


## Efforts to improve initial numeracy skills through the use of snakes and ladders game media in early childhood

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Article Info	ABSTRACT
<b>Keywords:</b> Cognitive, Initial Numeracy, Snakes, Ladders Game	One of aspect development children must be developed is aspect cognitive especially on ability counting beginning . This research is uplifting problem-related ability counting beginning child age is still low, especially in children 5-6 years old in group B in the Az Zahra Integrated Islamic Kindergarten School (TK) year 2023–2024 teachings with a total of 8 children. The researcher applied to learn in group B kindergarten Islam Integrated Az Zahra year 2023/2024 teachings with different media, i.e., by using game media like snake stairs for activities counting, beginning with variations of different activities every day. This research includes a type of action research with repair in two cycles (practice, reflection, and improvement). Data collection techniques are carried out through documentation and observation. After the research is carried out, it can be concluded that game media snake stairs can be used to upgradeability count beginning child age, specifically group B This can be seen from the percentage level increase in activity results repair that is, in cycles One reached 50% and in cycle two, it reached 87.5%.
This is an open access article under the <a href="https://creativecommons.org/licenses/by-nc/4.0/">CC BY-NC</a> license 	<b>Corresponding Author:</b> Hizbul Wathoni Sekolah Tinggi Keguruan dan Ilmu Pendidikan Hamzar Lombok <a href="mailto:hizbulwathoni177@gmail.com">hizbulwathoni177@gmail.com</a>

### INTRODUCTION

Early childhood is a small human figure who has various abilities that must be developed. Having an age range of 0–6 years ( *golden age*) makes their development very rapid in every phase of their development. Some characteristics that stand out in children aged 5-6 years are that they are unique individuals, active and energetic, egocentric, relatively spontaneous, tend to be careless and less calculating, adventurous, have a high imagination, tend to get frustrated easily, and have a short attention span. short [1]. According to the view of constructivism promoted by Jean Piaget and Vygotsky, a child ages early and naturally active, and can build his knowledge. Piaget stated, "The inner child understands the world in fact as an active use scheme or framework reference." As a result of the interaction, the child with the environment will form a structure that is real and then develop a conclusion [2].

Cognitive development in children at a young age is critical, as is the ability of children to improve other abilities. Ability is cognitive it refers to the process of thinking, and the ability to connect, evaluate, and consider incident and incidents [3]. Cognitive

develops in a way that gradually depends on the development of the body and system nerve centers. Wrong One theory that influences explanation and cognition is the theory of Piaget [4]. Giving proper stimulation makes it easier for a child to age early and record various things using various senses, for example, by giving stimulation cognitive direction to draft counting necessary for a child as a provisionally educated basis later.

Aspects of cognitive development in the Minister of Education and Culture Regulation include:

1. Learn to solve problems, which covers the ability to solve problems in life daily with a flexible method in a new context.
2. Think logically, encompassing differences, clarification, and patterns, taking the initiative, planning, and getting to know the consequences.
3. Think symbolically, encompassing the ability to recognize, mention, and use draft numbers and letters, as well as being capable of presenting various objects and imagination-shaped pictures[5].

Beginning numeracy skills is an ability that includes concepts. Numbers also manipulate quantities such as addition and subtraction. Activity Early numeracy for AUD has many benefits, including helping children think logically and creatively, think systematically, and increase children's precision and patience. Apart from that, starting numeracy can also equip children with skills in solving problems, measuring, recognizing patterns, and understanding mathematical concepts in further education. From preschool childhood until school begins, skills in mathematics like counting, matching numbers, and counting more than 10 develop more quickly [6] Starting to count is also part of one of the abilities that is very important for children in an effort to develop as well as equip the child for his future life [7]. The ability to count in early childhood is very necessary so that children are ready to take part in further education [8]. The environment greatly influences early childhood numeracy skills by stimulating development. Skills child covers his understanding of numbers, specifically numbers and subtraction [9].

Based on observations of development activities in the class, problems were found, namely in cognitive abilities, especially beginning numeracy. Of the 8 children in the class, only 4 children developed according to expectations, while the other 4 children did not develop well. Apart from the conditions above, it is based on observations of development activities. The class found the following conditions: First, some children were still confused about the concept of numbers. Second, most children are bored with monotonous initial counting activities. Third, most children lose focus during learning activities. Fourth, media-based learning used by teachers is less interesting. Of the four problems that have been identified above, the one that will be solved is the child's lack of initial numeracy skills. The problems that occur are caused by lots of factors, such as media that is less interesting, teachers' strategies that are not appropriate when delivering material, and the lack of interest and concentration of children in counting activities.

