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Analysis of Students Interest in Learning Mathematics at MAS Plus Al Ulum Medan

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Abstract

This research began due to the low interest of students in learning mathematics. This can be observed from the classroom atmosphere and the students' responses during the learning process. Interest in learning is very important so that students are happy and enthusiastic in undergoing the learning process, thereby improving their academic achievements. This analysis of learning interest is conducted to determine the extent of students' interest in learning mathematics. The results of the analysis obtained can be used as evaluation material to enhance students' interest in learning, particularly in mathematics. In this study, students' learning interest was analyzed using qualitative research with a descriptive approach. This research technique was carried out by distributing a questionnaire, which was subsequently analyzed descriptively. The questionnaire consists of 24 statements filled out by 32 students from the XI Religious Studies class. In short, students are interested in learning mathematics using the learning media in the form of the Mathlab graphing calculator application. They seem happy and enthusiastic about learning. The classroom atmosphere is also enjoyable because the students appear active in solving the problems given. This is what makes students' interest in learning increase. The results of the research related to students' interest in learning mathematics yielded 79.04% with high criteria. On the indicator of enjoyment in learning mathematics, the percentage reached 82% with a high category; the indicator of interest in following mathematics lessons had a percentage of 80% with a high category; the indicator of attention in mathematics learning had a percentage of 75% with a sufficient category; and the indicator of student involvement during mathematics learning had a percentage of 73% with a sufficient category. These results indicate that students have an interest in learning mathematics in class.

Keywords**: **Learning Interest, Mathematics subject, Graphing Calculator

INTRODUCTION

Mathematics is one of the fields of knowledge that has a significant contribution in schools and everyday life. Through learning mathematics, its usefulness and benefits can be felt, such as in the buying and selling process, making various types of toys using mathematical formulas, and creating medicines that require mathematical knowledge to determine their dosages. Based on these examples, it can be stated that mathematics is a field of knowledge that should be introduced from early childhood education, elementary school, to higher education. Mathematics is introduced because it can prepare students for logical, analytical, systematic, critical, and creative thinking skills, as well as the ability to collaborate with peers. Mathematics is referred to as the queen of sciences, which means that the field of mathematics is not bound by other sciences. Therefore, understanding mathematical concepts is very necessary. In order to achieve that goal, a high level of interest and curiosity in learning is needed. The interest in learning will arise from within oneself or from the support of others. (Ina Ledun et al., 2020) state that interest can expand curiosity and feelings of joy.

Learning is an effort to transform oneself by adding knowledge and skills (Kallesta et al., 2018). During the learning process, students are encouraged to be active in class so that the learning objectives can be achieved. Therefore, teachers must be able to master the material, provide motivation, and master teaching strategies to encourage students' interest in learning.

Interest is useful in encouraging an individual's internal motivation to pursue or obtain something. Crow and Crow (Khairani, 2017) reveal that interest is something that demonstrates ability by providing a reason that leads us to observe someone, an object, or an activity, or something that can influence our experience driven by the activity itself. Interest is not innate but must be learned, and it influences the subsequent learning process as well as the acceptance of new interests (Slameto, 2015). Susanto (2014) states that interest is an aspect that significantly influences learning success. This is in accordance with Hartono's opinion (Susanto, 2014) suggests that interest significantly contributes to students' learning success. Good mathematics learning achievement can be maximally achieved if students have an interest in learning. Interest plays a very important role in the teaching and learning system to achieve an improvement in academic performance. Interest in learning mathematics has an impact on the level of student engagement. In lazy students, the lack of desire to learn and the experience of failure are caused by the absence of interest in learning. The high or low interest in learning mathematics can be determined based on indicators of learning interest, which consist of attention, desire to learn mathematics, enjoyment while learning mathematics, seriousness while learning mathematics, and satisfaction shown by students during the teaching and learning process.

Students who lack interest in education generally achieve results below their capabilities in all subjects or in subjects they do not like. Students usually appear passive or lazy in following the lessons. This is in agreement with the statement by (Sturges et al., 2016) which states, “Students with a good interest in learning mathematics can be seen through good learning outcomes, having regular study habits, and quickly understanding reading materials”.

