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Implementation Of Traditional Congklak Game-Based Learning To Improve The Numeracy Of Grade 3 Students Of SDN 3 Menggala In The 2024/2025 Academic Year

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Abstrak

This classroom action research aims to enhance the numeracy skills of 3rd-grade students at SDN 3 Menggala through the traditional Congklak game. Data collection techniques included observation, interviews, tests, and documentation, with observation guides, interview guides, test guides, and documentation guides as data collection tools. The results showed a significant increase in students' *numeracy skills, from an initial 23% to 46.1% in the first cycle, and further to 84.6% in the second cycle. This demonstrates that the Congklak game is effective in improving numeracy. The average numeracy ability of students increased according to predetermined success criteria, proving the effectiveness of this approach.*

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1. INTRODUCTION

Game-based learning has been proven effective in increasing student engagement and making the learning process more enjoyable. By integrating traditional games into lessons, teachers can create an interactive and enjoyable learning environment, thereby increasing student motivation. Furthermore, this approach can also help students develop social, collaboration, and problem-solving skills (Suyanto, S. 2018, p. 37).

Traditional game-based learning is an educational approach that utilizes traditional games as a medium to achieve learning objectives. This approach is increasingly popular because it is considered effective in creating a fun, interactive, and meaningful learning environment for students (Suyadi, 2013, p. 27). Traditional games are a cultural heritage that not only have entertainment value but also contain educational elements. In the context of learning, traditional games can be an effective tool to improve students' numeracy skills. Numeracy, as a basic ability to understand and use mathematical concepts in everyday life, is an important skill that needs to be developed from an early age (Zulkardi, 2002).

Sukiniarti (2018.Page 41), emphasized that the application of traditional games can increase the creativity of elementary school students. In line with that, Nugroho (2017.Page 23), emphasized that traditional games can improve the numeracy skills of early childhood. Then it was emphasized again by Zulkardi & Puttri, I. I. (2019), that some traditional games such as congklak, gasing, hide and seek, indirectly involve mathematical concepts such as calculation, measurement, and strategy, as this study uses the congklak game involving counting seeds inserted into the hole, which can train

students' numeracy skills and numerical understanding. In addition, traditional games can also increase students' learning motivation because they are carried out in a fun and non-stressful atmosphere, in this study the traditional game that will be used to improve the numeracy skills of grade 3 students of SDN 3 Menggala is the congklak game.

The use of traditional games in numeracy learning is also in line with the contextual learning approach, where students learn through direct experience and real-life situations. This can help students better understand mathematical concepts because they see their relevance in everyday life (Sujadi, I. 2003). Numeracy is an important basic skill for elementary school students because it is the foundation for understanding mathematical concepts and their application in everyday life. Numeracy not only includes the ability to count, but also involves an understanding of numbers, patterns, measurements, and data analysis. These skills help students think logically, critically, and systematically, which are necessary for solving problems in various contexts (Steen, L. A. 2001).

There are 20 out of 26 students who still experience difficulties in mastering and completing number operations, especially in multiplication and addition. Usually, students have difficulty when adding numbers above 30, then multiplication above 3. This is because the learning is less interesting to students, also the media used is less interesting and still uses the old method so that children look bored quickly and are not interested.

2. MATERIALS AND METHODS

This research was conducted using the classroom action research (CAR) method. Classroom action research is practical research to improve classroom learning (Yandi Prayuda and Miftahurrizqi, 2015:42). Classroom action research is conducted because there is a problem that requires an answer or to prove something that has long occurred by inserting a new method that has not been used in that place.

In this research, stages such as planning, action, observation, analysis and reflection were used. In this research stage, the Classroom Action Research (CAR) method was used, which was aimed at improving students' numeracy skills, and this stage was first developed by Kurt Lewin in 1946 (Tampubolon, 2014:20).

The data collection techniques used were observation, interviews, tests, and documentation. The research design used the research procedures of Kemmis and Mc. Taggart. This study used stages such as planning, action, observation, analysis, and reflection. At this stage of the study, the Classroom Action Research (CAR) method was used, which was aimed at improving students' numeracy skills. This stage was first developed by Kurt Lewin in 1946 (Tampubolon, 2014:20).

The classroom action research procedure is carried out in a continuous cycle of activities, consisting of two cycles, each cycle consisting of four main activities, namely: planning (planning stage), acting (taking action), observing (data collection) and reflecting (reflection). The data analysis technique uses a formula used to determine individual completeness, namely as follows:

$$NA = \frac{SP}{SMI} \times 100$$

Information:
NA : Final score
SP : Score Obtained
SMI : Ideal Maximum Score

The formula used to determine classical completeness is as follows:

$$P = \frac{f}{N} \times 100\%$$

Information:
P : Percentage to be searched for/Classical completeness
f : Number of Students Who Completed
N : Total Number of Students

3. RESULTS

Based on the results of interviews with grade 3 teachers on Wednesday, May 3, 2025, it was stated that the level of numeracy of grade 3 students was still low, children seemed more interested in discussing online games with their friends. The media used in the school in learning mathematics used blackboard media, but this turned out to be less effective, because children still seemed reluctant to pay attention and listen to the teacher's learning until the end. This traditional congklak game media had apparently never been implemented, (Edi, May 3, 2025). Therefore, teachers and researchers collaborated in research using the traditional congklak game media that researchers had compiled so that there was an increase in student numeracy after using the traditional congklak game media during the learning process at school.

