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The Effect of Egg-breaking Media on Early Childhood Counting Skill

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Abstract

Counting is one of the lessons introduced in early childhood before the elementary school era. In group A students, counting learning has been taught to children aged 4-5 years, which is carried out with various activities using appropriate and more exciting media to influence children's interest in learning to count because learning to count is the most important part for children. This study aims to determine: 1) a description of children's counting skills in group A at RA Tri Bhakti Claket; 2) the effects of egg-breaking media on children's numeracy skills at RA Tri Bhakti Claket. This research is a pre-experimental design with a one-group pretest-posttest using a nonprobability sampling technique with purposive sampling. Data collection techniques using observation, questionnaires (pretest-posttest statement items), and documentation. The calculation of data analysis techniques using paired sample t-tests with the help of the SPSS application version 23 for Windows. The findings indicate a significant effect between egg-breaking media and children's numeracy skills at RA Tri Bhakti Claket by the average child's skills, from 30.14 to 46.28. It is also proven from the results of hypothesis testing where the sig. Value < 0.05.

Keywords: *Counting Skill, Egg-breaking Media, Early Childhood.*

INTRODUCTION

Early childhood is an individual figure undergoing a process of very rapid development and growth. Early Childhood Education is provided to develop and stimulate at this level (Nirawati, 2019), which includes the development of morals and values, religious, physical, social-emotional, language, artistic, and cognitive values, mastering several knowledge and skills according to the development, and have motivation and attitudes, and learn to be creative (Fitri, 2019).

Kindergarten or Taman Kanak-kanak (TK) and Raudhatul Athfal (RA) are formal education institutions for early childhood education aged 4-6 years. This educational institution aims to develop all aspects, including religious and moral values, social-emotional, cognitive, language, and physical-motor aspects. The cognitive aspect is one aspect that needs to be developed in TK/RA (Amaris et al., 2018).

Cognitive is a thinking process in which individuals can connect, assess, and consider an event or event. Cognitive cannot be separated from a person's level of intelligence (Rosyidah & Santoso, 2018). Cognitive plays an essential role in child development because cognitive is the intelligence of the mind and can be used to think quickly and precisely.

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Mathematical skills are essential in day-to-day life; counting in early childhood is knowing numbers by mentioning the order of numbers or counting unquestioningly. Children count by mentioning the order of objects without being connected to concrete objects. Four-year-olds can count up to ten, and five-six-year-olds can count to one hundred.

Counting is part of the concept of numbers. Counting is a thinking process that occurs internally in the central nervous system. They were playing while learning, which can indirectly stimulate children's egg-breaking media, such as counting correctly and being expected to recognize symbol numbers properly and correctly. The counting skill is a behavior that can result in a person gaining knowledge because the ability to count has a broad understanding in terms of thinking and observing (Patmonodewo & Soemiati, 2009)

Counting is very close to everyday life, homes, schools, public places, and everywhere else (Yono, 2018). Teaching children to count can be done through games or media. Learning media is a component that plays a vital role in the learning process. Every learning activity related to media use should receive the teacher's attention as a facilitator. Learning while playing can fulfill children's curiosity while practicing observing and comparing so that children can find various ways to solve a problem at hand.

Counting games require a fun atmosphere and provide children with security and freedom. For this reason, attractive and varied props/media are needed, easy to use, and not harmful (Cahyadi & Hernita, 2016). Media that can be used to instill the concept of counting in children is broken egg media. Egg-breaking media is one of several teaching aids educators use to channel messages and stimulate students' thoughts, feelings, attention, and willingness to encourage learning. Media broken eggs are oval-shaped paper cutouts cut in a zig-zag manner that resembles broken eggs, and each fragment is affixed with pictures and numbers, the number of which is in pairs. Then, the child is given the task of pairing them so that the child can recognize the numbers and the number of numbers that represent them.

The use of broken egg media can help children develop numeracy skills. Through breaking eggs, children can be directly involved in their activities. The way this game works is for the child to take the piece of egg that has a number symbol on it, and then the child matches the number of pictures on the other piece of egg. The pictures and numbers are matched according to the number and then put together after the pieces come together to form a complete egg.

