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THE EFFECT OF THE GEMROT MULTIPLICATION MATERIAL PAIKEM MODEL ON THE LEARNING OUTCOMES OF GRADE IV SD MUHAMMADIYAH 07 MEDAN

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Abstract
This research aims to understand the learning outcomes of students through the Active, Innovative, Creative, Fun, Joyful and Weighty learning model (PAIKEM GEMBROT) in grade IV of SD Muhammadiyah 07 Medan. With the participation of all students in class IV totaling 43 students. The sample used was 20 IV b students and Random sampling technique. This study uses quantitative research with a Pre-Experimental approach type One Group Pre-test Post-test by using one class as an experimental class without a control class. The instrument used is in the form of a multiple-choice test of 10 questions to determine the learning outcomes of students in multiplication material. The data requirement test uses the normality test and the Wilcoxon test From the results of the study, it was obtained based on the average score of the student pretest of 65.00 while the average score of the post test was 88.00 Well, from the statistical test the value of sig was 0.000 because the sig was 0.000 < of 0.05, the hypothesis was accepted, namely that there was a significant influence between the Active, Innovative, Creative, Effective, Fun, and learning models Joy, and Weighted (PAIKEM GEMBROT) multiplication material on student learning outcomes in grade IV of SD Muhammadiyah 07 Medan.
Keywords: Learning Model, PAIKEM, Learning outcomes.

1. Introduction

Education has an important role in ensuring the life of the Nation and state, education plays a role in the production of good human resources. Quality education brings progress to the country. Education is the process of changing the behavior and behavior of individuals or groups of people to mature them through educational and training efforts.

According to Bunga Harumsari, H. Muhammad Ali, 2018 in (Conference & Foundation, 2022) education is continuous learning in human beings with the aim of obtaining behavioral changes for the better taken from human experiences in interacting. In the world of education, there is an interaction between teachers and students that aims to change the level of student behavior through stimuli provided by teachers.

According to (Ahmad et al., 2019) there is a need for stimulus to develop what students get when sitting at school and in the environment where they live. The learning process will run smoothly if the teacher's stimulus can be responded to by students. Every learning process must have a stimulus and response from the teacher to the students so that the material delivered by the teacher can be well received and digested by the students.

Efforts to improve human resources are carried out through the application of learning models in schools. The success of learning teachers in the classroom has a strong influence. In the past and now there are still many teachers who act on their own Learning materials to give the impression to the class that the teacher is the most important figure This causes learning activities in the classroom to move in one direction and feel the same thing is very boring, so that students do not absorb the material. Based on the results of observations at SD Muhammadiyah 07 Medan. Interview a study teacher that the mathematics learning outcome is relatively low.

Low learning outcomes are influenced by children's potential and environmental factors to learn Internal factors are children's ability to process information to solve mathematical problems. The creator of the learning environment is in the form of delivering material with a teacher-centered learning model.

Elementary school students' assessment of Mathematics subjects is difficult and boring. Because teachers when teaching are very nervous and become students, they are not enthusiastic about participating in ongoing learning and finally learning goals are hampered. Especially with unidirectional learning, it is very easy for students to forget to differentiate learning. Usually, teachers if mathematics subjects only give problems without explaining or using the learning model.

Based on the results of observation in grade IV of SD Muhammadiyah 07 Medan, teachers still use the lecture method in delivering material, teachers do not use media so that students are easily bored in learning and have difficulty completing multiplication material. With that, the results of the daily test of multiplication material students are still many students who have not reached the Minimum Completeness Criteria (KKM).

"The Learning Model is a plan which describes the details and the process of making it An environmental situation that empowers students to interact to make developmental changes in students. The Learning model is the pattern or steps applied to a specific level of learning and because of the objectives or task jurisdiction the expected learning success is achieved quickly, more effectively and efficiently. If this is successful, it means that the learning model has succeeded in changing and improving the quality of student learning. (Sugiono, 2018)

To make students active in the classroom is to use the Active, Innovative, Creative, Effective, Fun, Joyful and Weighty Learning model (PAIKEM GEMBROT) by using this learning model students can play and learn. So students no longer say math is difficult but fun.

The Active, Innovative, Creative, Fun, Joyful and Weighted learning model (PAIKEM GEMBROT) is a versatile learning model Learning materials for various levels of Competencies and basic competencies or several subjects (Ahmadi, 2011).

Based on the description, this study uses the Paikem Gembrot learning media of Multiplication material on student learning outcomes. Learning outcomes are changes in the level of students' abilities after the completion of learning, both written and oral. This level of ability is seen from three domains, namely the cognitive, attitude and psychomotor domains. Learning is the process that a person goes through to achieve a relatively permanent change in behavior. Students who achieve good learning outcomes mean that they have achieved their learning goals well.

