The influence of class management on mathematics learning outcomes in algebraic form material

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ABSTRACT

This research aims to find out the effect of classroom management on the learning outcomes of mathematics in algebra form material. The question is whether there is an influence of classroom management on the results of mathematics learning in algebra form material? This research method uses a descriptive approach with a quantitative method by knowing the value of the influence of classroom management on students' mathematics learning outcomes in algebra form material. Data was obtained using a questionnaire. The written questionnaire instrument consists of 10 questions on the influence of classroom management and 10 questions on the results of students' mathematics learning in algebra form material. Data analysis techniques using descriptive statistics. The results of the study show that the value of the influence of classroom management on students' mathematics learning outcomes in the form of material algebra obtained an average percentage of scores of 88.34% and 84.83% in the category of excellent. Meanwhile, the maximum value of the influence of classroom management on the mathematics learning outcomes of class X students is 91.72% and 91.37% in the very good category. This shows that the value of the influence of classroom management has a strong relationship with the results of students' mathematics learning in algebra form material.

INTRODUCTION

Education is an awareness of planned efforts to create a learning atmosphere and learning process for students to actively develop their potential to have religious spiritual strength, attitude control, personality, intelligence and noble morals, as well as skills needed by themselves and society. (Rahman et al., 2022).

Education plays a very important role in enhancing and developing human resources (Sugiarti et al., 2024). Education is a communication process that contains the transformation process of knowledge, values and skills, both inside and outside the classroom (Nur Inah, 2015). In the

educational process at school, learning is the most important activity. The success or failure of educational goals depends greatly on how teachers carry out the teaching and learning process at school (Nurhasanah & Sobandi, 2016). Education has a very important role for the progress of all human life, it can create quality, integrity and intellectual people so as to avoid ignorance and lack of knowledge (Isnaini et al., 2021)

In fact, there are schools that are not yet optimal in the teaching and learning process. There are many factors that need to be taken into account in order for the teaching and learning process to run well, namely one of the factors that affect the success of the learning process at school is facilities such as tools or media that will be used in teaching and learning. a process to improve the ability to solve mathematical problems that is much needed (Sirait, 2016). Mathematical learning is an activity carried out by understanding the achievement of mathematical learning to acquire knowledge so as to cause change. In learning mathematics, students' learning problems are individual so that students can learn according to their own abilities (Amallia & Unaenah, 2018). Students' difficulty in learning mathematics is called dyscalculia (Patricia & Zamzam, 2019).

The low level of student mathematics achievement can be seen from the results of the 2015 Trends International Mathematics and Science Study (TIMSS) survey involving 49 countries which stated that Indonesia is ranked 43rd in mathematics achievement with a score of 397 points and is below the national student score level with the TIMSS average is 490 according to Mullis, Martin, & Sainsbury (Putra & Yulanda, 2021). Likewise, the results of the 2015 Program for International Students Assessment (PISA) survey with participants from 70 countries showed that Indonesia scored 386 and was ranked

62nd according to Schleicher (Putra & Yulanda, 2021). Student learning achievement will be affected if students have excessive math anxiety (Anita, 2014).

Anxiety about mathematics affects students' ability to solve mathematical problems (Adhimah & Ekawati, 2020). If students experience math anxiety, their math abilities will be low and students will avoid things related to learning math according to Beilock & Maloney (Stiawan et al., 2024). Students will have difficulty learning mathematics because of their inability to adapt so that the results and achievement of students' mathematics learning are low (Imro'ah et al., 2019). Anxiety in learning causes students to experience difficulties in the learning process (Irfan, 2017). Anxiety can cause disturbances in the performance of cognitive functions such as concentration, remembering, problem solving, and concept formation (Ibadurrahman et al., 2023).

There is a negative influence which is anxiety that arises because many students think mathematics is complicated especially in solving problems in mathematics learning (Wijaya et al., 2018). So it affects the learning achievement of students if they have excessive math anxiety (Anita, 2014).

Learning mathematics is an activity done intentionally, both directly and indirectly, to gain knowledge through an environment that causes changes in the Educational Didactics Journal, Faculty of Education IAIN Bone, Vol. 15, no. 1 June 2021 Student Mathematics Anxiety and Its Effects: A Systematic Literature Review (Putra & Yulanda, 2021). Among the many important roles in mathematics, the fact is that mathematics is still considered difficult for many students (Raharjo et al., 2021). Mathematics is a very important subject because there is no denying that there are many things around related to mathematics.

