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THE INFLUENCE OF NUMBER POCKET MEDIA ON THINKING CRITICAL MATHEMATICS OF STUDENTS OF GRADE I ELEMENTARY SCHOOL

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ABSTRACT

Penelitian ini bertujuan untuk mengetahui pengaruh media kantong bilangan terhadap kemampuan berpikir kritis matematika siswa di kelas I SD Muhammadiyah 12 Medan. Populasi penelitian ini adalah seluruh siswa di kelas I SD dimana 1 reg sebagai kelas eksperimen dan 1 plu sebagai kelas kontrol. Jenis penelitian ini adalah penelitian kuantitatif dengan desain penelitian yang digunakan adalah Pre-Test Post-Test Control Group Design. Dengan jumlah siswa yang menjadi sampel penelitian sebanyak 40 orang dengan mengambil 2 kelas yaitu kelas eksperiment dan kelas control kelas eksperiment berjumlah 22 dan kelas kontrol berjumlah 18 siswa, dibantu dengan SPSS 23. Hasil penelitian menunjukkan bahwa kantong bilangan berpengaruh dalam meningkatkan kemampuan berpikir kritis matematika siswa dalam materi operasi penjumlahan bersusun. Instrument penelitian ini menggunakan tes. Teknik analisis data meliputi uji validitas, uji reliabilitas, uji normalitas, uji homogenitas, uji n - gain dan uji hipotesis. Hasil penelitian menunjukkan bahwa media kantong bilangan berpengaruh terhadap kemampuan berpikir kritis matematika siswa karena pada hasil analisis uji t (independent t-test) diperoleh dari hasil nilai signifikan (sig.2-tailed) 0.000< 0,05, maka Ha diterima dan H0 ditolah artinya terdapat pengaruh media kantong bilangan terhadap kemampuan berpikir kritis siswa kelas I SD Muhammadiyah 12 Medan. Siswa yang mendapat perlakuan dengan menggunakan media kantong bilangan memiliki rata-rata yang lebih tinggi jika dibandingkan tanpa menggunakan media kantong bilangan Artinya variabel x (solusi) yang digunakan dalam penelitian mempengaruhi variabel y (masalah).

This study aimed to determine the effect of the "number pouch" media on the mathematical critical thinking skills of first-grade students at SD Muhammadiyah 12 Medan. The research population comprised all first-grade students, with one class designated as the experimental group and another as the control group. This quantitative research employed a Pre-Test Post-Test Control Group Design. The sample consisted of 40 students, divided into two classes: 22 students in the experimental group and 18 in the control group. Data analysis was conducted using SPSS 23. The findings indicated that the "number bag" media significantly enhanced students' critical thinking abilities in mathematics, particularly in performing vertical addition operations. The research instrument was a test, and data analysis techniques included validity tests, reliability tests, normality tests, homogeneity tests, N-gain tests, and hypothesis testing. Results from the independent t-test analysis showed a significant value (sig. 2-tailed) of 0.000, which is less than 0.05, leading to the acceptance of

the alternative hypothesis (Ha) and rejection of the null hypothesis (H0). This outcome suggests that the "bag of numbers" media positively affects the critical thinking skills of first-grade students at SD Muhammadiyah 12 Medan. Students who received instruction using the "bag of numbers" media achieved higher average scores compared to those who did not use the media, indicating that the independent variable (solution) employed in the study influenced the dependent variable (problem).

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1. INTRODUCTION

Education in Indonesia in 2022 provides three curriculum options that can be used as alternative choices by educational units in implementing independent learning (Widyastuti, 2022). The policies that have been made by the government over time have undergone changes or improvements, one of which is the policy in the field of Education (Malikah et al., 2022). This has been reinforced regarding education as stated in Article 3 of Law Number 20 of 2003 concerning the National Education System. Where teachers have a very large role in the success of learning in schools (Marsela Yulianti et al., 2022). The driving school program is implemented through the independent curriculum where the curriculum applied to the driving school is an improvement on the 2013 curriculum, namely the independent curriculum by prioritizing student learning outcomes based on the Pancasila student profile (Rahayu et al., 2022).

