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CLASS MANAGEMENT OF MATHEMATICS LEARNING OUTCOMES IN APPROXIMATION MATERIALS

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Abstrack: The Effect of Class Management on Mathematics Learning Outcomes in Approximation Material. Elementary School Teacher Education Study Program. Faculty of Teacher Training and Education. Pakuan University. Bogor. 2021. The purpose of this study is to determine the effect of classroom management on mathematics learning outcomes in approximation material. This researchmethod uses a survey method through a causal study approach. The population in this study are students in grades IV A and IV B, Cibeureum 2 State Elementary School, Bogor City, Even Semester for the 2020/2021 Academic Year, totaling 67 students. The sample taken is 40 students. The results showed that there is an effect of classroom management on mathematics learning outcomes inapproximation material, indicated by statistical analysis which resulted in a correlation coefficient (rxy) of 0.89. This shows the effect of classroom management on mathematics learning outcomes in approximation material. While the coefficient of determination (r2) is 0.79 or 79%, through the regression equation = -33.05 + 0.80X. The remaining 21% is determined by other factors. Based on the results of the research above, it can be concluded that there is a positive influence between classroom management on mathematics learning outcomes in approximation material. The results of this study are expected that when teaching can provide good classroom management for students so that students can improve their learning outcomes.

Keywords: Classroom_Management; Mathematics_Learning_Outcomes.

Introduction

Classroom management is related to the ability of teachers to create a pleasant learning environment and conditions to achieve learning objectives. Class management carried out by the teacher can be related to the management of students on the material presented by the teacher, or other things can be seen from the aspect of managing the physical environment of the class. Such as the arrangement of chairs, lighting and cleanliness of the classroom where learning takes place.

Classroom management can be said to be a major problem that is often faced by teachers, whether young or novice teachers or teachers who have years of teaching experience. Teachers must create and maintain classroom conditions so that students can achieve teaching goals effectively and enable them to learn comfortably. In the teaching and learning process, of course, comfortable classroom conditions will greatly help convey the material presented by

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the teacher to students. Teachers are required to have skills in managing the learning components so that later it will create an effective teaching and learning atmosphere.

Achievement obtained by students in following the learning process in class is one of the benchmarks for student success in school. Learning achievement in question is the level of achievement of the results that have been achieved by students in the form of knowledge, understanding and application. So it can be said that student achievement is the result of student learning obtained during the process of teaching and learning activities. But in reality there are still many students who get poor results.

Mathematics is one of the subjects that is still often considered difficult by students, this is because mathematics is a subject that is different from other subjects, namely when doing it requires more accuracy, even though mathematics is a subject that is considered important, because it aims to so that students are able to solve problems related to mathematics that exist in everyday life.

Based on the facts that I got by interviewing the fifth grade teacher at SDN Cibeureum 2 regarding the mathematics learning outcomes obtained by the students, it was stated that the KKM for mathematics subjects was 70, the PTS results of 67 students were only 37.3% or 25 students who scored above KKM, the remaining 62.7% or 42 students who get a score below the KKM. This means that learning outcomes in the fourth grade Mathematics subject at SDN Cibeureum 2 are very low.

To achieve good learning outcomes, one of which needs effective classroom management and the availability of adequate learning facilities. So, if the teacher has implemented classroom management well and can facilitate students well, it will have an impact on increasing the learning outcomes obtained by students.

Based on the description above, the researcher intends to conduct a study to determine "The Effect of Classroom Management on Mathematics Learning Outcomes in Approximation Materials".

Referring to the background of the problem and the formulation of the problem stated above, the purpose of this study is to determine the effect of classroom management on mathematics learning outcomes in approximation material.

Learning outcomes are the final grades obtained by students during learning. As stated by Sudijono quoted by Sutrisno and Siswanto [1], it is revealed that learning outcomes are evaluative behavior that can reveal all aspects of the thinking process (cognitive field), as well as other psychological aspects, namely values or attitudes (emotional, field) and skills (mental movement) inherent in students.

From several theories that have been stated previously, it can be synthesized that mathematics learning outcomes are numerical values obtained by students from test results in the mathematics learning process within a certain period of time where there are factors that influence learning outcomes, namely external factors and internal factors.

According to Syaiful Bahri quoted by Asmadawati [2] that classroom management is the ability of a teachers to create and maintain the best learning conditions, if there are problems or interruptions in the teaching process, the teacher can return them. In a sense, it is an activity to maintain learning conditions if there are disturbances and problems in the teaching and learning process. This includes stopping disruptive student behavior in class and giving awards to students who do not respect the agreed time. Likewise, according to S. Arikunto in F. Kadir [3] classroom management is an effort carried out by the person in charge of teaching and

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learning activities or who helps with the aim of achieving optimal conditions so that learning activities can be carried out as expected.

Based on several views according to experts, it can be synthesized that classroom management is an effort made by the teacher to create the best and conducive learning conditions in order to fully achieve the learning objectives, including the teacher must be able to create a warm classroom atmosphere that can turn on student enthusiasm, provide challenges, vary in providing learning and must always emphasize the positive.