Based on research (Miswara, Wiyono & Ariani, 2018), Problems with children's learning outcomes regarding numeracy skills are caused by learning media related to numeracy abilities that are still unattractive with the results of children's research being in the pretty good category of 14 children (46.7%), congklak game is given so that children can explore what they do while playing so that they can increase children's numeracy knowledge. After being given the congklak game, the children's numeracy skills were mostly in the excellent category, namely 18 (60.0%). The aim is to find out the general description of the development of children's numeracy skills in group A at RA Tri Bhakti Claket and how the effect of breaking eggs on children's numeracy skills at RA Tri Bhakti Claket.

METHOD

This study uses a quantitative experiment with a *pre-experimental design, a* type *one group pretest-posttest* (single group). Arikunto stated that *one group pretest-posttest design* is activity research that provides a test beginning *(pretest)* before and after treatment *(post-test*). This observation was held twice before and after the experiment. Tests performed before the experiment (O_1) are called the last *pretest*, or treatment (x), and after the experiment (O_2) is the *post-test.* (Arikunto, 2010).

Following is a description of variable research :

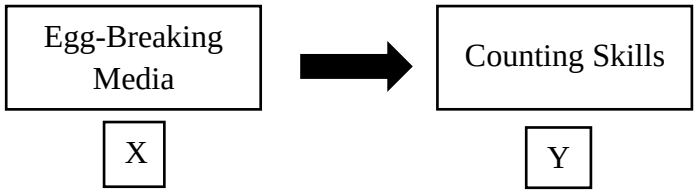

Figure 1. Variables Study

The research location was at RA Tri Bhakti Claket Mojokerto, East Java, with a sample study of 14 children. The technique used is *nonprobability sampling*, which is a purposive *sampling* technique based on consideration and objective certainty and has known characteristics and specific properties (Arifin, 2011). The data was collected with observations, interviews, and documentation.

Table 1. Instruments Study (Sulistyawati, 2013)

Variable	Indicator	Activities undertaken
Counting Skill	Counting/mentioning order numbers from 1-10	a. Able to know numbers 1-10
		b. Able to mention the number next to a number line (up to 10)
		c. Able to sort numbers 1-10
		d. Be able to distinguish numbers 1-10
	Counting with points out (recognize concepts numbers with things up to 10)	a. Able to count objects rightly.
		b. Able to carry out the teacher's orders and take objects by the numbers mentioned.
	Pointing order object for a number until 10	a. Able to put numbers into the gathering object
		b. Able to sort objects from 1-10
		c. Able to mention numbers by the amount teacher pointed object.
	They are connecting/pairing symbol numbers with things.	a. Able to pair numbers with a suitable thing

The analysis technique is descriptive, which describes an object through sample data average or mean (M) and standard values deviation (SD), which results in knowledge starting (before treatment) and skill tests for the student (after treatment). The pretest data *assignment* students were qualified using the evaluation reference benchmark (PAP) scale five, as shown in the following table (Fred L. et al., 2019).

Table 2. PAP scale five

No.	Criteria	Category
1.	85-100	Very good
2.	70-84	Good
3.	55-69	Enough
4.	40-54	Not enough

The analysis discusses the effect of egg-breaking media with an arithmetic mean formula *(Mean)* and standard deviation. Analysis t-test statistics were used to test the proposed hypothesis if the number resulting significance was more significant than 0.05 (α > 0.05). A *paired sample* t-test tests the hypothesis where the data was used. A paired test is the most frequent feature encountered in individual (object research) was subjected to 2 different treatments (Ridwan & Sunarto, 2013).

RESULTS AND DISCUSSION

This research used an experimental method and was designed by an experiment group with a single post-test (one group post-test design). Experiment This is done on one group without existing group comparison by giving a test at the beginning and the end.

1. Normality Test

A normality test was carried out on all the data obtained, namely pre-post-test data.

Table 3 Results of the One-Sample Kolmogorov-Smirnov Test Normality

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residuals
N		14
Normal Parameters [a,b]	Means	.0000000
	Std. Deviation	1.20676874
Most Extreme Differences	absolute	.203
	Positive	.172
	Negative	-.203
Test Statistics		.203
Asymp. Sig. (2-tailed)		.121 [c]

a. Test distribution is Normal.

b. Calculated from data.

c. Significance Correction.

Based on the data, the mark with more data significance is more significant than 0.05. It is a known results calculation from the SPSS normality test of 0.1. shows that level

significance > of 0.05, so that can concluded that the normality test in research is usually distributed.