Damayanti et al. (2023) stated that the independent curriculum can be a breakthrough that brings change for teachers and principals to change the learning process to be important, profound and enjoyable. Education in elementary schools is the first educational foundation to achieve the next educational process. There are many basic subjects in it. One of them is mathematics lessons in elementary schools. Mathematics consists of three basic parts, especially variable-based mathematics, examination and calculation (Islamiyah & Qodariah, 2022). The urgency of implementing the independent curriculum is also to improve student learning outcomes. One effort to improve learning outcomes in the numeracy aspect is understanding through mathematics learning. Realizing how important mathematics is, students are required to be able to study mathematics seriously so that they produce good and even satisfying mathematics learning outcomes (Hartati, 2013).

Mathematics as a foundation of science is fundamental to all types of science and in the world of work. Specifically, mathematics lessons are designed to enable students to be able to work on materials such as addition, subtraction and multiplication operations (Rizko et al., 2023). Mathematics learning according to the independent curriculum must be realized effectively and enjoyably so that students feel happy and what is learned is easy to accept (Sahrun et al., 2023). Mathematics contains many concepts, logic that requires a lot of problem solving. Mathematics plays a very active role in various disciplines and advances human thinking so that it is capable of being logical, analytical, systematic, critical, and creative. To improve problem-solving skills, it is necessary to develop problem-solving skills. This can be attempted by teachers by using learning models and media that can make it easier to understand and of course fun for students. The use of media as a learning tool is still very rarely used in schools, especially in mathematics

learning which is closely related to numbers. Teachers only explain using the lecture method without using media, this situation is found. Based on the problem of the lack of use of learning media during the learning process, it has an impact on student learning outcomes which are less than optimal because the learning carried out does not attract students' attention and results in students being unable to concentrate during the learning process (Sabilla et al., 2022).

At present, the critical thinking skills of students at the elementary school level, especially in Indonesia, still tend to be low. This fact is based on the author's search for several research articles in Indonesia, from this search, many studies were obtained that sought to improve students' achievement in critical thinking skills at the elementary school level. These efforts were carried out by researchers in order to increase the critical thinking skills of elementary school students. In improving the achievement of students' critical thinking skills, it is not only supported by the students' willingness to study well (Dari & Ahmad, 2020). Educators can try to do this by utilizing learning models and media that can make it easier and of course fun for students, especially in the lower grades. With this assumption, students' interest in everything related to mathematics can increase, and of course it will have an impact on students' learning outcomes which will be more optimal. Learning that is combined with agreeing on age parcels and stages of consideration will ensure that arithmetic learning is delivered successfully, thereby minimizing the perception that counting is difficult. This may start from the first time a child enters elementary school (Nabila, 2021).

By using media, students will be more interested and not easily bored in learning, and it is fun, especially if the media used is a counting media. It is clear that by using media, students will be more creative in solving mathematical problems (Andriani et al., 2021). The importance of using learning media in this context is explained as a need to provide realistic and concrete learning, so that students can understand mathematical concepts better (Sholihah et al., 2024).

The results of a national survey show that the critical thinking skills of elementary school students in Indonesia are still at a low level (PISA, 2018). Meanwhile, based on observations at SD Muhammadiyah 12 Medan, it was found that 50% of grade I students had difficulty understanding the concept of stacked number operations. In addition, students also seemed confused and less interested in participating in learning because teachers had not implemented varied learning, and only used conventional media, namely printed books and blackboards. This is aware of the lack of use of learning media that support the teaching and learning process in the classroom. . These factors make learning seem monotonous and less enjoyable. So that this is one of the causes of the low critical thinking skills of students in mathematics learning

Based on these conditions, researchers know that mathematics learning has not been implemented optimally and effectively. Mathematics learning can be done in various ways according to the needs, interests, and talents of students. Realizing this, teachers can provide learning using the right approach, namely through the use of appropriate learning media.