Seeing some of the problems above and taking into account various existing theories on aspects of early childhood development, research and improvements in learning need to be carried out in order to develop children's abilities, which are still not optimal in the

cognitive field, especially in early numeracy activities. Teachers apply new strategies and media, such as the game-media snake ladder. With this medium, teachers must hope to be able to improve interest as well as the ability of children to count beginnings. This research aims to determine learning progress in activity counting beginning child age early with a game media snake ladder as well as to improve activity learning, especially on cognitive ability in children aged early in group B at the Az Zahra Integrated Islamic Kindergarten teachings 2023-2024.

In the book *Development Cognitive for Early Childhood*, cognitive is interpreted as the ability to study, think, or have intelligence. It means the ability to learn skills, draft new ones, understand what happens in the environment, and use memory to solve simple problems (Khadijah, 2016). According to Piaget, cognitive-child preschool is generally divided into four stages. that is, stage sensorimotor (0–2 years), stage preoperational (2–7 years), stage operational concrete (7–11 years), and stage formal. Period active (11 years until mature) [10].

Early childhood is an effective age for developing various potentials possessed by children. Development can be done through various activities, one of which is counting beginnings. Beginning numeracy skills is the foundation for life skills later in life. When starting to count in early childhood, you can start by counting the sequence of numbers from one to the next, counting how many objects there are around the child, and also adding objects. This is in line with the ability children have to count reached at the age of 5–6 years based on Minister of Education and Culture Regulation No. 137 of 2014 concerning Achievement Level Standards for Child Development, where ability children have to count achieved such as: mentioning symbol numbers 1–10, using symbol numbers to count, matching numbers with symbol numbers, knowing various types of symbol letter vowels and consonants, as well as representing various types of objects in form of pictures or writing [11]. Initial numeracy skills in children aged 5–6 years refer to National Education Regulation Number 58 (2009), where activities for developing initial numeracy skills must be adjusted to the child's developmental age and environmental conditions [12]. Because of that, teachers should start early and push the development ability of the mathematics child, specifically, draft numbers, which become the base development ability of mathematics, so that the child can continue to level next [2] So, it's an important ability since early in the calculation, a child as a draft initial can be developed under the level of its development.

Because children 5–6 years old still have a range of short concentration in learning, they need an intermediary in the form of learning media, where learning media can focus the attention of the child so that they can engage in something activity for quite a long time compared to not using learning media. The term media comes from Latin and is the plural form of the word "medium," which is literally "intermediary," which means the media is an intermediary between the source of the message and the recipient [13]. Some of the benefits of learning media are:

- a. Learning media can attract children's attention when used in the learning process, so it can foster learning motivation in children.

- b. The meaning of the material delivered through learning media will be clearer, so it will be easier for children to understand and master the material.
- c. Learning methods will be more varied.
- d. Learning media can make children active learners [13].

Learning media for early childhood should use media that are interesting and can arouse interest in learning, attention, and creativity in early childhood. Apart from that, learning is successful and quality if a large participant Students can be physically active and psychic, as well as have a strong social spirit based on trust in themselves [14]. Learning media for early childhood must be appropriate to the age and characteristics of early childhood [15]. The hope is that with learning media, the message or information conveyed by the teacher will be easily accepted by children, including through game media that has a certain power pull. Children tend to be motivated to study very well in environments with more interactive play, including game use [16]. In terms of this, a learning medium can form a fun game, like a snake ladder.

The concept of the snakes and ladders game is a simple activity where the tools and media used are dice (usually made of wood, bone, ivory, or plastic), as well as pictures consisting of boxes containing the structure of the game board so that it can be played by two or more children [17]. Game Snake Ladder can be seen as the wrong strategy for learning in class because it is a game that is known by the entire public [18]. The Snakes and Ladders game is a game that uses dice to determine how many steps each player must walk [19]. This game is easy because the rules are simple and can educate as well as entertain children. Research shows that the game Snake Ladder can have a positive impact on teaching numbers and knowledge to children [20]. In general, the game Snake Ladder can be given to children aged 5–6 years. To stimulate various fields of development like cognitive, language, and social [12]. The game board on the symbol in the snake ladder loads characters, including the snake, as part of the provision backward (or downwards), while the ladder symbol is character lift (Rise) or constitutes mark luck [21].