The advantages of the PAIKEM Gembrot learning model are 1) it makes it easier to concentrate on one specific theme (2) students are able to learn knowledge and develop various basic competencies between the content of subjects in the same theme (3) the understanding of subject matter is more in-depth and memorable (4) basic competencies can be developed better by associating other subjects with students' personal experiences (5) the benefits and meanings of learning can be felt more because The material is presented in the context of a clear theme (6) students are more enthusiastic about learning because they can communicate in real situations, to develop their abilities in a subject and at the same time can learn other subjects (7) teachers can save time because the subjects presented in PAIKEM Gembrot can be prepared at once and given in two or three meetings while the rest of the time can be used for remedial activities, material consolidation or enrichment.

The weaknesses of the PAIKEM Gembrot learning model, namely: (1) tend to formulate a superficial theme (2) it is difficult to select a theme (3) teachers focus more on activities than on concept development.

The steps of the model PAIKEM Gembrot Class include: (1) introduction; (2) the Theory presentation stage; (3) the level of educational leadership; (4) explore understanding and provide input; (5) develop by offering continuing training opportunities and applications; (6) analyze and evaluate (Trianto., 2007)

Learning outcomes are a set of experiences carried out by a student that includes the cognitive, emotional, and psychomotor domains. Learning means not only mastering theoretical concepts about an object, but also mastering habits, perceptions of pleasure, interests and talents, adaptation of questions, types of abilities, ideals, desires and hopes. Learning is a complex and time-consuming process, and changes occur in the learning process. Changes in student behavior are observed by teachers and appropriate assessments are carried out, including assessments of cognitive, affective, and psychomotor domains. (Rusman, 2017).

Mathematics learning must be active, fun and innovative to attract students' attention. Mathematics is a discipline that applies the concepts of analytical and logical thinking to

formalize models, real-world approaches used in everyday life. (Hidayat, & Siti, K., 2018)
The characteristics of elementary school students who like to play, have a great curiosity and are easy must create a fun learning environment, Among them, the principle of fun learning while learning. Through the Play While program, learning from the experience of playing, then creativity is born directly from the experience of playing games (Samatowa, 2010)
The main key to obtaining measurement data and student learning outcomes is the classification of indicators related to the type of activity stated or measured. Indicators of learning outcomes according to Bloom (Dimyati, and Mudjiono., 2016). six types of cognitive domain behaviors, as follows: 1. Knowledge, 2. Understanding, 3. Application, 4. Analysis, 5. Synthesis, 6. Evaluation

2. RESEARCH METHODS

This study uses quantitative research with a Pre-Experimental approach, type One, Group Pre-test and Post-test design using one class, namely the experimental class does not use a comparative class or a control class.

Quantitative is defined as a research method based on the philosophy of positivism, used to research on certain populations and samples, data collection using research instruments, quantitative data analysis that aims to test the hypothesis that has been established (Sugiyono, Quantitative, Qualitative and R&D Research Methods, 2021)

The research was carried out at SD Muhammadiyah 07 Medan. Research ii was carried out in the odd semester of 2022/2023. The subject of this study is grade IV students of SD Muhammadiyah 07 Medan semester 1 of the 2022/2023 school year. The data of this study was used to determine whether there was an influence of the Active, Innovative, Creative, Fun, Joyful and Weighty Learning model (PAIKEM GEMBROT) grade IV of SD Muhammadiyah 07 Medan which amounted to 20 students. The basis of the research variables is everything that the researcher chooses to investigate in order to collect data and reach conclusions (Magelo et al., 2019). The research variables are as follows:

a. The independent variable (X) in this study is the Active, Innovative, Creative, Fun, Happy and Weighted Learning model (PAIKEM GEMBROT)
b. The bound variable (Y) in this study is the Learning Outcomes of grade IV SD Muhammadiyah 07 Medan.

The normality test is used to test data in the form of group data in frequency distribution table. The normality test is carried out to find out whether the data that will be obtained in the study is normal or not. To find the data, the researcher used spss using the one-sample colmogriv Smirnov test normality test. After that, the Wilcoxon test was continued.
The Wilcoxon signed test uses a nonparametric test used for abnormally distributed data

Research design

Pre-test	Treatment	Post- test
O1	X	O2

With the caption:
O1 : before using the Paikem Gembrot learning model
X : Treatment
O2 : after using the Paikem Gembrot learning model

The population of this study is all grade IV of SD Muhammadiyah 07 Medan totaling 43 students. With a sample of 20 students in grade IV b and Random sampling, which is the taking of sample members from the population is carried out randomly without paying attention to the strata in that population.