The use of learning media in question will focus on the material of arithmetic operations of adding numbers in a row. Mathematics learning on the material of arithmetic operations of numbers, especially addition, which is certainly not only about writing symbols, but students must also understand the concept of how to solve problems in long and short rows, as well as related to saving and borrowing techniques. Therefore, students must be trained to be able to work on problems guided by teachers. To understand the concept of saving and borrowing can be made easier by using interesting media and of course in accordance with the child's development.

Thus, the researcher found one solution to help students improve their critical thinking skills in mathematics in the operation of adding stacked numbers, so that mathematics learning will be easy to understand, and is expected to improve the mathematics learning outcomes of participants, namely by using number bag media. Number bags are a simple learning media created to make it easier for students to understand number arithmetic operations in mathematics learning. This media consists of several bags arranged based on the place value of a number.

Previous studies have shown that the use of learning media, such as number cards, can improve students' mathematics learning outcomes. However, studies that specifically evaluate the effect of the use of innovative media, such as number bags, on the development of critical thinking skills in grade I students are still relatively minimal. Therefore, this study is important to explore how number bags media can support learning and make a significant contribution to training critical thinking skills in students from an early age. (Najilah & Suciyati, 2024).

This study has significant differences compared to previous studies, because it specifically focuses on developing critical thinking skills of first grade students in understanding the material of stacked addition operations. The approach used is the use of number bag media, which is designed to help students visualize the concept of place value concretely and intuitively. This media is expected to not only facilitate the understanding of basic mathematical concepts but also stimulate students' analytical and logical skills through a more interactive and contextual learning approach.

This research is expected to provide significant contributions in developing effective learning media to improve critical thinking skills of elementary school students, especially in number operation material. With the innovation of learning media such as number bags, this research also aims to enrich teaching strategies that support active and meaningful learning. In addition, the results of this study can be used as a guide for teachers in designing and implementing media-based learning methods that are interesting, interactive, and in accordance with students' development needs.

2. METHODS

The focus of this study is to determine the effect of number bag media on critical thinking skills of students in class I of Muhammadiyah Elementary School 12 Medan. The place for the study is located on Jalan Kapten Muslim Gg. Jawa Komp. Muhammadiyah, Sei Sikambing C II, Kec. Medan Helvetia, Medan City, North Sumatra Province. This research was conducted in December 2024. This type of research is quantitative research with the research design used is the *Pre-Test Post-Test Control Group Design.* There are two groups, namely the experimental group and the control group.

This study uses a quantitative approach with a *Pre-Test Post-Test Control Group Design* to compare learning outcomes between the experimental group using number bag media and the control group using the lecture method. This approach aims to measure the effectiveness of number bag media in improving students' critical thinking skills . The pretest was given at the beginning of the study which was used to determine the initial state of the students, while the posttest was given after the research trial was conducted. This design can be described as follows:

Table 1. *Pre-Test Post-Test Control Group*

Pre-Test	Treatment	Post-Test
O_1	X	O_2
O_3	-	O_4

Information :
O_1 & O_3 : *Pre-Test* results of experimental group & control group
O_2 : *Post-test results* in the experimental group
O_4 : *Post-test results* in the experimental group
X : Treatment by applying number bag media in the experimental class

2.1. Research Subject

The subjects of this study consisted of 40 first-grade students of Muhammadiyah 12 Elementary School Medan, who were divided into two groups: 22 students as the experimental group and 18 students as the control group. The selection of subjects was carried out using a *purposive sampling technique*, taking into account the similarity of the initial ability level of students to ensure balanced conditions between the two groups. *Purposive sampling* is a sampling technique with certain considerations. These certain considerations, for example, the person is considered to know the most about what we expect, or maybe he is the ruler so that it will make it easier for researchers to explore the objects/social situations being studied (Bashar et al., 2019). The results of the determination obtained were class I plus as the control class and I Regular as the experimental class. The variables in this study consisted of independent variables and dependent variables. The variables in this study are The independent variable in this study is the treatment of the Number Pocket Media (X) and the dependent variable in this study is Critical Mathematical Thinking Ability (Y).