The results obtained from the pre-cycle, cycle I, when compared, show that there has been an increase, but have not yet reached the target that is the reference for researchers, so that further action is needed in cycle II, this is because in the implementation of cycle I there are several obstacles faced so that corrective action is needed in cycle II so that the success indicators expected by researchers can be achieved. The obstacles faced in the implementation of cycle I are, children feel quite bored with the activities carried out, and also when the initial action in cycle I, many children still play with their friends and are not too focused on listening to the teacher when the study time and time used are also quite limited so that researchers need to make improvements in cycle II. This can be seen in the following table:

Table 01. Data Recapitulation on Improving the Numeracy of Grade 3 Students at SDN 3 Menggala from Pre-Cycle, Cycle I, Cycle II.

No	No	Score	PRE-CYCLE KI	Score	WITH CYCLE I	Score	KI SIKLUS II
1	on	25	31, 2	35	43,7	59	73,7
2	HA	35	43,7	41	52,5	60	75
3	JTU	26	32,5	55	68,7	61	76
4	AA	59	73,7	60	75	60	75
5	SBT	60	75	61	76	61	76
6	AM	39	48,7	41	51,2	42	52,5
7	AAH	41	52,2	42	52,5	43	53,7

8	Constitutional Court	46	57,5	47	58,7	60	75
9	BUT	42	52,5	43	53,7	47	58,7
10	RZK	46	57,5	47	58,7	60	75
11	OF	49	61,2	50	62,5	61	76
12	DA	47	58,7	50	62,5	59	73,7
13	ZZ	55	68,7	59	73,7	61	76
14	QTA	50	62,5	58	72,5	60	75
15	MAF	51	63,7	60	75	61	76
16	KM	54	67,5	59	73,7	61	76
17	THAT	53	66,2	60	75	61	76
18	THAT	52	65	54	67,5	59	73,7
19	Aw	58	72,5	60	75	61	76
20	KH	55	68,7	61	76	62	77,5
21	DJH	57	71,2	59	73,7	59	73,7
22	KM	27	33,7	35	43,7	59	73,7
23	IS	58	72,5	61	76	62	77,5
24	FS	29	36,2	37	46,2	60	75
25	ZZ	30	37,5	57	71,2	59	73,7
26	IS	59	73,7	59	73,7	60	75
Classical Completion		23 %		46,1%		84,6%	

Based on the results of research and observations conducted starting from the Pre-cycle, cycle I to cycle II shows a change or improvement in students' numeracy using traditional congklak game media. This is a form of result and evidence that there is a positive impact resulting from learning using congklak Media because at the pre-cycle meeting of students' Numeracy abilities there were only 23% of children with Complete criteria, and 77% of children in the Not Complete criteria. Then in cycle I there was an increase in children's initial mathematical concept abilities by 23%, so that students' Numeracy abilities in cycle I were Complete by 46.1%, and stated Not Complete by 54%. While in cycle II there was another increase of 38% so that the increase in students' Numeracy in cycle II was 84.6%, because in cycle II students' Numeracy abilities had reached the classical criteria, the increase in students' numeracy was sufficient until cycle II.

This is in line with the Definition of Traditional Games Congklak is a traditional game played using a wooden board with holes and seeds (usually sapodilla seeds, shells, or small stones). Congklak is usually played by two people and the aim is to collect the most seeds into a large hole (barn) on the player's side. Traditional Indonesian Games, (2018).

Numeracy is the ability to apply number concepts and mathematical skills in everyday life, such as understanding quantitative information, doing calculations, analyzing data, and solving problems involving numbers and patterns. OECD (2019).

4. CONCLUSION

Based on the results of the research that has been done, it can be concluded that the learning of Numeracy of 3rd grade students at SDN 3 Mengga can be improved through the use of traditional Congklak Game Media. In the pre-cycle, classical completeness (KK) achieved was only 23% or around 6 children who completed it out of 26 children, which is a sign that students' Numeracy interest is still low. Furthermore, actions were carried out in cycle I, increasing by 12 children to 46.1%. However, this achievement still has not reached the success indicator expected by the researcher. So, in the end, Cycle II was carried out and it turned out that there was an increase in improving student Numeracy, namely around 13 children to 84.6%. So, the research was only carried out until Cycle II because it had reached the success indicator expected by the researcher. So, it can be concluded that using traditional Congklak game media can improve the Numeracy of 3rd grade students at SDN 3 Menggala.

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