Methods

The research method used in this study is a survey method through a causal study approach. This survey method is a method in which data collection uses a questionnaire as the main instrument. This survey method was used to collect data from respondents, namely selected students. While the causal study approach is used to obtain information to determine whether there is an influence between classroom management on mathematics learning outcomes in the approximation material for class IV SDN Cibeureum 02 academic year 2020/2021.

In this study, there are two variables, namely classroom management as the independent variable (X) and mathematics learning outcomes in approximation material as the dependent variable (Y). The constellation of research variable problems can be described as follows:

Figure 1 Constellation of Research Problems

The data collection technique that will be used regarding mathematics learning outcomes which is the dependent variable by using a test form in the form of multiple choice and if the answer is correct will get a value of one while for the wrong answer will get a value of zero. Meanwhile, to obtain class management data which is an independent variable, use a questionnaire by giving a written statement to the respondent to answer it.

In this study, researchers used a Likert scale to develop an instrument in the form of a questionnaire. By giving a questionnaire, respondents are only asked to choose one answer by giving a checklist from several alternative answers provided.

The method for classroom management instruments uses a questionnaire (questionnaire) of 40 statement items, while for the instrument of mathematics learning outcomes on approximation material using multiple-choice tests as many as 40 items.

The population in this study were all fourth grade students of Cibeureum 2 State Elementary School, Bogor City, for the 2020/2021 Academic Year, totaling 67 students. The sample used in this study was carried out using the Taro Yamane formula, the number of research samples was 40 fourth grade students.

The instrument trial was conducted on 27 respondents. The validity of the non-test instrument trial used the Pearson Product Moment formula, while the test instrument's validity used the Biserial Point formula. The non-test research instrument reliability test uses Cronbach's Alpha calculation while the test instrument reliability test uses the Kuder

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Richardson formula. Before testing the statistical hypothesis, the research data must first meet the analysis requirements by using the estimated standard error normality test and regression linearity test. The research method used is a survey research method with correlational techniques.

Result and Discussion

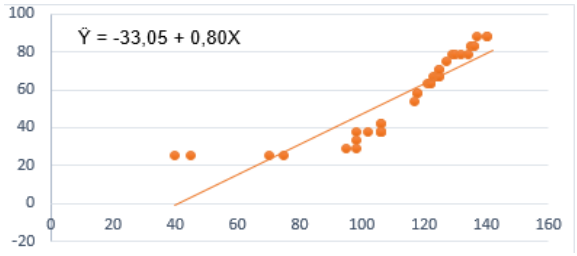

Figure 2 The scatter diagram of research results

The description of the research data is grouped into 2 consisting of the dependent variable data, namely the results of learning mathematics on approximation material (Y) and the independent variable data, namely class management (X). The data is described in the form of statistical descriptions. The description of each data is the lowest score, highest score, score range, mean (mean), median value (median), frequently occurring value (mode), standard deviation (SD), sample variance, and total score.

Before testing the hypothesis, a prerequisite analysis test is carried out with the following results:

Table 1 Summary of Normality Test for X and Y . Variables

No	Estimated Standard Error	L_{count}	L_{table}	Conclusion
1.	Variable X and Y	0.1324	0.1402	Normal

Normal Terms Lcount < Ltable

Based on the results of the normality test using the Liliefors test, it was obtained that Lcount = 0.1324, this price is smaller than the Ltable price.
= 0.1402 at the level of =0.05. So, it can be concluded that H0 = Lcount < Ltable, then the distribution of class management data (X) with mathematics learning outcomes (Y) is normal.

Table 2 Summary of Homogeneity Test for Variables X and Y

No.	Tested Variants	Fcount	Ftabel	Conclusion
1	Y atas X	2,51	4,10	Homogen

Significant Level Test Fcount < Ftable

Based on the results of the calculation of the homogeneity of class management data and mathematics learning outcomes, it is obtained Fcount of 2.51 for a sample of 40 and a significant level of = 0.05 obtained Ftable of 4.10. If Fcount < Ftable means homogeneous while Fcount > Ftable means it is not homogeneous. Because Fcount < Ftable means the data used is homogeneous.

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To clarify the effect of classroom management on mathematics learning outcomes. Hypothesis testing using simple linear regression is generally expressed in the form of a regression equation Y = a + bx. The effect of X on Y is presented in the form of = -33.05 + 0.80X where X is significant, it can be seen in the following scatter diagram:

Figure 2 Scatter Diagram of the Effect of Class Management (X) on Mathematics Learning Outcomes

To determine the tested hypothesis with the condition that Fcount > Ftable, then based on the results of the calculation of the regression significance test, Fcount = 136, with Ftable (α = 0.05) = 4.10. Thus, Fcount > Ftable = 136 > 4.10 means that the effect of classroom management on mathematics learning outcomes shown by the regression equation is quite significant.

To test the hypothesis, the data must go through statistical methods in the form of a correlation coefficient test, a correlation significance test and a determination coefficient test. Based on the results of the calculation of the correlation coefficient of class management (X) with the results of learning mathematics, the value of r = 0.89 is obtained. The coefficient value is consulted with the guide table.