2.2. Data collection

The data collection technique used in this study was in the form of test questions. A test is a number of questions that have right or wrong answers. A test is also defined as a number of questions that require answers or responses by measuring a person's ability level (Ndiung & Jediut, 2020) . The tests used are *pretest* and *posttest*. *The pretest* will only be given once before the material is delivered, as well as *the posttest* will be given at the end of the lesson material being delivered. The test was carried out twice, namely before the treatment was given to the control class and after the treatment was given to the experimental class. The instrument was given by distributing it to the research sample, namely all students of grade I of SD Muhammadiyah 12 Medan. The purpose of providing this research instrument is to collect data related to the research variables.

The research instrument in the form of an essay test consists of 20 questions arranged based on indicators of critical thinking skills, including interpretation, analysis, and evaluation. This instrument has been tested for validity with a correlation value (r = 0.78) and its reliability using Cronbach's Alpha of 0.81, so it meets the requirements for use in research.

2.3. Data analysis

The testing technique that is often used for validity testing is using the Pearson Bivariate correlation (Pearson Product Moment) (Sanaky, 2021). Before the pretest posttest is carried out, the instrument used must be tested first to determine validity and reliability. In this study, the examiner has conducted a validity and reliability test on 20 questions to determine whether each question item on the test instrument is valid or not. This validity calculation is carried out with the help of SPSS software version 23. After the data is collected, the next step is to analyze the data. In this study, the data analysis

technique used was the prerequisite test using the normality test and homogeneity test, the N-gain test and the hypothesis test.

Validity test shows the extent to which the measuring instrument used to measure what is measured. The method is to correlate the scores obtained on each question item with the total individual score. Validity testing is carried out with the help of a computer using the SPSS for Windows Version 23.0 program. The technique used in testing validity in this study is to use *Person Correlation* or known as *Product Moment Correlation. The Product Moment Correlation Coefficient* is a statistical measure used to determine the strength and direction of the linear relationship between two interval or ratio scale variables. The results of the calculation of r_{xy} are compared with the r table of product moments, if $r_{xy} > r_{table}$, then the question is declared valid. The following explains the interpretation of the correlation coefficient value $r_{xy.}$

Table 2. Validity Criteria

No	The value of r_{xy}	Interpretation
1.	$0.80 < r_{xy} \leq 1.00$	Very high
2.	$0.60 < r_{xy} \leq 0.80$	Tall
3.	$0.40 < r_{xy} \leq 0.60$	Enough
4.	$0.20 < r_{xy} \leq 0.40$	Low
5.	$0.00 \leq r_{xy} < 0.20$	Very Low

Furthermore, Reliability is translated from the word reliability which means something that can be trusted (tested) (Ono, 2020). Reliability testing is something that can be trusted or a condition that can be trusted, the reliability test has a function, namely to determine the level of consistency of a questionnaire used by researchers, so that the questionnaire can be relied on to measure research variables even though it is carried out repeatedly using the same questionnaire and questionnaire (Al Hakim et al., 2021).

Reliability testing is carried out on question items that are declared valid. A variable is said to be reliable if the answers to the questions are always consistent. The instrument reliability coefficient is intended to see the consistency of the answers to the statement items given by the respondents. The analysis tool uses the split *half method* by correlating the total odd versus even scores, then the reliability is calculated using the "Alpha Cronbach" formula. Meanwhile, the reliability test is carried out to measure the internal consistency of the Emotional Scale instrument. The Cronbach's Alpha coefficient is used to determine the level of reliability. (Rukhmana, 2021). Where the interpretation of this reliability is as follows.