In learning mathematics there should be a connection between the student's learning experience and the concepts that will be taught by the teacher, because in learning mathematics the concepts are interrelated with each other. Students should understand the basic concepts correctly so that there is no confusion when applying other concepts according to Heruman (Amallia & Unaenah, 2018). In line with increasing the ability to understand the concept of collection through learning mathematics with Articulate Studio media through learning mathematics (Zaki et al., 2019). In the learning process, students can be more active and easily understand the concepts of the material to be learned (Khairunnisa et al., 2019).

Learning mathematics at school is learning that refers to the three functions of mathematics subjects, namely as a tool, mindset, and science or knowledge. While studying mathematics, pupils (students) sometimes experience difficulties in processing information and knowledge received. So that information and knowledge can pass without being understood by students. Challenges in learning mathematics at school, many students experience difficulty in understanding mathematical concepts and mastering the skills to solve mathematical problems. This can be caused by various factors, such as students' lack of interest in learning mathematics, lack of understanding of abstract concepts, and lack of skills in explaining and applying mathematical concepts in real situations.

Student learning outcomes are the final learning scores achieved by students academically through exams, daily assignments, and actively conducting questions and answers that support student learning outcomes. Learning outcomes are student learning achievements based on criteria or assessments that have been set (Dakhi, 2020).

The learning outcome is a good change, that is the student's behavior or attitude during the learning process to achieve the learning goal. There are changes in the success of student behavior in learning through internal factors and external factors, so that learning success can be realized if both factors have been me (Sari et al., 2021). Learning is an activity carried out by individuals to gain knowledge so as to enable individuals to experience change (Kasyadi et al., 2018).

Learning algebraic forms can make students analyze the facts in completing algebraic material (Nuraini et al., 2022). Algebra materials can improve students' critical thinking in studying the problems contained in the questions (Nasoha et al., 2022). The fact that most students have a low understanding of mathematical material is that they have difficulty distinguishing very general methods and understanding operational material in the form of algebra and applying it in daily life (Isfayani, 2023). To understand the learning of algebraic forms, start from the beginning by understanding the basic concept of algebraic forms (Sardin & Rosjanuardi, 2024). Algebra is a lesson that facilitates problem solving by using substitution symbols that are constants and variables so that the value of arithmetic operations on certain numbers is known (Sumargiyani & Tsani, 2024)

Things that affect learning are internal factors, external factors and learning approaches, where internal factors are found in students including factors: innate, intelligence, physical condition, psychology, emotions, age and gender, while external factors are found in students that include external factors : family, class and community environment, as well as learning approaches (Samsudin, 2020).

Classroom management is an effort made by the person responsible for

learning activities to help achieve a satisfactory condition or atmosphere in accordance with the expected goals (Jannah et al., 2020). Classroom management has an important role in increasing students' strategic interest in learning (Kamilah & Furnamasari, 2023). C Class management can be done in a variety of ways, namely organizing the class, creating a conducive atmosphere in learning activities, managing student behavior, and creating good interaction (Laknasa et al., 2021). Teachers are responsible for all the efforts made to support the activities of the learning process (Muna & Suparni, 2024). It can be concluded that classroom management is an activity of all class users by creating a conducive classroom atmosphere so that they feel comfortable when carrying out an effective learning process in order to increase student motivation.

Classroom management is an art in which teachers work together to optimize the classroom environment to create a fun, effective and efficient learning process (Husna, 2020). Class management aims to provide facilities in schools, especially classes to implement various schools (Husna, 2020). Classroom management is an important component in education management, which is the application of other management in classrooms related to infrastructure (Habbah et al., 2023). Class management cannot be separated from the supervision of the school principal (Nur Inah, 2015).

Optimizing and maximizing conducive learning conditions in the classroom and can enable students to accelerate the learning process and progress which requires a relatively short time and can create and maintain good learning conditions according to St Fatimah Kadir (Fidrayani & Mawadah, 2022). Organizing classes related to students, namely the interests, skills, desires and activities of students to

achieve the prerequisites to fulfill the learning process (Faruqi Dwi, 2018).

The skill of managing and controlling the class is one of the teacher's skills in creating and maintaining an optimal and comfortable learning environment. In line with Burhanuddin's opinion that classroom management is an effort made by teachers to create and maintain conducive and optimal classroom conditions for the implementation of effective and efficient learning activities according to Widiasworo (Fidrayani & Mawadah, 2022). Class management is a series of activities carried out by teachers or instructors to try to organize the class so as to enable the teaching and learning process to go according to plan (Nasikin & Marsina, 2022).

