dakon and Snakes and Ladders

This analysis aims to answer the level of knowledge of what simple mathematical concepts are most appropriate for the traditional game of dakon and snakes and ladders. The test result shows the Sig value of 0.0001. Because the value of Sig is smaller than the predetermined alpha of 0.05, it can be concluded that the difference in the level of thinking ability with the traditional game of dakon and snakes and ladders gives different results. Furthermore, further tests were carried out to determine whether there was a significant difference between high and low levels of thinking ability.

Table 4. Advanced Test of Traditional Games Analysis Results

Games	(I) SMC	(J) SMC	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
						Lower Bound	Upper Bound
1	1	2	2.733 [*]	.344	.000	2.044	3.423
	2	1	-2.733 [*]	.344	.000	-3.423	-2.044
2	1	2	4.067 [*]	.344	.000	3.377	4.756
	2	1	-4.067 [*]	.344	.000	-4.756	-3.377

Based on the table of further test results, it can be concluded that building simple mathematical concepts with the traditional game of Dakon and Snakes and Ladders to develop numeracy skills in high thinking ability children better than low thinking ability children. So that means the application of traditional games, both Dakon (Game 1) and Snakes and Ladders (Game 2) is very appropriate to be given to children with high thinking ability. However, if it is seen from the results of the average difference, the traditional Dakon game (Game 1) is more appropriate to be given to children with knowledge of simple mathematical concepts at both high and low levels than the traditional Snake and Ladders game (Game 2).

Simple Effect Analysis on High and Low Level Simple Mathematical Concepts

This analysis aims to answer what types of traditional games are most appropriate for high-level and low-level simple math concepts. The test result shows the Sig value of 0.0001. Because the Sig value is smaller than the predetermined alpha of 0.05, it can be concluded that the different types of traditional games with high-level and low-level simple mathematical concepts give different results. Furthermore, further tests were carried out to determine the significant difference between the types of traditional games of Dakon and Snakes and Ladders.

Table 5. Advanced Test of Simple Math Concepts Analysis Results

TA	(I) Games	(J) Games	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
						Lower Bound	Upper Bound
1	1	2	1.533 [*]	.344	.000	.844	2.223
	2	1	-1.533 [*]	.344	.000	-2.223	-.844
2	1	2	2.867 [*]	.344	.000	2.177	3.556
	2	1	-2.867 [*]	.344	.000	-3.556	-2.177

*high thinking ability (TA 1) and low thinking ability (TA 2)

Based on the table of further test results, it can be concluded building simple mathematical concepts with traditional Dakon games to develop numeracy skills in high and low thinking ability children is better than using the traditional Snakes and Ladders game. So that means the application of traditional games Dakon (Game 1) is very appropriate to be given to children with high thinking ability and low thinking ability.

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Discussion

The results of this study provide information that the method of playing through the traditional game of Dakon and Snakes and Ladders has a different effect on early childhood numeracy skills. The results of this study support previous research that traditional games can improve students' academic abilities by adjusting to their respective cultures and countries, for example the game congklak can be an alternative for teachers in increasing students' memory performance capacity, traditional games in Bengkulu, for example the game "a lot of people"; 'pack bananas'; "Sesimbunan", can provide benefits in stimulating children's growth and development ((Iswinarti & Suminar, 2019; Puspitasari et al., 2021).

Traditional games in this study have an impact on the level of knowledge of simple mathematical concepts. Children with a high level of knowledge of simple mathematical concepts have better numeracy skills when given the traditional game of Dakon than Snakes and Ladders, while children with a low level of knowledge of simple mathematical concepts, their numeracy skills will also be better if given the traditional game of Dakon than Snakes and Ladders. This traditional game is closely related to children's psychological abilities, especially cognitive development, and at the same time can increase children's creativity (Damanik & Sinaga, 2021; Pic et al., 2019). The research results are relevant that the dakon game as a traditional game is very effective in learning to count in introducing simple mathematical concepts. Several previous studies also support that the use of dakon games can facilitate understanding of mathematical concepts (Asrial et al., 2020; Laily et al., 2019; Mulyani et al., 2020). In line with this,

traditional games can improve problem solving skills in children, stimulate language development, verbal skills, social skills, a good place for emotional expression for children, and increase children's learning motivation (Lestari & Prima, 2017; Nataliya, 2015; Zayyadi et al., 2018). Children can rediscover the concept of adding numbers from their experience in playing the traditional game of dakon. The stages in a child's learning trajectory have an important role in understanding the concept of number operations from the informal to the formal level (Nursyahidah et al., 2013; Prahmana et al., 2012).

Simple mathematical concepts with dakon games are very effective for students who have low-level thinking skills. This is evident in the results of the study where the dakon game has a fairly high mean difference compared to the application of the snake and ladder game. The thing that becomes an obstacle in the snake and ladder game is that in the implementation of the snake and ladder game it is only applied to certain materials and students pay less attention to the rules of the snake and ladder game. These constraints can affect the increase in cognitive development in the form of physiological maturity, experiences of children who have been through since childhood, and mental skills. However, on the other hand, based on the results of research that has been done, the use of the snake and ladder concept can actually improve the cognitive development of children who have learning difficulties. Research respondents showed that the concept of counting can be built well through the game of snakes and ladders. This can be seen when each player is able to reach the last stage in the game of snakes and ladders. At a glance, the snake and ladder game is a board game for children played by two or more people (Ibam, et al, 2018), which consists of several elements including game boards, dice, pawns, cards containing questions, bonus cards, surprise questions. and zonc cards (Ibam et al., 2018; Meriyati et al., 2019; Srinivasan, 2019).

The implication in learning with the application of games is that educators must be creative in using strategies and presenting learning media so that students can easily catch the subject matter presented by the teacher. As educators who will teach mathematics to early childhood, they should not be too textual, theoretical and rigid during the learning process. Learning activities must be packed with play activities and be meaningful for children. Learning in early childhood education should use a quality preschool approach that is able to "invite children to experience mathematics as they play, describe and think about their world. Based on extensive research and training, teachers in early childhood education should be able to plan activities that simultaneously involve cognitive, socio-emotional and physical development, and build on children's informal knowledge and experiences (Agusti et al., 2018; Hasibuan & Jannah, 2018). Through creative games, children have more opportunities to enrich their movements. Various movements with motor sensory, hands, feet, head, or other part of the body involving both big and small muscle will enable them to fully develop their physical motor ability. Furthermore, play-based learning is currently getting more support, where with games there are many valuable things that children get, namely strengthening many areas of development so that it must include games that can hone children's independence and children get a grip. - in the experience of playing that still gets adult direction in this case is the teacher. If playfulness seems to predispose to certain types of creative actions, including those required in scientific and mathematical files (Bergen, 2018; I. Lestari & Ratnaningsih, 2016).

4. Conclusion and suggestions

The conclusion obtained from this study is that building simple mathematical concepts through traditional dakon games to develop numeracy skills in children with high and low-level thinking skills provides better and more effective results than the traditional snake and ladder game.

Some suggestions that can be put forward in this research, namely traditional games have an important role in developing the abilities of early childhood, so it is necessary to continue to use traditional games as one of the children's play activities, and it is hoped that further dig and study more deeply about the benefits of Indonesian Traditional Games. others as a medium to develop children's abilities.

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