2. Paired Sample t-Test

There is a difference or No effect of egg-breaking media before and after the program, so the researcher counts using paired samples t-test with SPSS version 23 assistance. This research uses a level significance of 5% or 0.5. Based on hypothesis research that follows: a) If the value significance <0.05, then H_o is rejected, and H_a is accepted. b) If the value significance > 0.05, then H_o is accepted, and H_a is rejected

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The Development of Counting Skills of Children In Group A RA Tri Bhakti Claket

The egg-breaking media can help the learning activity by embedding draft counting in children, stimulating thoughts, feelings, and petrification, and helping them finish a problem by play. The general overview of counting skills in children groups A RA Tri Bhakti Claket is based on indicator achievements, such as counting or mentioning order numbers from 1-10 without meaning. A child can say it but does not understand the means. Children do not know that a number is a symbol or a number thing. Although the children can already count, they cannot yet understand numbers. Roy and Edward stated that counting skills are used to state numbers sequentially with the start of "one" and connect every number to one and only one until the count is something real. From the observations that researchers have conducted, almost all children in class A RA Tri Bhakti Claket are already capable of counting or mentioning order numbers from 1 to 10.

Counting with pointing**:** For children who do not understand numbers, say number one, two, three, and so on; no will mean. The child is capable of saying. However, No one can understand What It means one and the other. The child does not know, yet the number symbolizes many things. When the child counts objects, matter can be seen. Although the child can already count and is not yet fully capable of understanding, from observations, one child cannot count while pointing. This kid only needs habituation because he is shy, and three children are still growing; three grew very well, and seven are generated by expectancy.

Pointing order objects for several 10, when the sensitivity to numbers of children grows, they become more interested in the arithmetic count. Count the basis for children

working early with the count. For example, in the scene, count the same kids aged three, four, and five years; by sensitivity count, they will count the child's stairs climb, the food they have eaten, and the flowers. The observations find that children must still be directed to point order numbers until 10. However, some are proficient in pointed-order objects for numbers up to 10.

Connecting or pairing symbol numbers with objects, according to Ginsburg & Seo classification, grouping similar objects or own similarity is a critical process for developing a draft number. Order children capable of classifying or sorting objects, then they must develop an understanding of each other have "similarities" and "differences." With egg-breaking media, the child can connect the number of objects by the symbol of the number. Under observation, this is the same case as the indicator before. Some children Still need direction to connect or pair things; when already directed, this only needs habituation. He thought that in the future, for children, the more substantial Power remembers and patterns.

Effect of Egg-Breaking Media to Chilhood Counting Skill at RA Tri Bhakti Claket

The effect of egg-breaking media eggs on ability counting in children at RA Tri Bhati Claket was divided with a sample of 14 children. Before he did treatment class, the test was initially (a pretest) to know the circumstances, beginning with the ability to count the children before the treatment. Then, treatment 2-3 times using an egg-breaking media is given a final post-test for circumstances in children's counting skills after it is given treatment using an egg-breaking media.

Based on the testing analysis, descriptive with summary in table 4.2 for pretest and table posttestost-test can seen in the conclusions in table 4.6 and obtained value data _ from preset with minimum 23 and maximum 34 with a mean of 30.14 and value standard deviation of 3.63439. The value data obtained from the post-test has a marked minimum and maximum of 45 and 48, with a mean of 46.28 and a standard deviation of 0.91387. This can concluded with broken media egg ability counting in children increases.

Based on results calculation using the t-test (paired sample test) with SPSS application version 16 known results calculation that marks the significance of 0.000, namely < 0.05, then H_o is rejected, and H_a is accepted. This means that the egg-breaking media affects the enhancement of ability counting in children at RA Tri Bhakti Claket. For level

success in one study, use 5% or 0.5 if the sig value obtained is significant from the value considered to have no effect, then level 95% confidence.

CONCLUSION

Children's counting skills after being given treatment in the form of cracked egg media experienced an excellent increase; children's counting skills were better than before, as described in the results of the descriptive analysis; with egg-breaking media, children could count well and sharpen their cognitive skills.

There is a significant influence between egg-breaking media and children's numeracy skills at RA Tri Bhakti Claket, which can be seen from the average child's counting skills before and after treatment, from 30.14 to 46.28 and proven from the results of hypothesis testing where the sig. Value < 0.05.

IMPLICATIONS

The conclusion drawn from theoretical research by characteristic strengthens theory. The findings are the influence of egg-breaking media on the counting skills of early students in group A at RA Tri Bhakti Claket. Field research describes that to increase the ability to count children, a teacher must pay attention to the media and methods used so that children are motivated and interested in the following learning.

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