

# PROCEEDINGS OF THE 3<sup>RD</sup> INTERNATIONAL CONFERENCE ON ISLAMIC EDUCATION AND SCIENCE DEVELOPMENT (ICONSIDE)

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## THE EFFECT OF COUNTING BOX LEARNING MEDIA ON THE COUNTING ABILITY OF I GRADE AT MIN 1 CENTRAL LOMBOK IN THE 2024/2025 ACADEMIC YEAR

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### Abstract

This study aims to determine the effect of counting box learning media on the counting skills of grade I at MIN 1 Central Lombok in the 2024/2025 academic year. This study used a quantitative approach of quasi-experiment type with a research design of Nonequivalent Control Group Design. The sampling technique used Probability Sampling type cluster random sampling. The samples in this study were two classes, namely class I B amounted to 36 students as the experimental class and class I E amounted to 34 students as the control class. Data collection techniques using tests, observation and documentation. Data analysis techniques used normality test (Kolmogorov Smirnov), and homogeneity test (F test) and hypothesis testing (Independent t-test) using the polled variance formula. The results of this study indicate that the counting box learning media has a significant effect on students' counting skills. This is evidenced by data analysis using t-test obtained sig value.  $0.002 < 0.05$ , so  $H_0$  is rejected which means  $H_a$  in this study is accepted. Thus, there is an effect of counting box learning media on the counting ability of I grade students at MIN 1 Central Lombok in the 2024/2025 academic year.

**Keywords:** Counting Box Learning Media; Counting Skills

### INTRODUCTION

Learning is a process of cooperation between teachers and students in utilizing all the potential and resources available, both the potential of the students themselves such as interests, talents and basic abilities as well as the potential that exists outside. As a collaborative process, learning emphasizes teachers and students together trying to achieve predetermined learning goals (Sanjaya, 2011). One of the factors that support conditions is the teaching and learning process that can give students enthusiasm to want to learn, especially in learning mathematics.

According to Yayuk (2019), the main characteristic of mathematics learning is deductive reasoning, namely the truth of a concept or statement obtained as a logical consequence of the previous truth. If students do not understand the basic concepts of mathematics presented, then these students will have difficulty understanding the

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material for the next level which is even more difficult (Ruqoyyah et al., 2020). This also has an impact on students' low numeracy skills.

Numeracy is an ability that requires reasoning and algebraic skills used to formulate mathematical problems so that they can be solved with the necessary counting operations (Afriani et al., 2019). One of the numeracy skills taught in elementary mathematics is addition and subtraction. Addition is a way of finding the total sum of two or more numbers. While addition is the opposite of subtraction, but there are things that cannot be done by reversing subtraction (Badriah, 2016). In delivering addition and subtraction material by teachers to students, real and logical activities are needed.

Students' numeracy skills can also be influenced by several factors, for example, learning that is less fun and monotonous, the use of learning media that is not appropriate, the lack of application of learning methods that attract students' attention, and the lack of facilities during the learning process (Himmah et al., 2021). As is known, grade I students are at the stage of thinking about operational real objects so that the learning process should be carried out actively, creatively, and fun (Sukowati, 2023). With these fun learning activities, it is hoped that students will be able to understand and understand the material provided by the teacher.

From the results of observations made in class I MIN 1 Central Lombok on August 12, 2024 showed that during the learning process the teacher did not use tools to convey the material so it was seen that some students were not enthusiastic during the learning process. In addition, the number of students in the class makes the teacher overwhelmed in guiding and giving individual attention to each student. This greatly affected the teaching and learning process so that there were students who asked for help to be guided in counting. Then there are children who deliberately cry with incoherent reasons so that they are not asked to do the assigned tasks. In addition, they also write many numbers upside down because they are not too familiar with numbers.

The results of the interview with Mrs. Uswatun Hasanah as the homeroom teacher 1 B at MIN 1 Central Lombok explained that so far students consider math lessons boring and difficult so that there are students whose counting skills exceed and there are students who are still lacking. During the learning process the teacher has used concrete objects such as sticks and abacus but students are overwhelmed to be guided one by one because the class is a large class which causes students to be busy on their own. The low counting ability of students also has an impact on writing numbers in reverse, for example the number 9 is written as 6 because there are still some who have not memorized the shapes of numbers.

