

The Influence of the Number Block Abacus on the Early Arithmetic Ability of 5 to 6 Year Old Children

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*Cindah Ayu Saputri, Akmillah Ilhami¹² 

¹²University of Sriwijaya, Indonesia.

Corresponding Author: cindahayu24@gmail.com

ABSTRACT

Early childhood education is very important for the physical and mental development of children from birth to the age of six, when they experience rapid growth known as the "golden age". Independence in numeracy, which includes the ability to name, sequence, add, and subtract numbers, is a crucial skill that needs to be taught. However, many early childhood children in Indonesia still face challenges in numeracy skills. This study aims to determine the effect of using a number block abacus on early numeracy skills in children aged 5-6 years at Az-Zahrah Islamic Kindergarten, Palembang. This study used a quantitative experimental method with a *one-group pretest-posttest design*. The research sample consisted of 14 children in class B5, obtained through structured test and observation techniques. The results showed that the average *pretest score* was 15.28, while the average *posttest score* increased to 21.21, with a difference of 5.9. The results of the *paired sample t-test* showed a *Sig. value. (2-tailed)* of $0.000 < 0.05$, which means there is a significant difference between the pretest and posttest. Thus, the number block abacus has an effect on children's early arithmetic abilities. The implications of this study provide insight for teachers and parents that the number block abacus can be used as a tool for stimulating children's cognitive, language, and fine motor skills.

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INTRODUCTION

Education is a learning process that is usually delivered by a facilitator, such as a teacher, or carried out independently to individuals in need. There are various methods for providing education to children, especially at an early age, which requires patience and perseverance because children need special guidance and attention. Early childhood education is an important foundation for children in gaining the knowledge and skills needed for the next level of education. According to Law Number 20 of 2003 on the National Education System, is a coaching process for children from birth to the age of six, which aims to provide educational stimulation to support their physical and mental development. This prepares children to continue formal or non-formal education.

Early childhood is known as the "golden age" or golden age in human development. This period includes the age from in the womb to six years, where the child's growth is very rapid in various aspects, both physical, psychological, social, and emotional. At this stage, the child's brain develops rapidly, and they show high sensitivity to various new stimuli. Therefore, stimulation provided by parents and teachers is very important in maximizing the child's potential. If children get the right stimulation, their abilities and potential will develop optimally. Conversely, if stimulation is minimal or inappropriate, the child's development can be hampered. The role of parents and teachers in providing the first learning experience is crucial, because it will affect the child's development in the future.

Likewise, the ability to count in early childhood includes activities such as naming, sequencing, adding, and subtracting numbers. Counting is an ability that needs to be mastered by early childhood, because in everyday life humans cannot be separated from calculations. So from That, as early as Possible child need in teach draft counting in accordance with the ability counting is effort to find out mathematics Which close with characteristic And connection numbers real and with calculations involving addition, subtraction, multiplication, and division. In agreement with that, (Ratna Dewi et al., 2021) stated that numeracy is learning where children are introduced to numbers, number shapes and mentioning number shapes. Furthermore, according to (Nurhidayah & Astari, 2019) initial numeracy is the ability possessed by each child in mathematics, such as activities in sequencing numbers, counting and regarding quantities to improve the skills needed in everyday life.

The purpose of early numeracy according to the Ministry of National Education (2007) as quoted by (Shirley et al., 2023) is to prepare children for the next level by knowing the basics of numeracy. The principles of early numeracy games are: 1) Children are given numeracy games based on their numeracy abilities and concrete experiences. 2) Children are given knowledge and skills gradually according to the level of difficulty. 3) Children are given the opportunity to participate and are stimulated to solve problems themselves. 4) Children are given a sense of security and freedom in playing numeracy so that children learn in a pleasant atmosphere. 5) Children use simple language in introducing numeracy concepts by taking examples from the child's environment. 7) Evaluation of children's development results by teachers must be from the beginning to the end of learning activities.

The abacus aid helps the development of early childhood numeracy by providing a concrete visual representation of the concept of numbers and basic mathematical operations. By using an abacus, children can do physical counting activities, which makes it easier for them to understand addition and subtraction. This process strengthens their cognitive skills and improves memory of numeracy concepts. The abacus also supports active learning, where children can interact directly with the tool, thus increasing their interest and motivation to learn (Sujiono, 2016).