In every school, teachers hope that students have a high interest in learning. This will make it easier for teachers to guide students' learning at school so that students can easily obtain the expected learning outcomes. However, the reality on the ground shows that this rarely happens among students. Students who do not have an interest in learning will get poor learning outcomes, both feelings of pleasure, attention and their involvement. Based on initial research in the field, data were obtained that students were less interested in learning mathematics. This can be seen from the students' response when the teacher enters the classroom. Students look unenthusiastic, busy talking to friends, and even do not respond to the teacher's words. The results of the questionnaire given to students obtained data that 82% of students were less interested in learning mathematics because the material was difficult, boring, did not use learning media, and there were assignments that became a burden for students. These initial findings are supported by research conducted (Anggraeni et al., 2020) which states that the weak interest in learning mathematics of students can be seen from the lack of attention of the teacher when teaching because many students are busy talking with friends, having fun, or just being silent. Research (Andri et al., 2020) states that the low interest of students in paying attention to mathematics lessons can be seen when students are busy playing with friends when learning is in progress and do not respect the teacher teaching. The results of the study (Nurhafifah & Mayasari, 2019) obtained data that only 33% of students like to learn mathematics. This is because teachers lack motivation for students in learning, lack optimal supervision of students' seriousness in doing assignments or exams, and lack of direction from parents to increase interest in learning.

(Barimbing et al., 2022) states that students who have low interest in learning mathematics are influenced by several factors, including lack of rest time at home, no interest in learning mathematics, no parental role in helping students to learn, fear of asking questions to the teacher, no use of media and learning tools in class, and students do not yet know how to develop interest in themselves. From the reality above, it can be seen that there are students who do not have an interest in learning mathematics so that there is a difference between the expectation of the emergence of students' learning interest to the maximum and the reality of the

low interest in learning students. Difficulties in learning can be caused by the low interest in learning students. If students have an interest in learning, students will be serious in undergoing every learning process that takes place and go through each process happily. Furthermore, students also take part in the learning process with enthusiasm without any coercion from teachers or families.

Students' interest in learning when studying mathematics is very necessary, because through this learning interest students will be interested and motivated to take mathematics learning. In addition, learning interest is an initial capital that students should already have because through this interest, learning conditions will be fun, students will become active when the learning process takes place (Falah & Fatimah, 2019). Because learning interest is one of the factors of the success of teaching and learning, there are several factors put forward by Totok Susanto (Zahirah et al., 2024), namely the factors that can affect students' learning interest including (1) motivation, (2) family, (3) teachers, (4) facilities and infrastructure, and (5) friends. The results of the study (Sarah et al., 2021) obtained data that there are internal factors and external factors that can affect students' learning interest. Internal factors include curiosity, motivation and physical, while external factors include family, school and community environment factors. Therefore, based on the factors above, it is necessary to pay special attention to educating and giving direction to students in learning. Learning interest has a big influence on the learning process. Teachers are one of the factors that can increase students' interest in learning. The hope is that teachers will be able to be creative in providing interesting subject matter so that it can make students happy and enjoy the learning process. Students who are happy during learning will cause student learning outcomes to increase and can increase students' interest in learning. Therefore, learning in the classroom requires capable teachers, able to provide explanations of the material by creating a fun learning atmosphere, arousing students' interest and enthusiasm in learning. Widiasworo (2017:25) states that there are ways that teachers can do in fostering students' interest in learning, including (1) having a warm and cooperative attitude; (2) making a good impression at the beginning of learning; (3) learning in accordance with students' real lives; (4) creating varied learning methods; (5) using learning media; (6) doing ice breaking when learning starts to get boring; (7) giving rewards to students.

Based on the explanation above, a study was conducted to determine the students' interest in learning mathematics at Madrasah Aliyah. This analysis of learning interest is conducted to determine the extent of students' interest in learning mathematics. The results of the analysis obtained can be used as evaluation material to increase students' interest in learning, especially in mathematics.