It can be concluded that the numeracy skills of grade I students at MIN 1 Central Lombok are still far from the conditions that should be. This is evidenced by the low percentage of students' daily math test scores with the KKM set by the school which is 70, students who have scores above the KKM reach 42%, and students who have scores below

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the KKM reach 58%. Where the number of students is 36 people. Among them are 15 students who have reached the KKM and 21 students who have not reached the KKM.

To overcome these problems, creative teachers are needed to utilize the media during the teaching and learning process. One of the media that can be used is counting box learning media. Counting box learning media is a type of media made of cardboard or plywood, box-shaped and contains toy eggs, coupled with attractive illustration designs so that it can motivate students to learn. Counting box learning media aims to be able to make students able to understand number counting operations easily so as to provide a new and not boring learning atmosphere (Ibrohim, 2024). Then this media can be used to voice messages, provoke students' thoughts and emotions.

Referring to the results of previous research conducted by Muhammad Rozi entitled "The Effect of Counting Box Learning Media on Increasing Mathematics Learning Outcomes of Grade I Students of SDN 1 Kekait" explained that counting box learning media can have a significant effect on student math learning outcomes. The results of this study are expected to add to the repertoire of knowledge for researchers and readers regarding the effect of counting box learning media on counting skills.

## METHOD

This research uses a quantitative approach of quasi-experiment type. The variables in this study consisted of independent variables, namely the counting box learning media and the dependent variable, namely students' counting ability. This research was conducted at MIN 1 Central Lombok in the odd semester of the 2024/2025 academic year. The population in this study were all grade I students at MIN 1 Central Lombok with a total of 208 students consisting of six classes namely I A, B, C, D, E, and F. The sampling technique used in this study was cluster random sampling class I B as an experimental class with 36 students and class I E as a control class with 34 students.

This research design is an experimental form of nonequivalent control group design. The instruments used in this study used test instruments in the form of multiple choice pretest and posttest each consisting of 10 questions. Before being given to students, the questions were tested using validity tests, reliability tests, difficulty tests, differentiation tests and tests of the function of examiners. Then the observation sheet serves to obtain information on a variable with the highest possible validity and reliability (Komang & Kadek, 2020).

The data collection techniques used in this study were tests, observation and documentation. The data analysis technique in this study uses a prerequisite test in the form of normality test and homogeneity test while the hypothesis test uses t-test.

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## FINDINGS AND DISCUSSION

### Descriptive Statistics Results

The results of descriptive statistics in this study are to see the distribution of data collected in this study. The data in this study are statistical data in the form of pretest and posstest scores of students' counting skills using counting box learning media in experimental classes and without using counting box learning media in control classes. The data of students' pretest and posstest scores are as follows:

Table 1. Students Pretest Result Value Data

Class	Control (A)	Eksperiment (B)
Number of Students	34	36
Te highest score	86	86
Lowest Value	43	14
Average	60	58

From the table above, it can be seen that students' counting ability from the results of pretest scores before using counting box learning media in the learning process in the experimental class, and without using counting box learning media in the control class. The number of control class students was 34 students and the experimental class students were 36 students. The highest pretest score in the control and experimental classes were both around 86, then the lowest score in both were 14. The average score for the control class was 60, while the experimental class was 58.

Table 2. Students Posstest Result Value Data

Class	Control (A)	Eksperiment (B)
Number of Students	34	36
Te highest score	100	100
Lowest Value	43	57
Average	77	88

From the table above, it can be seen that students' counting ability from the results of the posstest scores after using the counting box learning media in the learning process in the experimental class, and without using the counting box learning media in the control class. Where the number of control class students is 34 students and experimental

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class students are 36 students. The highest pretest scores in the control and experimental classes were both around 100, then the lowest score in the control class was 43 and the lowest score in the experimental class was 57. The average score for the control class was 77, while the experimental class was 88.

## Results of Inferential Statistics

### Normality Test

Normality test is conducted to determine whether the data is normally distributed or not. In this study, the normality test was carried out using the Kolmogorov-Smirnov test because the sample used was  $> 50$ . The test criteria are if the sig value is  $> 0.05$  then the data is normally distributed and vice versa if the sig value  $< 0.05$  the data is not normally distributed. The data on the results of the normality test using statistics can be seen in table 3. below.