However, the current reality shows challenges in children's numeracy skills in Indonesia. Based on the daily report of Media Indonesia, the results of *the Program for International Student Assessment (PISA) research* on December 5, 2023, placed Indonesia in 68th place with a mathematics score of 379. These results show a significant decline in students' mathematics achievement over the past four years (2018-2022). Problems related to limited numeracy skills and understanding the concept of numbers and figures in early childhood are a major concern for parents and the community. Therefore, it is important to introduce the concept of numbers early on so that the development of children's mathematics skills is optimal. To stimulate early numeracy skills, learning media are needed that attract children's interest and make the learning process more effective.

Based on the reality in the field that researcher found when conducting initial observations at Az-Zahrah Islamic Kindergarten Palembang, children's numeracy skills are still low. This can be seen during the teaching and learning process in class, some children have not been able to count and mention numbers in order from 1-20 correctly, children have not been able to match number symbols and objects correctly and precisely, children have not been able to perform addition and subtraction operations up to 20 correctly and children still feel confused. Of the 14 children, only 6 children showed numeracy skills. The reason for the 8 children not being successful was because the children only worked on worksheets in the classroom besides that the teacher still did not use APE and media so that learning became monotonous. So that children do not feel interested in learning activities and cause low numeracy skills in children.

One type of learning media used in early arithmetic for early childhood is the number block abacus media. The number block abacus media is an educational tool designed to help children understand basic mathematical concepts, such as addition, subtraction, and number recognition. This media functions to develop children's arithmetic skills in an interactive and

fun way, so that it can increase students' learning motivation. The number block abacus helps students visualize abstract mathematical concepts, making it easier for them to understand and remember the lesson material. So, the researcher wants to use this number block abacus media in classroom learning activities, then the researcher has conducted observations at the Az-Zahrah Palembang Islamic Kindergarten and it was found that they had not used the number block abacus media in learning.

In previous research conducted by Martindah regarding the use of abacus media in early arithmetic learning for early childhood, it was stated that the use of abacus at the Rumah Belajarku Tutoring Center in Beji Village provides a systematic arithmetic learning structure. This learning process involves preparation, implementation, and evaluation, thus helping children understand the basic concepts of arithmetic (Martindah, 2022). Findings from other research conducted by Nadhiroh regarding the implementation of number block media in improving children's arithmetic skills found that number block media at RA Kusuma Mulia XVII helped improve children's arithmetic skills significantly. Most children were able to arrange number blocks 1-10 well, showing the effectiveness of this media in supporting numerical development (Nadhiroh, 2022). Then in another study conducted by Nasution regarding the effect of number block games on the ability to recognize number symbols 1-10 in group A children, it showed a positive effect of number block games on recognizing number symbols 1-10. This quantitative study proves through hypothesis testing that the game significantly improves children's ability to recognize numbers (Nasution, 2020).

The difference in previous studies is that the colored abacus media is less attractive to children, and the scope of abilities discussed is not much research that discusses the influence of the number block abacus media to be applied to early arithmetic skills. Therefore, the novelty in this study lies in the number block abacus media that has been adapted to early childhood, then the scope of abilities discussed is the initial arithmetic skills of children aged 5-6 years. So this study aims to determine the effect of the number block abacus media on the initial arithmetic skills of children aged 5-6 years.

METHOD

The type of research in this study is quantitative research. Quantitative research is a process of finding knowledge that is used to research certain populations and samples with sample collection techniques generally carried out randomly (Sutisna & Laiya, 2020). The population in this study was all children in group B at the Islamic Kindergarten. Az-Zahrah Palembang that is child Which consists of from 6 class with a total of 103 students. Sample in research This namely class B5 Which contains ability child Which diverse on ability counting such as the existence of children with low, medium and good abilities so that it is considered capable of representing the population and allows for research to be conducted. The number of participants students, namely 14 consisting of children with a composition of 7 girls and 7 boys.

This study uses a *pre-experimental design*, with a research design form using "one group pre-test-post-test design". This design consists of two main stages: initial measurement (*pre-test*) before treatment and measurement after treatment is given (*post-test*). Thus the results of the treatment can be known more accurately, because it can be compared with the conditions before treatment. By using the one group pre-test-post-test method which aims to determine whether there is an effect of the number block abacus media on the initial arithmetic abilities of children aged 5-6 years at Az-Zahrah Islamic Kindergarten Palembang.