Table 3. Reliability Interpretation

No	r value $_{11}$	Interpretation
1.	$0.80 < r_{11} \leq 1.00$	Very high
2.	$0.60 < r_{11} \leq 0.80$	Tall
3.	$0.40 < r_{11} \leq 0.60$	Currently
4.	$0.20 < r_{11} \leq 0.40$	Low
5.	$0.00 \leq r_{11} < 0.20$	Very Low

Furthermore, the normality test aims to test whether in the regression model, the interfering variables or residuals have a normal distribution or not (Syofian, 2015). The normality test is used to determine whether two samples taken from the population are normally distributed or not normality test. Because the number of samples is below 50,

the test used is Shapiro-Wilk, while the normality test analysis in this study was assisted by SPSS 23.00. Data can be categorized as circulating normally if it has a significance value criterion> 0.05 and if the significance value criterion <0.05 then the data is said to be abnormal (Hasanah & Setiyawati, 2024).

Next, after the data has been tested for normality and produces normally distributed data, the next step is to find out whether the data has a homogeneous variance or not. According to Zulkifli & Pengantar (2009) the homogeneity test is to provide confidence that a set of data manipulated in a series of analyzes comes from a population but is not much different in diversity. In addition to the normality test on the data, a homogeneity test is also needed. This homogeneity test mechanism uses One-Way ANOVA on spss 23.00. The underlying assumption in the analysis of variance (Anova) is that the variance of the population is the same. The equality test of two variances is used to test whether the data distribution is homogeneous or not, namely by comparing the two variances. If two or more data groups have the same variance, then the homogeneity test does not need to be carried out again because the data is considered homogeneous (Sianturi, 2022). The data being tested is said to be homogeneous if the significance value (p) ≥ 0.05. Conversely, if the significance value (p) <0.05, then the data is not homogeneous.

In addition to conducting a hypothesis test or t-test, an N-Gain test was also conducted. N-gain is a test used to see the difference between the posttest and pre-test values of a study (Nismalasari et al., 2016) . In the N-gain test, the average score of the initial data, namely the pretest, and the final data score, namely the posttest, will be compared and tested for improvement. Where the criteria set if the calculated N-gain ≤0.3 then the increase is low, if the calculated N-gain <0.7 then the increase is moderate, and if the calculated N-gain ≥ 0.7 then it can be concluded that the increase is high (Bagoes et al., 2020).

After conducting prerequisite testing, the next step is to conduct a hypothesis test using the T-test. This hypothesis test is used to determine the effect of using word card media on the beginner reading skills of grade II students of SD Muhammadiyah 12 Medan. The hypothesis test in this study used the t-test (independent t-test) assisted by SPSS 16.00. decision making in the t-test is if the sig. value. (2-tailed) If significant> 0.05 then H0 is accepted, If significant <0.05 then H0 is rejected.

3. RESULTS AND DISCUSSION

3.1. Results

This research is a quantitative research conducted in class I of SD Muhammadiyah 12 Medan by determining the effect of number bag media on students' critical thinking skills in mathematics. The subject of this research is the material of stacked addition operations. This research is a study that uses two classes, namely the experimental class and the control class. To find out, learning in the experimental class is given treatment in the form of using number bag media, while for the control class only using learning with the lecture method.

Table 4. List of Students of Class I Reg and I Plus of Muhammadiyah Elementary School 12 Medan

Class	Man	Woman	Amount
I Regular (Experimental)	10	12	22
I Plus (Control)	11	7	18

Table 5. Classification of Research Instrument Trial Question Items

Classification	Number of Questions	Question Item Number
Valid	10	1, 2, 4, 6, 7, 8, 9, 11, 14, 15
Invalid	5	3, 5, 10, 12, 13

Based on table 5, it can be seen that the results of the Validity test show that there are 15 valid questions and 5 invalid questions. So it can be seen that there are 10 questions that are said to be valid from all 15 questions for the upper class instrument because the *Rcount (Corrected Item-Total Correlation) value* > Rtable of 0.4329; and sig <α; where α = 0, ".