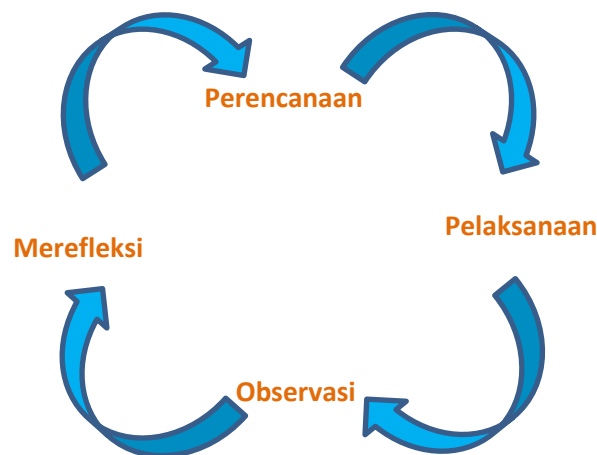
Play in the development of cognitive According to Vygotsky (1976), there is a close relationship between play and cognitive development. Play is a chance for a child to explore, research, and experiment to obtain knowledge [22]. So from that, the Snakes and Ladders game can be used as a fun concrete learning medium for initial numeracy activities in the form of adding and subtracting simple numbers.

## METHOD

This research uses *action research* (classroom action research), namely research carried out by teachers in the classes they accompany. This research activity was carried out simultaneously with activity learning in the next class. If there is a lack, it will be repaired in cycle repair; furthermore, Subjects in this research are children of Kindergarten B Matahari Integrated Islamic Kindergarten Az Zahra year teachings 2023/2024, with a total of 8 children, consisting of 3 daughters and 5 sons. This research was conducted in two cycles of improvement; each cycle consists of five meetings with each activity consisting of an activity beginning or opening, core activities, and closing. After doing reflection on the

activities arranged in the pre-cycle RPPH, the researcher does a repair activity learning field cognitive with game media snake ladder cycle I (repair). In each cycle, researchers do later reflection, which is used as a decider in compiling plans for repair.

Because the improvement results were not yet optimal, the improvement activities were continued in cycle II. Cycle II begins with reflection on cycle I improvement activities, then planning improvements, then implementation, and then observing the results again. In improving cycle II, researchers used a more creative strategy for delivering material, better classroom management, as well as a variety of snakes and ladders playing activities that were more interesting than before. This was done with the hope of improving children's cognitive abilities by starting to count more optimally. In general, the PTK stages of each cycle are as follows:



**Figure 1** Stages of Classroom Action Research

The stages in Classroom Action Research are:

1. Planning: This stage involves the identification of a problem or issue that will be researched, the determination of research objectives, and the formulation of research questions. Apart from that, planning also includes planning activities, election methods, and data collection.
2. Implementation: At this stage, implementation is carried out through actions or interventions designed to address identified problems or issues. This action can be the use of new learning strategies, material differentiated learning, or innovative evaluation methods.
3. Observation: This stage involves data collection via observation of students or the learning process. The data collected can be: notes, observations, development students, and effectiveness of implemented actions.

Reflection: At this stage, the researcher analyzes and evaluates the data that has been collected. The goal of this stage is to understand the effectiveness of actions performed, identify advantages and disadvantages, and make recommendations for improvements in the future. Reflection can also involve discussing findings with fellow educators or reporting research results Click or tap here to enter text..

When the researcher observes the progress ability of children in class both before, after, or during the activity process development, instruments are used containing evaluations of activity development ability and good cognitive skills from cycles 1 and 2, namely:

- Plan activity improvements carried out in cycles 1 and 2.
- Plan Implementation Daily Learning (RPPH).
- APKG-PKP 1, namely instrument evaluation ability plan repair activity development.
- APKG-PKP 2, namely instrument evaluation ability, carries out repair activity development.
- Observation is direct and natural observation at the moment of activity opening, core, and closing.
- Documentation form photo child at the time activity development.

Furthermore, researcher reflect activity learning means remembering what has been done and making plans to upgrade quality in activity development.

- Reflection is carried out on each day after carrying out activity development, which started in cycle 1 on November 6–10, 2023. Cycle 2 on 13-17 November 2023
- Reflection is done with the method of filling in sheets. Reflections include information about reactions of children to activity development, weaknesses and strengths of writers in activity development, unique encounters, and steps that will be taken to improve quality in activity development.
- Reflection is done to see weaknesses and strengths, and action improvements have been made to the plan, repair activity, and furthermore.