RESEARCH METHODS

This research is a qualitative study with a descriptive approach. Moleong (2014:6) explains that qualitative research is a form of research aimed at understanding phenomena (events) regarding what is experienced by the research subjects, such as behavior, perception, actions, and so on, in a comprehensive manner and reporting the results in written language. The data sources in this study were obtained from questionnaire results and interviews with teachers as informants.

This research was conducted in a natural classroom setting by having students fill out a questionnaire on their interests. Students fill out this questionnaire according to their own personalities without any interference from others. The data collection process is carried out directly at the source of the data. The research data obtained is described descriptively in the form of sentences to explain how students' interest in learning after the teaching process is

completed. In the classroom learning, students solved story problems on linear programming using the Mathlab graphing calculator application, which had been downloaded on each student's Android device. The researcher used a questionnaire as a measurement tool to obtain data and a brief interview as a research instrument. The researcher provided 24 statements containing both positive and negative statements to 32 students in the XI Religious Studies class at Madrasah Aliyah Plus Al Ulum Medan, Academic Year 2024/2025. The results of the questionnaire filled out by the 32 students will be analyzed to determine the students' interest in learning mathematics.

RESULT AND DISCUSSION

The format of the results of research and discussion is not separated, considering the number of pages available for the author is limited. The data obtained from the student learning interest questionnaire given to the 32 students consists of 4 indicators of learning interest, namely (1) feelings of happiness, (2) student interest, (3) student attention, (4) student involvement. The respondents of this questionnaire are 11th-grade Religious Studies students at Madrasah Aliyah Al Ulum Medan.

In this research, a questionnaire was used to obtain data on students' interest in learning mathematics in the classroom. This questionnaire was completed by the students themselves without any input from others. The researcher scores each statement in the questionnaire. The scoring for each answer is explained in the table below:

Table 1. Student Learning Interest Questionnaire Scores

No	Positive Statement	Score	Negative Statement	Score
1	Always (SL)	4	Always (SL)	1
2	Often (SR)	3	Often (SR)	2
3	Sometimes (KK)	2	Sometimes (KK)	3
4	Never (TP)	1	Never (TP)	4

Table 2. Criteria for Interest in Learning Mathematics

No	Score Achievement Level	Criteria
1	76 – 100%	High
2	51 – 75%	Quite High
3	26 – 50%	Low
4	0 – 25%	Very Low

Table 3. Result of the Student Mathematics Learning Interest Questionnaire

Indicator	Many Statements	Percentage
The feeling of joy in learning mathematics	6	82%
Interest in taking math lessons	6	80%
Attention in mathematics learning in the classroom	6	75%

Engagement during mathematics learning in the classroom	6	73%
Students Learning Interest		79,04%

Based on the results of the questionnaire filled out by students with 24 statements to measure students' interest in learning mathematics, administered to 32 students of the XI Religious Studies class, a score of 2.428 was obtained with a maximum score of 3.072. The students' interest in learning mathematics, in percentage, resulted in 79.04% with the criterion "High". Based on the questionnaire results for the indicator of enjoyment in mathematics learning, a percentage of 82% was obtained with the "High" criterion. This means that students greatly enjoyed the learning conducted during the research. Students are very enthusiastic about receiving the material being taught and are pleased with the mathematics teacher who provides the learning material. During the lesson, the students were very enthusiastic about learning. The teacher delivered the material using a learning medium in the form of the Mathlab graphing calculator, which had been installed on each student's Android device. The learning activities were carried out by the students with a sense of joy because they conducted experiments according to the provided worksheets and then performed their own experiments to better understand the concepts. Students participate in the learning process without feeling forced, making the learning meaningful for each student.

On the interest indicator, 80% falls under the "High" category. The feeling of interest in learning is very important in fostering students' interest. Students who are interested in the learning material provided will engage in the learning process with joy. During the learning process, many students ask questions when there is something they do not understand. Although the students have been divided into discussion groups to share knowledge with each other, they still seek reinforcement of what they have done. Through this interest, it is hoped that students will be able to go through the series of lessons seriously and understand the material being studied.