One-group pretest-posttest method design was chosen for the study of the effect of the number block abacus media on the arithmetic ability of 5-6 year old children at Az-Zahrah Islamic Kindergarten Palembang because of its simplicity and focus on the changes that occur. By measuring abilities before and after the intervention, researchers can directly observe the effectiveness of the media without requiring a control group, which is often impractical in early childhood education. This design allows for a quick evaluation of the impact of the

media, providing insight into improving teaching methods, although there are limitations in the control of external variables.

Data collection techniques in this study are tests, observations, and documentation. The research process begins with proving the truth of the hypothesis, the researcher collects data, but before collecting data, the researcher first prepares the research instrument, followed by conducting validity and reliability tests of the research instrument. After the instrument is declared valid and reliable, the researcher collects data through an observation checklist sheet. Then, the researcher analyzes the data using the normality test, and the t-test, then the researcher makes the research results and discussion followed by drawing conclusions.

FINDINGS AND DISCUSSION

In this study, 1 sample was taken class that is class B5 (Khuldi) which was carried out in 16 meetings, namely *the pretest* which was carried out at the beginning for one meeting, *the treatment* which was carried out for fourteen meetings, and *the posttest* which was carried out the same as the *pretest activity*, namely at the end for one meeting. In this study, the sample used was 14 children. This study was conducted at the Az-Zahrah Islamic Kindergarten, Palembang. There were samples that had been tested before being given treatment (pretest) and after being given treatment (posttest). The samples were also given treatment (*treatment*) for fourteen meetings.

Initial observation or *pretest* was conducted before the treatment was given by the researcher which was conducted by the researcher for one day. The data of this *pretest research* was conducted in class B5 of Az-Zahrah Islamic Kindergarten Palembang. The *pretest activity* conducted was aimed at determining the initial state of children's initial arithmetic ability in mentioning numbers 1-20 in sequence, mentioning numbers randomly, mentioning odd and even numbers, matching the number of objects with numbers, adding and subtracting two simple numbers. With a research tool in the form of a *checklist observation sheet*. The following is the data from the initial observation (*pretest*) of children's initial arithmetic ability in class B5 of Az-Zahrah Islamic Kindergarten Palembang:

Table 1. Data from the *Pretest* Results of Early Arithmetic Ability of 5-6 Year Old Children at Az-Zahrah Islamic Kindergarten, Palembang

Child	Indicator						Amount	Average	Category
	1	2	3	4	5	6			
1	4	3	3	3	2	2	17	70	MB
2	3	3	3	2	2	2	15	62	MB
3	3	2	2	2	2	2	13	54	BB
4	3	3	2	2	2	2	14	58	MB
5	4	3	2	2	2	2	15	62	MB
6	4	3	3	3	3	3	19	79	BSH
7	4	3	3	3	3	3	19	79	MB
8	4	3	3	3	2	2	17	70	MB
9	3	3	2	2	2	2	14	58	MB
10	4	3	3	2	2	2	16	67	MB
11	3	3	3	3	2	2	16	67	MB
12	3	2	2	2	2	2	13	54	BB
13	4	3	2	2	2	2	15	62	MB
14	3	2	2	1	1	2	11	45	BB

Table 2. Frequency Distribution of Pretest of Early Arithmetic Ability of 5-6 Year Old Children at Az-Zahrah Islamic Kindergarten, Palembang

Mark	Frequency
45	1
54	2
58	2
62	3
67	2
70	2
79	2

The researcher conducted a *posttest activity* with the aim of knowing the final state of the sample after being given treatment in the form of using a number block abacus media in improving children's early arithmetic skills. The *posttest* was conducted individually, with children coming forward one by one to complete various tasks given by the researcher. The first activity carried out during the first researcher's *posttest* was to start by inviting the child to mention the numbers 1-20 in sequence. The child was asked to mention the numbers 1-20 in sequence while looking at the number block abacus provided by the researcher. Second, the child was asked to mention numbers randomly, the researcher showed numbers on the number block abacus randomly, and the child was asked to mention the numbers shown. Third, the child was asked to mention odd and even numbers based on the numbers shown on the number block abacus. Fourth, the child was also asked to mention the number of objects based on the numbers shown. The child was given a picture with a number of objects on the number block abacus and was asked to count and mention the number. Fifth, the child added two simple numbers on the number block abacus mentioned by the researcher as many as 4 questions. Sixth, the child subtracted two simple numbers with the child given as many as 4 questions on the number block abacus and was asked to do the subtraction. The following are the results of observation data after treatment (*posttest*) was carried out regarding the influence of the number block abacus media on the initial arithmetic skills of children aged 5-6 years in class B5 of Az-Zahrah Islamic Kindergarten, Palembang.