3. DISCUSSION AND RESULTS

The results of this study were carried out with a treatment that could be calculated by comparing the pre-test and post-test scores.
The following is the data on the results of the pre-test d post-test for grade IV students of SD Muhammadiyah 07 Medan for the 2022/2023 academic year
Table 1.1
Pre-test and Post-test result data

No	Nama	Pre-test	Post-test
1	Lailatria putri	60	90
2	Zemahin syaputra	60	80
3	Revan	50	70
4	Raihan	70	90
5	Reskia adity	60	80
6	Haikal	70	100
7	Abizar	70	100
8	Septia hamdalah	70	100
9	Nazwa	80	100

	dwi		
10	M alwi	80	100
11	Alisa azzahra	80	100
12	Fairuz febrma	60	100
13	Cantika putri	60	90
14	Najwa silfia	70	90
15	Rania nazwa	80	100
16	Nadhifa sahira djufit	50	50
17	Naomy ralisha	40	70
18	Zulaika	40	60
19	Alisa	70	90
20	Hadibah khaza	80	100

Tabel 1.2
Data Rata – Rata

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
pretest	20	40	80	65.00	12.773
posttest	20	50	100	88.00	15.079
Valid N (listwise)	20				

Based on table 1.2, the average pretest score of grade IV students of SD Muhammadiyah 07 Medan which aims to measure the learning outcomes of students who obtain a result of 65.00 with a standard deviation of 12,773 (rounded to 13) and the post-test score in mathematics learning using a learning model that aims to measure the learning outcomes of students obtained an average score of 88.00 with a standard deviation of 15,079 (rounded to 15).

a. Normality Test

The normality test is one of the requirements for conducting a t-test. Test this normality to find out if the data is normally distributed. This normality test can be seen from the data before and after the test results. The Kolmogrov-Semirnov and Shapiro Wilk normality tests can be used to see the normality test with a significant level. If the sig > 0.05 then the data is normally distributed. If the value is < 0.05, the data is not normally distributed.

The results of the data normality test used SPSS. The table of normality test results is below:

Tabel 1..3
Hasil Uji Normalitas

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	.202	20	.031	.892	20	.029
posttest	.253	20	.002	.796	20	.001

a. Lilliefors Significance Correction

a. Uji Wilcoxon

Tabel 1.4
Hasil Uji Wilcoxon

Ranks

		N	Mean Rank	Sum of Ranks
posttest – pretest	Negative Ranks	0[a]	.00	.00
	Positive Ranks	19[b]	10.00	190.00
	Ties	1[c]		
	Total	20		

a. posttest < pretest

b. posttest > pretest

c. posttest = pretest

Test Statistics[b]

	posttest - pretest
Z	-3.954[a]
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

Based on table 1.4, the Wilcoxon test can be concluded from the ranks data table for negative ranks from 19 data, none of which experienced a decrease in both mean rank and sum of rank. For positive ranks to see an increase in pretest and posttest, namely mean rank 10.00 and sum of ranks 190.00. Ties is a value that the same pretest and post test values are 1, so the conclusion of this table

from the pretest and post test increases. For the basis of decision-making, if the sig value is < 0.05, the hypothesis is accepted. If the sig value is > 0.05, then the hypothesis is rejected

Now from the statistical test test the value of sig is 0.000 because the sig is 0.000 < from 0.05, the hypothesis is accepted

4. CONCLUSION

Active, Innovative, Creative, Fun, Joyful and Weighty Learning (PAIKEM GEMBROT) is a good creative teacher is needed in learning activities/experiences for students even when choosing skills from other groups of topics and arranging them sequentially Learning becomes more meaningful, more interesting, fun and broad (Amri., 2011) So it is concluded, Active, Innovative, Creative, Fun, Joyful and Weighty Learning (PAIKEM GEMBROT) is a form of learning subject-oriented connection of topic-related content specifically narrates students' daily lives and makes the learning process effective and engaging to engage students participatory, active, innovative, positive, cheerful and the emphasis is on learning more meaning.

This pre-test is known to have the initial condition of students who have not received treatment, so the researcher carried out treatment using the Active, Innovative, Creative, Fun, Happy and Weighty learning model (PAIKEM GEMBROT). Students of SD Muhammadiyah 07 Medan have results that produce learning outcomes in the medium category. Meanwhile, the learning outcomes of students after receiving remote treatment have greatly improved.

By using the Active, Innovative, Creative, Fun, Happy and Weighted learning model (PAIKEM GEMBROT) aims to see student learning outcomes from medium to high. By using the Active, Innovative, Creative, Fun, Joyful and Weighty learning model (PAIKEM GEMBROT), student learning outcomes are good.

This researcher uses quantitative research which is interpreted as a research method based on the philosophy of positivism, used to research on certain populations and samples, data collection using research instruments, quantitative data analysis that aims to test the hypothesis that has been established (Sugiyono, Quantitative, Qualitative and R&D Research Methods, 2021) The experimental research method can be interpreted as the research method used to look for the effect of certain treatments on others under controlled conditions (Sugiyono, Statistics for Research, 2016).

The data requirement test uses the normality test and the Wilcoxon test from the results The research was obtained based on the average score of the pretest students of 65.00 while the average score of the post test was 88.00 Now from the statistical test the value of sig 0.000 because the sig was 0.000 < out of 0.05, the hypothesis was accepted, namely that there was a significant influence between the Active, Innovative, Creative, Effective, Fun, Joyful, and Weighted learning model (PAIKEM GEMBROT) multiplication material on the learning outcomes of students in grade IV of SD Muhammadiyah 07 Medan.

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