## RESULTS AND DISCUSSION

According to Ministry of Education and Culture Regulation Number 137 of 2014, Concerning the National Standards for Early Age Children's Education, the standard level of development achievement for children aged 5–6 years in the scope of symbolic thinking is:

- Children can name the symbols for numbers 1–10.
- Use number symbols to calculate.
- Match numbers with number symbols [5](Kemendikbud, 2014).

So, researchers make activity improvements that refer to indicators. During the action research class, the researcher held 10 meetings on scenario repair. The improvement aims to increase the ability of cognitive children through activity play (snake stairs) for children in group B kindergarten. Az Zahra Integrated Islam, South Jakarta. Following is activity cycle I (6–10 November 2023):

**Table 1** Activity Repair Cycle 1

SKH To	OPENING	CORE	CLOSING
I Nov. 6, 2023	Play pat number	Play snake stairs ( mentioning point dice that appear )	Play jump number
II	Sing proceed backwards	Play snake ladder	Play “ Collect a number



Nov. 7, 2023	( according order )	( run to number )	of balls number "
III	Play guess card number	Play snake stairs (	Meronce with straw in
Nov 8, 2023		guess numbers 1-10)	accordance existing
			numbers _
IV	Play pat with pat	Play snake stairs ( sum	Stacking blocks
Nov 9, 2023	patterned	1-5 )	become tower
V	Play look for Friend	Play snake stairs (	Sorting competition
Nov 10, 2023	group	summation 6-10)	card numbers 1-10

After carrying out activity development, the author does reflection. On the first activity development reaction, the child was good enough, but the weak writer in activity development was still not prepared enough. The second-day reaction child in activity development With enough enthusiasm and weakness, the author is less motivated to motivate underprivileged children to finish tasks. On the third day, reaction child to activity development child looks more excited. The weakness writer is the less stimulating ability to count the ing child at the start activity. On the fourth day of reaction, the child is very interested in activity development and weaknesses in development, namely card media and new additions. Fifth-day children are still seen as enthusiastic about activity development. The weakness at the meeting in cycle 1 is that the learning outcomes of some children have not met expectations. Because the results in cycle 1 have not yet shown the desired improvement, researchers are making activity improvements to improve quality in activity development cycle 2. Following is activity cycle 2 (13-17 November 2023 ):

**Table 2** Activity Repair Cycle 2

SKH To	OPENING	CORE	CLOSING
VI	Play tapping the	Play snake ladder	Play arrange the
Nov 13, 2023	numbers	( count eye dice that appear )	cones
VII	Game ice cream	Play snake ladder	Walk with hoop
Nov 14, 2023	stick number	( with chance throw dice 2	alternate
		times)	
VIII	Move beam in	Play snake stairs ( get to	Collect balls with
Nov 15, 2023	accordance number	know numbers 11-20)	the same number
IX	Guess number with	Play snake ladder	Assembling the
Nov 16, 2023	<i>flash cards</i>	( sum 1-15)	tower glass
X	Sing song	Play snake ladder	Play pinch number
Nov 17, 2023	summation	( sum 1-20)	

This snakes and ladders game is a real model for solving number operations in the form of simple number and addition concepts. Children become more interested because they can do initial counting activities while playing; besides that, all children will be active in learning activities while playing [23].

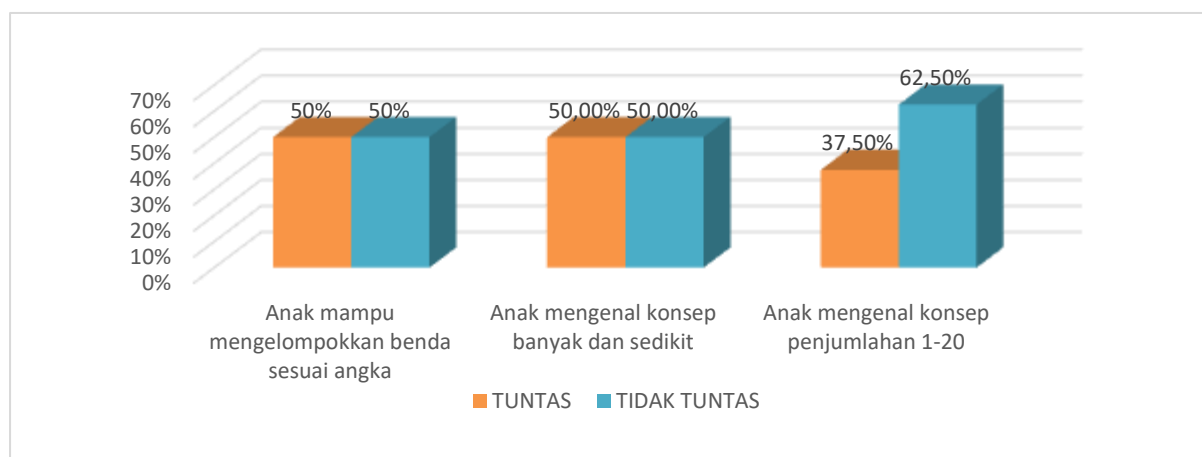
Observations and data collection carried out by researchers during the learning process took the form of observations and assessments of initial numeracy indicators in