On the attention indicator, it is 75% with quite high criteria. In the learning process, there are students who only follow the instructions on the student worksheet, there are students who only imitate how their group members try the application, and there are students who truly pay attention to the teacher when explaining how to use the application and how to complete the tasks given in the student worksheet. Students who pay serious attention will quickly understand how to solve the given problems. However, for students who are less active in the group, teachers should give special attention by asking what they do not understand, providing questions that help students think by relating problems to real-life situations, and motivating students to capture their attention.

On the engagement indicator, it is 73% with quite high criteria. Student involvement in learning will make it easier for students to understand the material provided. Student involvement in class can be seen through group discussions and presenting the results of group discussions in front of the class, as well as students' awareness in reviewing lessons at home. Students who are heavily involved in group work usually understand the material given, allowing them to explain the process of solving answers to their peers. Students who have understood the material will confidently stand in front of the class and explain the results of their group discussion to other groups. This student involvement will make other students interested in learning mathematics.

Based on the results of the observation conducted on the XI Religious Studies students, it was found that the students' interest in learning mathematics is classified as high. This was obtained after the students filled out a learning interest questionnaire conducted after the linear programming material was completed. The students were very enthusiastic in participating in the learning because the teacher used a learning application downloaded on each student's Android device. Students enjoy learning more because they gain new experiences and it is not boring.

Before the lesson begins, the teacher provides motivation by relating the material to be studied with everyday life. The material in the linear program, especially the story problems, is directly related to everyday life and economics. Students can imagine how they would be involved when reading story problems and think about how to achieve significant profits. After motivating the students, the teacher divides the study groups that have been arranged according to each student's ability. The division of groups is based on the daily grades of the students in the class.

After the division of student groups, the teacher then provides the students with worksheets that include the use of the Mathlab graphing calculator application and also questions that the students must discuss within their groups. The teacher only explained how to use the application and acted as a facilitator so that students could understand the concept of solving linear programs. During the learning process, the students appeared enthusiastic in following the teacher's instructions. Students felt happy because they could use the application themselves according to the student worksheets and even tried to create their own questions to better understand the concept of linear programming. Based on the instructions in the student worksheet, it is expected that students understand when to shade upwards and when to shade downwards. In addition, students must also understand when to use dashed inequality lines and solid inequality lines, how to create inequality graphs, and how to determine intersection points. However, for story problems, students need to discuss in groups to determine the greater than or less than signs. By being given group work and using applications, students are more enthusiastic about learning mathematics because it does not make them bored, tired, or sleepy. Through this application, students are also more interested in learning and paying attention to the teacher when explaining how the learning process will be conducted. Through group discussions, students can also provide input, teach classmates who do not understand, so the involvement of students in each group becomes more apparent.

Based on the results of interviews with teachers, data was obtained that students will enjoy learning mathematics when using learning media. When the teacher explains the material using the conventional teaching model, students who are not interested in learning mathematics will appear unenthusiastic, doze off, talk quietly with friends, have a blank stare even while paying attention to the teacher, remain silent when the teacher asks questions, or engage in their own activities to distract themselves from boredom during the lesson. Therefore, teachers must create enjoyable learning experiences in the classroom using learning media so that students become enthusiastic, eager to learn, and their interest in learning mathematics increases. This is in line with the opinion of (Putri et al., 2019), which states that one of the ways teachers can foster students' interest in learning is by using learning media and more varied teaching methods, thereby making students interested and having an interest in learning mathematics.

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CONCLUSION

Based on the overall research results, data was obtained showing that students have a mathematics learning interest of 79.04% in the high category. This was achieved through the use of learning media in the form of Mathlab graphing calculators. Students are very enthusiastic about using learning aids because they can learn while playing, discuss in groups, and thus understand the concepts of the material provided. During the learning process, the students appeared happy and enjoyed the flow of the lessons. The presence of feelings of happiness, attention, interest, and student involvement in learning causes students' interest in mathematics to increase, leading to improved academic performance. Therefore, it is hoped that teachers can use appropriate learning media that align with the material to be studied, so that students feel that mathematics is not a boring subject.

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