Table 3. Posttest Results Data of Beginning Arithmetic Ability of 5-6 Year Old Children at Az-Zahrah Islamic Kindergarten, Palembang

Child	Indicator						Amount	Average	Category
	1	2	3	4	5	6			
1	4	4	4	4	4	4	24	100	BSB
2	4	4	4	4	3	3	22	91	BSB
3	4	4	3	3	3	3	20	83	BSH
4	4	4	4	3	3	3	21	87	BSB
5	4	4	3	3	3	3	20	83	BSB
6	4	4	4	4	3	4	23	96	BSB
7	4	4	4	3	3	3	21	87	BSB
8	4	4	4	3	3	3	21	87	BSB
9	4	4	4	3	3	3	21	87	BSB
10	4	4	4	4	3	4	23	96	BSB
11	4	4	4	4	3	3	22	91	BSB
12	4	3	3	3	3	3	19	79	BSH
13	4	4	4	4	3	3	22	91	BSB
14	4	3	3	3	2	3	18	75	BSH

Table 1 Frequency Distribution of Posttest of Early Arithmetic Ability of 5-6 Year Old Children at Az-Zahrah Islamic Kindergarten, Palembang

Mark	Frequency
75	1
79	1
83	3
87	3
91	3
96	2
100	1

Then the results were tested for *Shapiro Wilk normality* to determine whether the research data was normally distributed or not, usually used as a requirement in the *paired sample t test*. *Shapiro Wilk* is used for small samples. Researchers use SPSS version 30 with a significance of 0.05 or 5%. The assumption of the level is if the calculated W value is greater than the critical value, then the data is normally distributed, but if the calculated W value is smaller than the critical value, then the data is not normally distributed. Researchers have calculated the W value with the help of the SPSS version 30 application, which can be seen in the following table:

Table 5. Normality Test Results

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Pre-Test	.122	14	.200 *	.966	14	.820
Post-Test	.162	14	.200 *	.970	14	.875

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Decision making criteria:

If Sig. > 0.05: Distributed data normal.

If Sig. < 0.05: Data not normally distributed.

Based on the results of the normality test using the SPSS version 30 program with *Kolmogorow-smirnov* and *Shapiro Wilk* from the *pretest* and *posttest results* on children's initial numeracy skills are normally distributed (Sig. > 0.05). The researcher used *Shapiro Wilk data* because the sample was less than 50. In *Shapiro Wilk*, the *pretest* value has a Sig score (0.820) > (0.05) and the *posttest* has a Sig score (0.875) > (0.05) which means that the data is normally distributed.

Then a hypothesis test is carried out whether the data is paired or related. The purpose of this t-test is to find out whether the independent variable (X) has an effect on the dependent variable (Y). The decision in this test is the *paired t-test* which is based on significant values with the calculations performed. Hypothesis testing in this study can be seen in the following table:

Table 6. Paired Samples Statistics

		Paired Samples Statistics			
Pair 1		Mean	N	Std. Deviation	Std. Error Mean
	Pre-Test	15.2857	14	2.26779	.60609
	Post-Test	21.2143	14	1.62569	.43448

paired samples statistics test above show that the average value of the *Pretest* is 15.28 and the average value of the *Posttest* is 21.21, thus the average value (mean) after being given the number block abacus media treatment is greater than before the treatment. This means that there is an increase in the activity of using the number block abacus on children's initial arithmetic abilities.

Table 7. Paired Samples Correlations

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pre-Test & Post-Test	14	.712	.004

The results of *paired samples correlations* show that the correlation score is $r = 0.712$, indicating a strong correlation between the *pretest* and *posttest* scores. The Sig. (2-tailed) value = 0.004 which is < 0.05 , indicating that this correlation is significant. So there is a strong and significant relationship between the *pretest* and *posttest* scores ($r = 0.712$, $p = 0.004$).