In general, the goal of classroom management is to provide facilities for various student learning activities in the social, emotional and intellectual environment of the classroom. The facilities provided allow students to study and work, creating a social atmosphere that provides satisfaction, discipline, intellectual development, emotions, and attitude and appreciation to students. (Rejeki & Warsono, 2023).

According to Nurhadi in (Laknasa et al., 2021) efforts to create and maintain conditions to increase high student motivation can be done preventively or curatively. That is, classroom management, if seen from its nature, can be divided into two, namely:
Classroom Management in Student Settings
1. Preventive classroom management (preventive action) is action taken before deviant behavior appears that can disrupt optimal conditions for the learning process.
2. Corrective classroom management is classroom management that is carried out as it occurs after deviations in student behavior appear to disrupt the ongoing learning process. The teacher will try to

stop or reprimand the disruptive behavior and further direct good behavior towards the students to support the smoothness of the learning process.

Physical Class Management
1. Classroom arrangement that can support the learning process
2. Facilitate all learning tools
3. Seating arrangements and arranging classroom lighting
4. As well as classroom facilities such as chalkboards, chairs, tables, and so on.

Based on the description above, it can be concluded that the purpose of classroom management is to determine the influence of classroom management on the results of mathematics learning in student algebra material by analyzing and describing it correctly and optimally.

METHOD

The research method used is a quantitative method with a descriptive approach that aims to express the correct data. According to Iskandar in (Rosmana et al., 2022) descriptive research is research that provides an overview of the symptoms, phenomena or facts being studied so that it can reflect the correct value. According to Sugiyono in (Suriani & Pratiwi, 2022) the quantitative method is a method based on the philosophy of positivism in the context of examining the sample population, as well as collecting data using research instruments, quantitative or statistical data analysis

with the purpose of testing predetermined hypotheses.

The population in this research is all students in classes X, XI, and XII at MAS AL WASLIYAH Negeri Lama Bilah, downstream of Labuhanbatu Regency, which consists of three classes with a total of 81 students.

Table 1. Number of Students

Class	Male	Female	Number of Students
X	18	6	24
XI	18	5	23
XII	29	5	34
Total	65	16	81

The data collection technique is to distribute a questionnaire research instrument to obtain data on the influence of classroom management with 10 questions, and 10 questions regarding the results of learning mathematics in the form of algebra. The questions answered by students were counted and analyzed, using descriptive statistical data analysis.

The questionnaire used as a data collection tool in this research is closed, that is, respondents give a mark ($\sqrt{}$) for each answer given, for example in the column "Yes" with a score of 1 and "No", which means they get a score of 0 or not. at all (Hasanah et al., 2023).

This questionnaire is calculated using the Gutmann scale so that you get the right answer to the question asked, which is Yes given a score of 1 or No given a score of 0 (Yulia & Setianingsih, 2020).

Table 2. Class Management Indicators and Mathematics Learning Outcomes in Algebra Form Material

No.	Variable	Indicator
1.	Class Management	Arrange cleaning facilities and so on are fulfilled and complete.
		Learning planning is going well.
		Creating a conducive, orderly, disciplined, enthusiastic and optimal learning environment.
2.	Mathematics Learning Results in Algebraic Forms	Students can understand the basic concepts of algebraic forms in learning mathematics.
		Students can complete arithmetic operations in algebraic form well.
		Students can explain learning mathematics in the form of algebra.

In this study, the data analysis technique used is descriptive statistical data. According to (Waruwu, 2023) descriptive statistics is a way to describe the various characteristics of data derived from a sample in the form of mean, median, mode, percentile, decile, quartile in the form of analysis or pictures/diagrams.

The data obtained through the survey is quantitative data according to Sugiyono in (Azzahra et al., 2023). Data analysis techniques used to illustrate the results are maximum, minimum and average percentages (Talakua & Sesca Elly, 2020).

Table 3. Score Percentage

No.	Score Percentage	Category
1.	80 – 100%	Very Good
2.	60 -79%	Good
3	40 – 59%	Pretty Good
4	20 – 49%	Enought

Regarding the Gutman scale, provision for obtaining a percentage score
(Answer Yes)/(Questionnaire Answer) x 100%.

In this study, the data analysis technique used is descriptive statistical data. According to (Suriani & Pratiwi, 2022) descriptive statistics is a way to describe various characteristics of data derived from a sample in the form of mean, median, mode, percentile, decile, quartile in the form of analysis or image/diagram.