Table 3. Normality Test Results

Variable	Sig Value	Significance Level	Conclusion
Posstest Results Of Control Classes	0,082	0,05	Normally distributed
Posstest Results Of Experimental Classes	0,053	0,05	Normally distributed

Based on the table above, the Kolmogorov-Smirnov value on the posstest results of the control and experimental classes sig value (2-tailed)  $> 0.05$ . Where in the control class the sig value is  $0.82 > 0.05$  and in the experimental class the sig value is  $0.053 > 0.005$ , so it can be assumed that the data is normally distributed.

### Homogeneity Test

The homogeneity test is carried out to ascertain whether the experimental class and control class data have the same variance or not. The test criteria are if the sig value,  $> 0.05$  then the data is homogeneous and vice versa if the sig value  $< 0.05$  the data is not homogeneous. The following data on the results of the homogeneity test using statistics can be seen in table 4 below.

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Table 4. Homogeneity Test Results

Variable	Sig Value	Significance Level	Conclusion
Posstest Results Of Control and Experimental Classes	0,944	0,05	Homogeneous

Based on the table of homogeneity test results above, the significance value of Based on Mean is 0.944 automatically greater than  $> 0.05$ . Then the variance of the control and experimental class posstest data is homogeneous or the same.

## Hypothesis Test

Hypothesis testing is a test conducted to determine whether  $H_a$  is accepted or rejected. This test is carried out after the previous data is declared homogeneous. Testing the hypothesis of this study using an independent sample t test with the criteria if the significance  $<0.05$  then  $H_a$  is accepted and if  $sig > 0.05$  then  $H_a$  is rejected. The data for the hypothesis test results can be seen in table 5 below.

Table 5. T- Test Results

Variable	Sig Value	Significance Level	Conclusion
Posstest Results Of Control and Experimental Classes	0,002	0,05	$H_a$ accepeted

Based on the results of the t test above, the t test results show that  $H_a$  is accepted, because the sig value (2-talled) is 0.002 which means it is smaller than 0.05. Thus it can be concluded that there is an effect of counting box learning media on the counting ability of grade I students at MIN 1 Central Lombok on the material of addition and subtraction of numbers 1-20.

## DISCUSSION

Based on the results of the results of this study indicate that the use of counting box media in the learning process has a positive influence on students' counting ability. The results of hypothesis testing using the independent sample t test show that  $H_a$  is accepted, because the sig value (2-talled) is 0.002, which means it is smaller than 0.05. Thus it can be concluded that there is an effect of counting box learning media on the

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counting ability of grade I students at MIN 1 Central Lombok on the material of addition and subtraction of numbers 1-20. As according to Fitri et al. (2023) counting box learning media is able to teach the concepts of addition and subtraction, considering that counting boxes are game-based teaching aids, able to motivate students and suitable for use in the development of grade I children.

Good numeracy skills can be obtained if a teacher is able to develop his creativity during the learning process. Lack of teacher creativity will have an impact on students' counting skills. As one of the factors that affect numeracy skills is external student factors (Zuschaiya et al., 2021). If learning seems boring, this will have an impact on students' numeracy skills. In addition, students will find it difficult to understand the material presented by the teacher. In this case, the teacher must be able to use learning media that can attract students' attention. Seeing that grade I students are at the concrete operational thinking stage, where children are able to operationalize logic, but still in concrete form. In line with Sekar's research (2024), it shows that the ability to count grade II students at SD Negeri 03 Buyut Utara has increased in cycle I by 68%, while in cycle II the level of completeness of the ability to count grade II students is 80%. The use of Animal Counting Box media can improve the ability to count grade II students at SD Negeri 03 Buyut Utara.

Through this research, it can be realized that students' counting ability depends on the teacher's creativity in teaching. If the learning media used is appropriate, the students' counting ability can reach the average. What must be considered is the characteristics of students, learning styles, interests and talents of students so that they can be adjusted to the media to be used.

## CONCLUSION

Based on the results of research and discussion, there is an effect of counting box learning media on students' counting ability, this is evidenced by the results of hypothesis testing using the independent sample t-test obtained sig. (2-tailed) of 0.002, this is smaller than the value of 0.05 (0.002 < 0.05) which means Ha is accepted and Ho is rejected. These results indicate that there is an effect of Counting Box Learning Media on the Counting Ability of Grade I Students at MIN 1 Central Lombok in the 2024/2025 School Year.

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