Table 8. Sample Test

Paired Samples Test									
		Paired Differences							
			Std.	Std.	95% Confidence Interval				
		Mean	Deviation	Error	of the Difference		t	df	Sig. (2-
				Mean	Lower	Upper			tailed)
Pair 1	Pre-Test - Post-Test	-5.92857	1.59153	.42535	-6.84749	-5.00965	-13,938	13	.000

Provision:

If the *Sig value (2-tailed)* < 0.05 , then there is a significant difference between the *pretest* and *posttest* data.

If the *Sig value (2-tailed)* > 0.05 , then there is no significant difference between the *pretest* and *posttest* data.

The results of the *paired sample test* above show that the *sig value (2-tailed)* of 0.000, which means less than 0.05, there is a significant difference between *pretest* and *posttest* data. Based on the results of the Paired Samples T-Test, there was a significant difference between the *pretest* and *posttest* scores ($t = -13.94$, $p = 0.000$). It can be said that there is a positive influence of the use of a number block abacus on the initial arithmetic skills of children aged 5-6 years at the Az-Zahrah Islamic Kindergarten in Palembang.

This study was conducted at Az-Zahrah Islamic Kindergarten, Palembang, which focused on early numeracy skills using abacus number blocks. The researcher obtained data from the test by taking data through pretest and posttest. The data was then calculated and analyzed by looking for normality tests and hypothesis tests. This study took a sample in class B5 with 14 children. The learning process in this study was carried out by introducing numbers, odd and even numbers, and simple addition and subtraction operations using abacus media. The purpose of this study was to determine the effect of using abacus number blocks on children's early numeracy skills at Az-Zahrah Islamic Kindergarten, Palembang. This study used the *Pre-Experimental Design research method* with a *One Group Pretest-Posttest Design* which aims to determine whether or not there is an effect of using abacus number blocks on children's early numeracy skills. After the study was conducted, the results were obtained in the first aspect, namely numeracy skills.

In accordance with the first indicator, namely mentioning numbers 1-20 in sequence (Rasmani et al., 2023) said that several aspects of cognitive development should be owned by children, especially in the cognitive aspect of mathematics, namely: mentioning or pointing to the sequence of numbers from 1-20. Children are increasingly able to recognize and mention numbers in sequence, marked by increased focus and accuracy in mentioning numbers. The scores that often appear before treatment are 2 (Starting to Develop) and 3 (Developing According to Expectations). After being given treatment, the score that often appears is 4 (Developing Very Well). The increase in scores after using the number block abacus shows that the number block abacus media is effective in helping children recognize numbers in the correct order.

In the second indicator, namely mentioning numbers randomly (Rasmani et al., 2023) said that random number recognition is an important part of early childhood numeracy development. The focus of the study was on children's ability to recognize numbers shown without a particular order. Before treatment, the scores that often appeared were 3 (Starting to Develop) and 2 (Developing According to Expectations), which indicated that children still had difficulty in mentioning numbers randomly. After treatment using the abacus media, the score increased to 4 (Developing Very Well), which indicated progress in recognizing and mentioning numbers randomly. The increase in score after using the number block abacus showed that the number block abacus media showed that the abacus media was effective in improving children's ability to recognize numbers without having to memorize the sequence.

In the third indicator, namely mentioning odd and even numbers, before the treatment the scores that often appeared were 2 (Starting to Develop) and 3 (Developing According to Expectations), indicating that children still have difficulty in distinguishing odd and even numbers in line with the opinion of (Umayah et al., 2021) indicating that early childhood children have difficulty in understanding the concept of odd and even numbers because they are still in the stage of recognizing number patterns. After treatment using the abacus media, the score increased to 4 (Developing Very Well), which indicates progress in distinguishing odd and even numbers.

The fourth indicator focuses on the ability to match the number of objects according to the numbers shown in accordance with the opinion of (Lestari & Khoiriah, 2022) that the ability to match the number of objects with numbers is highly dependent on the concrete experience gained by the child. Before treatment, the scores that often appeared were 2 (Starting to Develop) and 3 (Developing According to Expectations), indicating that children still had difficulty in connecting numbers with the number of objects. After treatment using the abacus media, the score increased to 4 (Developing Very Well), which indicates progress in this skill ability.

In the fifth indicator, namely adding two simple numbers, before the treatment the score that often appeared was 2 (Starting to Develop), indicating that children still had difficulty in performing simple addition operations. This is in line with (Khoirunnisa et al., 2022) who found that the use of aids such as an abacus or other manipulatives can improve children's ability to add two simple numbers. After treatment using the abacus media, the score increased to 3 (Developing as Expected), indicating progress in the ability to add numbers.