Table 6. Reliability Test Results

No	Cronbach's Alpha	Interpretation
1	0.807	Very high

From the table above, the results of the Reliability test using Cronbach's Alpha statistics. looking at the table, the Cronbach's Alpha value is 0.807 for 10 items that are said to be valid. In general, values above 0.05 are considered to indicate good reliability. esearch results are presented in graphical, tabular, or descriptive form. Analysis and interpretation

Table 7. Results of the Normality Test of Critical Thinking Ability Pretest of Experimental Class and Control Class

Tests of Normality

	Class	Kolmogorov-Smirnov [a]			Shapiro Wilk		
		Statistics	df	Sig.	Statistics	df	Sig.
Critical Thinking Skills in Mathematics	Experimental Class Pretest	.214	22	.010	.920	22	.075
	Control Class Pretest	.128	18	.200 *	.965	18	.703

From the table above, it is known that the normality test presented shows that the significant value produced in the experimental class is 0.075 ≥ 0.05, while the significant value produced in the control class is 0.703 ≥ 0.05, so it can be concluded that the residual value is normally distributed.

Table 8. Results of the Critical Thinking Ability Homogeneity Test Pretest of Experimental Class and Control Class

Test of Homogeneity of Variances			
Critical Thinking Skills in Mathematics			
Levene Statistics	df1	df2	Sig.
.015	1	38	.903

Based on the results of the table above, it is known that the significant value produced is .903 ≤ 0.05. It can be concluded that the data produced is homogeneous.

Table 9. N-Test - Gain Data on Pretest and Posttest Score Improvement Experimental and Control Classes

Class	Average Pretest Score	Posttest Average	N-Gain Class	Category
Experiment	22.77	44.09	0.77	**Tall**
control	30.94	36.94	0.30	**Currently**

The results of the analysis show that the experimental class has an N-gain = 0.77 which means N-gain = 0.77 > 0.70 so that the score increase is categorized as high. While in the control class the results of N-gain = 0.30 which means N-gain = 0.30 ≤ 0.30 so that the score increase is categorized as moderate. So from these results it can be concluded that the use of napier rod media in the experimental class is more effective than the control class.

Table 10. Results of Critical Thinking Ability Hypothesis Test Post- Test of Experimental Class and Control Class

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Critical Thinking Skills in Mathematics	Equal variances assumed	1.275	.266	6.375	38	.000	7.146	1.121	4.877	9.416
	Equal variances not assumed			6.138	28,938	.000	7.146	1.164	4.765	9,528

Based on the table above, the results of the t-test data calculation on students' critical thinking skills in mathematics. From the results of the independent sample t-test calculation on the posttest value of students' critical thinking skills in mathematics, a significant value of .000 can be seen, which is 0.000 <0.05. It can be concluded that Ha is accepted and H0 is rejected, this states that there is an influence of number bag media on the critical thinking skills in mathematics of grade I students of SD Muhammadiyah 12 Medan .

3.2. Discussion

Based on the results of the hypothesis above, it was found that the use of number bag media in mathematics learning showed positive results. First, the average value of the ability to perform addition operations in students who used number bag media was much higher than students in classes that did not use the media. This proves that number bag media is a potential learning tool to improve critical thinking skills in mathematics, especially addition operations in addition.

Based on the average and hypothesis testing, the increase in critical thinking skills using number bag media is better than students' critical thinking skills in mathematics without using number bag media (lectures). This is in accordance with the statement of Dores, S.Pd., M.Pd et al., (2020) that there are several factors that influence students' critical thinking skills, including (1) physical condition, physical condition is the most basic physiological need for humans, when physical condition is disturbed, while he is faced with a situation that requires mature thinking to solve a problem, this condition greatly affects his mind, he cannot concentrate and think quickly because his body or physical condition does not allow it. (2) motivation, motivation is an effort to create stimulation, encouragement or power generation for a person to want to do something or show certain behaviors that have been planned to achieve predetermined goals. (3) anxiety, an emotional state characterized by anxiety and fear of possible danger, anxiety arises automatically if an individual receives excessive stimulus. (4) intellectual development, intellectual is a person's mental ability to respond to and solve a problem. Each person's intellectual development is different according to their level of development.