Table 3 Level of Correlation Coefficient

Coefficient Interval	Relationship Level
0,000 – 0,199	Very low
0,200 – 0,399	Low
0,400 – 0,599	Currently
0,600 – 0,799	Strong
0,800 – 1,000	Very strong

Based on the calculation results, it is obtained that r = 0.89 if seen in the table above is in the coefficient interval 0.800 - 1,000 which indicates that the influence of classroom management on mathematics learning outcomes is included in the very strong category. Based on the results of the calculation of the coefficient of determination, the value of r^2 = 0.79 with a coefficient of determination of 79% from the data, it can be formulated that class management can play a role by contributing 79% to mathematics learning outcomes while the remaining 21% is influenced by other factors.

After that, the path coefficient significance test was carried out with the t test. The criteria for testing the significance of the correlation coefficient are the same as the correlation coefficient, namely at a significant level of 5% or 0.05 if tcount > ttable then the correlation coefficient is declared significant. Based on the calculation, it is obtained that tcount = 12.0 with ttable (α=0.05) = 2.02, thus tcount > ttable (α=0.05) = 12.0 > 2.02, meaning the correlation coefficient of classroom management on learning outcomes in mathematics on the approximation material is significant, so it can be concluded that there is a positive and significant influence between the effect of classroom management on learning outcomes of mathematics on the approximation material.

Based on the results of hypothesis testing data analysis, it was obtained data that there was a positive and significant influence between classroom management on mathematics learning outcomes on approximation material. This shows that the research hypothesis is accepted, meaning that classroom management contributes to mathematics learning outcomes. The effect of self-concept on student learning independence statistically indicated by the results of the significance test and regression with the regression equation

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= -33.05 + 0.80X. The strength of the influence of classroom management on mathematics learning outcomes in approximation material produces a coefficient (r) = 0.89 which indicates that there is a very strong influence between classroom management and mathematics learning outcomes on approximation material.
Furthermore, the results of the significant correlation coefficient test obtained tcount = 12.00 while ttable with = 0.05 and dk 38 of 2.02. Comparison of the two values obtained tcount > ttable which shows that the effect of class management (X) on mathematics learning outcomes on approximation material (Y) is positive and significant.

The effect of classroom management on mathematics learning outcomes based on this research is shown from statistical analysis which results in a regression significance of Fcount > Ftable (α = 0.05 = 136 > 4.10, while the coefficient of determination (KD) is 79% and it is obtained information that there is an effect of classroom management on mathematics learning outcomes in approximation material.

This research is confirmed by research conducted by Rulli Agustiani and Siti Maisaroh [4] with the title "The Influence of Classroom Management on Social Studies Learning Motivation for Class V Elementary School Students in Kasihan District, 2016/2017 Academic Year". By obtaining Fcount = 30.446 with p = 0.000 <0.05 and tcount = 13.068 with p = 0.000 <0.05. This means that the better the classroom management, the higher the student's learning motivation. Likewise, the less class management, the lower the student's learning motivation.

In addition, an effect of classroom management on student achievement in socialstudies subjects for class IV at SDN Pondok Terong 02 Depok with an rsquare of 0.587 of 58.7%,meaning that the independent variable was able to explain changes in the dependent variable [5].

Furthermore, the results of research showed that there was a significant effect between classroom management and effective learning in class V SD Negeri 50 Banda Aceh [6]. It is evident from the results of the correlation analysis between classroom management and effective learning that the correlation value is 0.714 > 0.1927 and significant is 0.000 < 0.005. This means that there is a significant positive effect between classroom management and effective learning.

Further research the study using descriptive statistical analysis showed that the average student discipline result was 72.22 and quite high, the average student learning achievement in mathematics was 77.97 which was high [7]. The results of the study using the Pearson Product Moment correlation showed that the rcount value of 0.799 was greater than the rtable value for n = 36, which was 0.329, meaning that there was an influence of learning discipline on student learning outcomes at SD Negeri Nusa Harapan Permai, Makassar City, which became the population. Significant test results with 5% obtained t count 7.746 greater than t table 1.691, this means that there is a significant influence of learning discipline on students' mathematics learning outcomes at SD Negeri Nusa Harapan Permai Makassar City.

The parenting pattern of parents gave a significant direct influence of 51% on student learning outcomes. The community environment has a direct influence of 14% on student learning outcomes and learning discipline has a significant direct influence of 47.7% on student learning outcomes [8], [9].

That class management and student learning discipline are in the very strong category. Meanwhile, the results of the study indicate that there is a positive influence of classroom management on student learning discipline, with the value of the Ajusted R Square coefficient

of 0.806, which means that the better the classroom management, the better the student's learning discipline. The contribution of the class management variable relationship to student learning discipline in this study was 70.0% and the remaining 30.0% was in other ranges [10].

Concussions

Based on the results of the research and discussion, it shows that there is a positive and significant influence between classroom management on learning outcomes for class IV at SDN Cibeureum 2 Bogor City in the Even Semester of the 2020/2021 Academic Year. This illustrates that the better class management is carried out, the better the mathematics learning outcomes obtained by students. In improving student learning outcomes can be influenced by good classroom management carried out by the teacher.

Acknowledgements

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