Finally, in the sixth indicator, namely subtracting two simple numbers, before the treatment the score that often appears is 2 (Starting to Develop), indicating that children still have difficulty in performing subtraction operations (Mabtuhah et al., 2022) argue that early childhood often has difficulty in understanding the concept of subtraction because it is easier to understand the concept of addition. After treatment using abacus media, the score increased to 3 (Developing According to Expectations), indicating progress in understanding the concept of subtraction.

Children's numeracy skills increase when using abacus media in learning activities. This is in line with the opinion of (Purba et al., 2023) that numeracy is a skill that not only involves recognizing numbers, but also understanding basic mathematical concepts such as addition and subtraction. This progress is also supported by the opinion of (Saputri, 2020) that the abacus is a learning aid that helps children understand the concept of numbers more concretely, making it easier to understand basic mathematical operations. This opinion is also supported by the fact that the abacus media trains children's skills in distinguishing numbers and understanding the value of numbers more visually and kinesthetically. According to (Pradana & Gerhni, 2019), the abacus media can be used to introduce numbers, count objects, and perform basic arithmetic operations. By using the abacus repeatedly, children can better understand the concept of numeracy in a fun way. By repeating it continuously, it will help children who have learning difficulties improve their numeracy skills. The application of Bruner's theory in (Lestari et al., 2023) mathematics learning has been proven effective in

improving student learning outcomes. This is in line with research that shows that the use of concrete objects can improve children's understanding of mathematical concepts.

After the explanation of the indicator results, the results of the data obtained that have been studied in this study show an increase. This can be seen from the four assessment criteria, namely BB (Not Yet Developing), MB (Starting to Develop), BSH (Developing According to Expectations), and BSB (Developing Very Well). Regarding the results before being given treatment (pretest), it was 15.28. Then students were given treatment for 14 days using the abacus media. After being given treatment, the researcher conducted a posttest to see the difference in the average value of 21.21. So, the use of the number block abacus media can improve children's early arithmetic skills at Az-Zahrah Islamic Kindergarten, Palembang. This can be supported by the use of research instruments and linked to active learning.

Furthermore, the results of the Shapiro-Wilk normality test in this study on the pretest of numeracy ability stated that the normality test of *the Pretest and Posttest results on the number block abacus media* had a significance of 0.820 and 0.875. The significant value of the *Pretest and Posttest* data results **Sig. > 0.05**, so the data can be said to be normally distributed. After knowing the results of the normality test which showed a normal distribution, the researcher then conducted a t-test using three descriptive tables, namely paired samples statistics, paired sample correlation, and paired samples test. In the results of the paired sample t-test, the *Sig (2-tailed) result* was 0.000 which was <0.05.

From the description above, it can be concluded that $p\text{ value} < \alpha$ then H_0 is rejected, which means there is a positive influence and improvement between the pretest and posttest results in children's early arithmetic skills at Az-Zahrah Islamic Kindergarten Palembang in the 2024/2025 academic year. Therefore, learning using the number block abacus media has a significant effect because this media is concrete, visually appealing, fun, and provides direct experience in arithmetic so that children find it easier to understand the concept of numbers and basic mathematical operations.

CONCLUSIONS

Based on the results of the research and discussion, it can be concluded that there is an influence of the number block abacus on the early arithmetic ability of children aged 5-6 years at the Az-Zahrah Islamic Kindergarten, Palembang. The results of the researcher obtained stated that the normality test of *the Pretest and Posttest results on the number block abacus media* had a significance of 0.820 and 0.875. The significant value of the *Pretest and Posttest data results* **Sig. > 0.05**, so the data can be said to be normally distributed. In the results of the *paired t test*, the *sig. (2-tailed) result* was 0.000 <0.05, namely there was a significant difference between *the pretest and posttest values*, meaning $p\text{ value} < \alpha$, which means H_0 is rejected and H_a is accepted, which means that the use of the number block abacus media has a positive effect on the early arithmetic ability of children aged 5-6 years at the Az-Zahrah Islamic Kindergarten, Palembang. The implications of this study are expected to be able to contribute insight and knowledge to teachers and parents that the number block abacus can be used to stimulate cognitive, language and fine motor development, especially in the aspect of early arithmetic skills in children aged 5-6 years.

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