Meanwhile, according to Wibowo et al., (2022), the factors that cause low critical thinking skills are that many students are still passive in the learning process, students often take notes and memorize the material taught so that learning activities are not enjoyable, in the learning process students must be encouraged by the teacher themselves to ask questions about the material being taught, most students are still unable to understand the concepts and material being taught can be seen from the way students work on questions in the form of stories, many students still cannot understand the meaning of the question and how to solve it.

Number bag media is a media used to convey addition material and the value of a number (Sabilla et al., 2022). That the average value of the ability to perform addition arithmetic operations in students who use Number Bag Media is much higher than that of students in classes that only use the blackboard or lecture method. This proves that Number Bag Media is a potential learning tool to improve critical thinking skills in mathematics, especially addition arithmetic operations.

The use of this number bag media certainly makes it easier for students in mathematics lessons, especially addition material. The advantage of the number bag media according to Nalole (2011) is to concretize the concepts being learned. This is in accordance with the learning characteristics of children with mild mental retardation, namely they tend to have concrete thinking skills and have difficulty thinking abstractly, and have difficulty concentrating. This also agrees with (Mutaqin & Widiati, 2022) that the advantages of the Number Bag Media are that it is useful in any room without having to make special adjustments, easy to prepare by educators and easy to use by students, students are included in the learning process, and saves the use of the whiteboard. There are four types of number arithmetic operations that we know in elementary school, namely addition, subtraction, multiplication and division (Br Sitepu & Sitepu, 2022). According to Cahayani et al., (2022), addition is the addition of a nominal from its original form. There is 1 student who is still wrong in the addition arithmetic operation material because he does not understand the storage technique. For the addition arithmetic operation, most students already understand Mathematics subjects, especially the addition of numbers in sequence, require learning media to clarify the explanation of the material. The use of this number bag media is expected to enable students to understand the material more clearly and understand (Ratnasari, 2016).

There are several other studies that are in line with this research, namely research by Najilah & Suciyati (2024) the results of which show that the percentage of students' initial arithmetic ability in cycle I was 58.33%, increasing by 33.33% to 91.66% in cycle II. With an average value in cycle I of 74.16 increasing by 6.67 to 80.83 in cycle II. This shows that

the application of number bag media can improve students' initial arithmetic ability and can increase teacher and student activities. In addition, Azrori & Akrom (2023) also conducted the same research with the results of increasing from the pre-cycle to the next cycle when the media number bag was used. As much as 41.17% in the pre-cycle, 65% in cycle I, and 86% in cycle II, it has been proven that the use of number bag media in Mathematics subjects can improve student learning outcomes in Class III of SD Negeri 1 Sinar Jawa. Thus, the use of number bag media teaching aids has an effect on improving the learning outcomes of Class III students of SD Negeri 1 Sinar Jawa.

Based on this, the use of number pocket media can influence the learning outcomes of mathematics addition of numbers in sequence in grade 1 students of SD Muhammadiyah 12 Medan. Thus, it can be concluded that there is an influence of the use of number pocket media on the critical thinking ability of mathematics addition in sequence in grade 1 students of SD Muhammadiyah 12 Medan.

4. CONCLUSION

This study can prove that the use of Napier rod media has an effect on the critical thinking skills of students in class I of Muhammadiyah Elementary School 12 Medan. The number bag media significantly improves students' critical thinking skills. As evidenced by the results of the 't' test value, a significant value of .000 can be seen, which is 0.000 <0.05. It can be concluded that Ha is accepted and H0 is rejected, this states that there is an effect of number bag media on the critical thinking skills of students in class I of Muhammadiyah Elementary School 12 Medan. The average posttest score for the experimental group was 44.09 and for the control group it was 36.94. The average posttest score between the two classes showed a difference. The increase in the average score of students in the experimental group was 0.77. while the increase in students' scores in the control group was 0.30. So from these results it can be concluded that the use of number bag media in the experimental class is more effective than the control class.

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