children 5–6 years old. From the observation sheet, the number of aspects of abilities that have emerged in the child is recorded. Children are in the complete category if the development score obtained is BSH or BSB. BSH means that the child can do initial counting activities without teacher assistance; BSB means that children are capable and fluent in counting activities beginning even without the help of a teacher. Meanwhile, the improvement process is said to meet competency if the average level of completion has reached  $\geq 75\%$  in cycle 1, and complete if it reaches  $\geq 85\%$  in cycle 2. As for the assessment instruments for observed indicators, they are as follows:

**Table 3** Observation result cycle 1

NO	NAME	Indicator								
		Children are able to group objects according to numbers			Children know the concept of a lot and a little			Children know the concept of addition 1-20		
		Mark	Complete	Not finished	Mark	Complete	Not finished	Mark	Complete	Not finished
1	A A	MB		√	MB		√	MB		√
2	Bn	BSH	√		BSH	√		MB		√
3	Df	MB		√	MB		√	MB		√
4	Qa	BSH	√		BSH	√		BSH	√	
5	Ry	BSH	√		MB		√	MB		√
6	Slh	MB		√	MB		√	MB		√
7	Vr	MB		√	BSH	√		BSH	√	
8	Zhn	BSH	√		BSH	√		BSH	√	
Jumlah		-	4	4	-	3	5	-	3	5
Persentase (%)		-	50%	50%	-	50%	50%	-	37,5%	62,5%

Based on the results of the researcher's observations of activity improvement in cycle 1, we can improve our percentage completeness. Look at the graph below:



**Graph 1** Percentage Completeness Repair Cycle 1



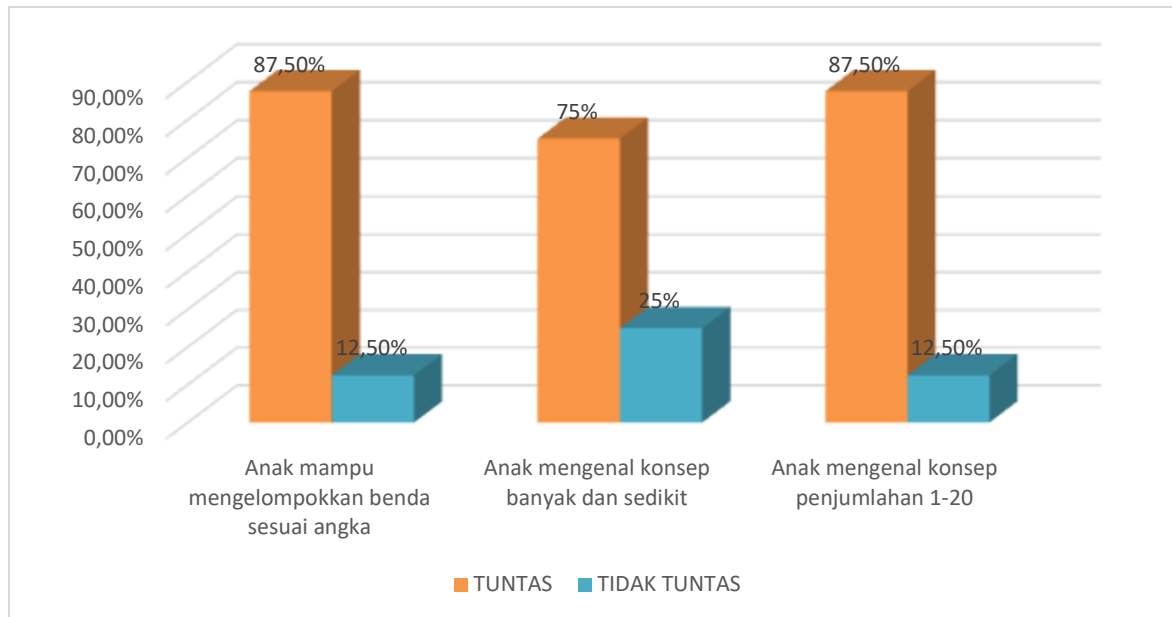
Based on the graph above, it can be seen that average ability counting at the beginning of group B is still not complete; it can be seen from the low presentation of the numbers that researchers continue activity improvement in cycle 2.