The data obtained through the survey is quantitative data according to Sugiyono in (Azzahra et al., 2023). Data analysis techniques used to illustrate the results are maximum, minimum and average percentages (Talakua & Sesca Elly, 2020). Until a percentage value was obtained regarding the influence of classroom management on the results of mathematics learning in the form of algebra for MAS AL WASLIYAH students.

RESULTS AND DISCUSSION

Results of the Influence of Class Management on Mathematical Learning Outcomes in Algebra Material

The number of students in this study is as many as 81 people which is class X MAS AL WASLIYAH BILAH HILIR, for more details can be seen in Table 4.

Table 4. Number of Students Who Completed the Questionnaire

Class	Number of Students	Number of Students Who Completed the Questionnaire
X	24	23
XI	23	22
XII	34	30
Total	81	75

Based on the table above, it is known that the number of X MAS AL WASLIYAH class students who are willing to fill in the questionnaire is 75 people out of 81 students which is 92.59%.

Table 5. Percentage of Students Who Completed the Questionnaire. The Effect of Class Management on Mathematics Learning Outcomes in Algebra Form Material

Class	Management Class (Percentage)	Mathematics Learning Results in Algebraic Forms (Percentage)
X	91,72%	91,37%
XI	85%	82,12%
XII	82,31%	81,02%
Avarage	88,34%	84,83%
Maximum	91,72%	91,37%
Minimum	82,31%	81,02%

Based on the table above, the percentage value of the influence of classroom management on the mathematics learning outcomes of MAS AL WASLIYAH students is distributed to the class of 91.37%. While in the class From the percentage analysis above it is known that classes XI and XII have a percentage categorized as "very good" because some

students answered "Yes" to the question regarding the influence of classroom management. about the mathematics learning results of MAS AL WASLIYAH NEGERI LAMA students. From the data table above, the results of the questionnaire filling study that the researcher has conducted on the students of MAS AL WASLIYAH NEGERI LAMA can be presented in graphic form in Figure 1.
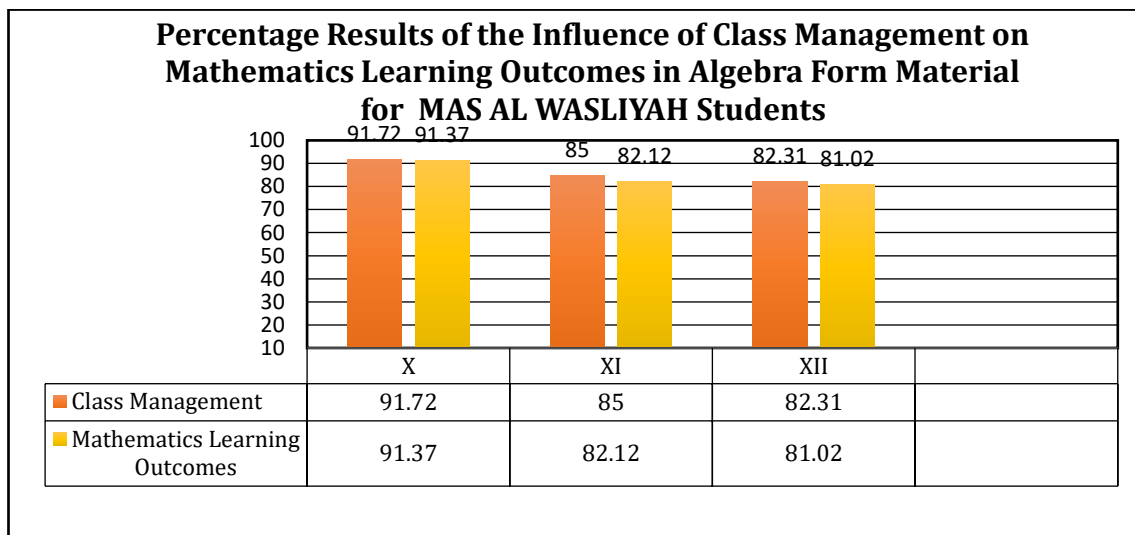
Percentage Results of the Influence of Class Management on Mathematics Learning Outcomes in Algebra Form Material for MAS AL WASLIYAH Students

	X	XI	XII
■ Class Management	91.72	85	82.31
■ Mathematics Learning Outcomes	91.37	82.12	81.02

Figure 1. Percentage Results of the Influence of Class Management on Mathematics Learning Outcomes in Algebra Form Material for MAS AL WASLIYAH Students

Discussion of Maximum and Minimum Average Value Percentage on the Influence of Class Management on Mathematics Learning Outcomes in Algebra Material for MAS AL WASLIYAH Students. Average Value of the Influence of Class Management on Mathematics Learning Outcomes in Algebra Form Material for MAS AL WASLIYAH Students

Based on the average value table, it is known that the percentage of influence on classroom management is 88.34%. The percentage value of the influence of classroom management is higher than the percentage value of students' mathematics learning results in algebra form material, but the difference is only 3.51%. While the average value of student mathematics learning results in algebra form material is known to be 84.83%, it means that MAS AL WASLIYAH students are able to understand mathematics learning in algebra form material due to the influence of classroom management which really makes students more enthusiastic in learning.