On the day of the first reaction child Enough enthusiasm for activity development; lack of preparation for activity development Still become a weak writer on the first day of cycle 2. The second day, the child is very enthusiastic about activity development. A weakness is a child's results that do not meet expectations. The third-day weakness of the writer is less effective time management. The fourth day weakness writer in activity development is too fast in giving playing platform. On the day fifth cycle 2 weakness writer is lack of preparation to additional media form card summation . The following is a table and graph of the percentage of results of improvement activities carried out by researchers to improve children's cognitive abilities in counting. Start with the game Snake Stairs in Cycle 2:

**Table 4** Observation result cycle 2

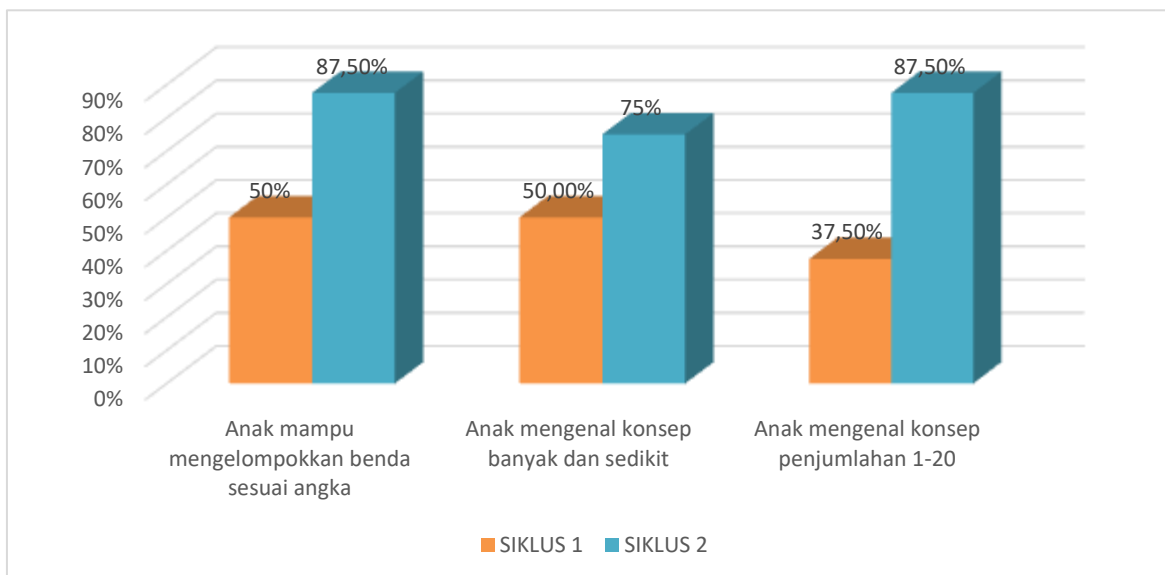
NO	Child's name	Indicator								
		Children are able to group objects according to numbers			Children know the concept of a lot and a little			Children know the concept of addition 1-20		
		Mark	Complete	Not finished	Mark	Complete	Not finished	Mark	Complete	Not finished
1	A A	BSH		√	BSH	√		BSH	√	
2	Bn	BSH	√		BSH	√		BSH	√	
3	Df	BSH	√		MB		√	MB		√
4	Qa	BSH	√		BSH	√		BSB	√	
5	Ry	BSH	√		BSH	√		BSH	√	
6	Slh	BSH	√		MB		√	BSH	√	
7	Vr	BSH	√		BSH	√		BSB	√	
8	Zhn	BSH	√		BSH	√		BSB	√	
	Jumlah	-	7	1	-	6	2	-	7	1
	Percentage (%)	-	87.5%	12.5%	-	75%	25%	-	87.5%	12.5%