In accordance with the opinion (Erwinsyah, 2017) that class management aims to increase effectiveness and efficiency in achieving learning goals. In line with the opinion (Amelia & Siregar, 2022) that the effectiveness of classroom management is to increase concentration in learning mathematics. In line with the opinion (Aprilia & Syunu Trihantoyo, S.Pd, 2020) that classroom management strategies improve learning effectiveness.

Likewise, students' math learning outcomes increase. Because good classroom management and interesting teaching variations are one of the factors that influence students' mathematics learning outcomes. As well as making students increase their curiosity, motivation and creativity towards learning mathematics.

Based on the table, the maximum percentage value for the influence of class management is 91.72% which is in the

class. While the maximum percentage of marks is obtained in class X, both classes also have good marks. With good classroom management, it turns out that it can trigger students' motivation to be higher, students' curiosity about learning mathematics increases every day with various interesting learning methods. The existence of various different teaching variations during the learning process can support the improvement of student morale. So with the variety of classes that are conducted in teaching, students do not feel bored until a high level of learning mathematics in algebra form material is achieved.

In line with the opinion of (Laknasa et al., 2021) teaching variation is an activity of the teacher in the process of teaching and learning interaction which aims to overcome student boredom so that in teaching and learning situations students always show enthusiasm in teaching and learning situations to the fullest persistence and participation.

In line with the opinion (Setriani, 2017) that if you want to improve students' mathematics learning outcomes, efforts can be made by understanding the teaching style and doing it in a variety of ways.

Based on this table, the minimum value for the percentage of classroom management influence is 82.31% which is in class XII. This is the minimum percentage of marks obtained which can still be categorized as excellent, just like the other two classes which are still categorized as excellent. While the minimum percentage value of student mathematics learning results obtained in this class is a high profit value.

In line with the opinion of (Yani & Siwi, 2020) the teacher's role in controlling the classroom situation must be able to create a learning atmosphere so that students have high learning motivation, which will help students to be active in learning and have the opportunity to achieve maximum goals.

In line with (Hasnan et al., 2020) motivation is a desire that activates, mobilizes, channels and directs attitudes and behaviors. And (Gustiawati, 2016) motivation to implement the learning process well and seriously.

The influence of good classroom management on students' mathematics learning results makes learning fun and classroom conditions conducted by teachers and students become more comfortable.

Because from the research conducted by the researcher, he directly saw the state of the classes at MAS AL WASLIYAH NEGERI LAMA, more precisely, in three classes namely class X, XI and regarding mathematics, the students enthusiastically answered the questions given. The same goes for classroom conditions in schools that are very safe and everything is fulfilled, in addition to teachers who can conduct learning well and control the classroom conditions so that it is comfortable for learning and various variations in teaching make students less bored and fun.

Based on the presentation of the data that has been obtained, good classroom management has a great influence on the results of mathematics learning in the algebra form of students at MAS AL WASLIYAH Negeri Lama because they have achieved a percentage of marks in the very good category which is the maximum score.

CONCLUSIONS AND SUGGESTIONS

Based on the results and discussion above, it can be concluded that the Influence of Class Management on Mathematics Learning Outcomes in Algebra Materials for MAS AL WASLIYAH NEGERI LAMA Students has achieved the maximum score in the very good category. Good classroom management affects students' mathematics learning outcomes

and they can pay attention and improve their classroom management to improve and maintain better learning outcomes than before. This research aims to find out the value of the influence of classroom management on students' mathematics learning outcomes in algebra form material.

Recommendations for future researchers, the findings of this study can be used as a basis for comparison and reference material as well as a basis for further research to learn more about the influence of classroom management on students' mathematics learning outcomes to produce more clarifying research findings. Therefore, future researchers are expected to be able to conduct interviews and involve teachers and media that are very interesting to students to further improve classroom management that affects students' mathematics learning outcomes.

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