Based on the results of the researcher's observations, due to activity improvement in cycle 2, we can improve our percentage of completeness. Look at the graph below:



**Graph 2** Percentage Completeness Repair Cycle 2

The results of the data analysis show that children's initial numeracy skills have been completed. Because the value categories for each indicator of children's initial numeracy are already in the BSH and BSB categories, the research is considered complete, and there is no need to carry out the next cycle. In general, enhancement average percentage of cycle 1 to cycle 2, can we look at the graph following:



**Graph 3** Recapitulation Percentage Completeness Repair Cycle 1 and Cycle 2

After making improvements in cycle 1 and cycle 2, thank God for my ability to count. Beginning child group B is far more OK, looking at the number percentage and increased

completeness from cycles 1 and 2. Children become more advanced in each indicator counting beginning. In indicators grouping objects in accordance with number percentage, the initial 50% increase to 87.5%, indicator know draft many and few were initially 50% increased to 75%, and indicator know draft summation simple in cycle 1 only 37.5% increased to 87.5%. But for deep activity development, use the game Snake Ladder. There are still some children who have difficulty participating in activities due to a lack of concentration.

Supporting research previously It also states that the Snakes and Ladders game can improve the numeracy skills of children aged 5–6 years. So, some effort is needed from the teacher to help children improve their abilities in each cycle [23]. These efforts can take the form of variations in teaching strategies and methods. If there has been no improvement, the teacher needs to carry out an evaluation that looks at various aspects of learning and teaching. Teachers need to do *trial and error* to help improve their ability to count. The teacher can use chants, add variation activities, and teach in different styles so that the class has an active and fun atmosphere.

## CONCLUSIONS

Based on the results of research conducted by researchers, it can be concluded that ability counting, beginning in children 5–6 years old, can be increased through game media like the snake ladder. This can be seen from the percentage completeness improvements that researchers made; in cycle 1, it increased by an average of 50%, and in cycle 2, it increased by an average of 87.5%. Researchers do repair enhancement ability counting. The beginning uses the preferred game media of the child as well as delivery strategies for easy activity, an understood child, and a fun situation. In carrying out activity repair, there are strengths and weaknesses, according to the researcher. As for weaknesses, the researcher is at the moment explaining activities are delivered too fast and sometimes inappropriately. Whereas excess from the researcher is in the design and implementation activity, the researcher adapts to the theme and refers to the desired development achieved as well as through varying strategies and conditions. Study fun teaching. Therefore, researchers or teachers need to continue to upgrade their knowledge and create innovations in learning methods in order to create a comfortable ecosystem, with the hope of optimizing every aspect of development and achievement. expected learning.

## REFERENCES

- [1] S. Tatminingsih, H. Lulu, and L. Cintasih, *Dasar-dasar Pendidikan Anak Usia Dini*, 2nd ed. Tangerang Selatan: Universitas Terbuka, 2019.
- [2] R. Audina, K. Setyaningsih, and I. Fitri, "Pengaruh Media Permainan Ular Tangga Terhadap Perkembangan Kognitif Anak Usia 5-6 Tahun Di Tk Dharma Wanita Pampangan Oki," *J. Ilm. Multidisiplin*, vol. 1, no. 3, pp. 295–304, 2022, [Online]. Available: <http://ulilalbabinstitute.com/index.php/JIM/article/view/93>
- [3] R. Jawati, "Peningkatan Kemampuan Kognitif Anak Melalui Permainan Ludo Geometri Di Paud Habibul Ummi li," *SPEKTRUM J. Pendidik. Luar Sekol.*, vol. 1, no. 1, p. 250,

- 2013, doi: 10.24036/spektrumpls.v1i1.1537.
- [4] Vera Heryanti, "Meningkatkan Perkembangan Kognitif Anak Melalui Permainan Tradisional (Congklak)," *Univ. Bengkulu*, vol. 2, no. 1, p. 22, 2014.
- [5] Kemendikbud, "Panduan Teknis Pembelajaran dan Penilaian," Jakarta: Kementerian Pendidikan dan Kebudayaan, 2014.
- [6] N. C. Jordan, D. Kaplan, L. Nabors Oláh, and M. N. Locuniak, "Number sense growth in kindergarten: A longitudinal investigation of children at risk for mathematics difficulties," *Child Dev.*, vol. 77, no. 1, pp. 153–175, 2006, doi: 10.1111/j.1467-8624.2006.00862.x.
- [7] F. D. Asmara *et al.*, "3309-Article Text-14056-1-10-20231215," pp. 529–536, 2023, doi: 10.47709/educendikia.v3i03.3309.
- [8] D. P. Nasional, *Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 tentang sistem pendidikan nasional*. Jakarta: Biro Hukum dan Organisasi Sekretaris Jenderal Depdiknas, 2007.
- [9] A. Susanto, *Perkembangan Anak Usia Dini Pengantar dalam berbagai aspeknya*, Pertama. Jakarta: Kencana Prenada Media Group., 2011.
- [10] S. E. W. Djiwandono, *Psikologi Pendidikan*. Samarinda: Grasindo, 2006. [Online]. Available: [http://opac.kaltimprov.go.id/ucs/index.php?p=show\\_detail&id=5413](http://opac.kaltimprov.go.id/ucs/index.php?p=show_detail&id=5413)
- [11] N. Asqia, N. Ashari, R. Razak, P. Islam, and A. Usia, "Anakta," pp. 65–72.
- [12] R. Kurniawati, "Meningkatkan Kemampuan Berhitung Dengan Permainan Ular Tangga Pada Anak Kelompok B Tk Yuniur Surabaya," *PAUD Teratai*, vol. 2, no. 1, pp. 24–25, 2013.
- [13] Rusman, *Model-model Pembelajaran mengenalkan profesionalisme guru*. Banjarmasin: Raja Grafindo Persada, 2016. [Online]. Available: [http://perpustakaan.uin-antasari.ac.id/ucs/index.php?p=show\\_detail&id=25318](http://perpustakaan.uin-antasari.ac.id/ucs/index.php?p=show_detail&id=25318)
- [14] A. Susanto, *Teori Belajar dan Pembelajaran di Sekolah*. Jakarta: Kencana Prenada Media Group., 2016. [Online]. Available: <http://pustaka.unm.ac.id/opac/detail-opac?id=42381>
- [15] Mursid, *Pengembangan Pembelajaran PAUD*. Bandung: REMAJA ROSDAKARYA BANDUNG, 2015.
- [16] N. M. Swasti Wulanyani *et al.*, "A preliminary study to assess the use of a 'Snakes and Ladders' board game in improving the knowledge of elementary school children about taeniasis," *Acta Trop.*, vol. 199, no. April, p. 105117, 2019, doi: 10.1016/j.actatropica.2019.105117.
- [17] A. Syawaluddin, S. Afriani Rachman, and Khaerunnisa, "Developing Snake Ladder Game Learning Media to Increase Students' Interest and Learning Outcomes on Social Studies in Elementary School," *Simul. Gaming*, vol. 51, no. 4, pp. 432–442, 2020, doi: 10.1177/1046878120921902.
- [18] H. Permadi, "PENGEMBANGAN PERMAINAN ULAR TANGGA UNTUK MENINGKATKAN KEMAMPUAN BERHITUNG PERMULAAN ANAK USIA 5-6 TAHUN," Universitas Negeri Jakarta, 2019. [Online]. Available: <http://repository.unj.ac.id/id/eprint/2305>

- [19] A. Winarti, *Jumping Prog Learning Media untuk Meningkatkan Pemahaman Konsep Makhluk Hidup Bagi Anak Usia Dini*. Tasikmalaya, 2020.
- [20] A. Nafisah Durotun, *Teori dan Praktik Bermain untuk Anak Usia Dini*. Surabaya: Cipta Media Nusantara, 2022.
- [21] E. Ibam, T. Adekunle, and O. Agbonifo, "A Moral Education Learning System based on the Snakes and Ladders Game," *EAI Endorsed Trans. e-Learning*, vol. 5, no. 17, p. 155641, 2018, doi: 10.4108/eai.25-9-2018.155641.
- [22] E. Suparman and D. Agustini, "Modul pengembangan keprofesian berkelanjutan terintegrasi penguatan pendidikan karakter bidang taman kanak-kanak kelompok kompetensi B," *Direktorat Jenderal Guru dan Tenaga Kependidikan*, 2018. <http://repositori.kemdikbud.go.id/id/eprint/8193>
- [23] I. Royani and D. Suryana, "Peningkatan Kemampuan Konsep Bilangan melalui Bermain Ular Tangga pada Anak Usia Dini," *J. Obs. J. Pendidik. Anak Usia Dini*, vol. 7, no. 1, pp. 17–25, 2023, doi: 10.31004/obsesi.v7i1.3480.