ANALYSIS OF MATHEMATICS LEARNING STUDENT'S INTEREST OF JUNIOR HIGH SCHOOL

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Artikel info

Abstract

The role of math in the real world is very large. But in fact, there are still many students who are afraid and dislike math lessons so students' interest in learning math is still low. The purpose of this study was to determine the analysis of students' interest in learning mathematics at SMP YKPP Dumai. The type of research used in this research is descriptive quantitative research. The sampling technique in this study was simple random sampling. In this study, the data collection technique is through distributing questionnaires and interviews, while the instrument used is a learning interest questionnaire. Therefore, to test the learning interest questionnaire instrument, the validity test and reliability test were carried out. The data analysis technique was carried out by researchers using the help of SPSS and Microsoft Excel. Based on the results of the analysis, the highest percentage of 170 students of SMP YKPP Dumai regarding the analysis of interest in learning mathematics based on academic ability when viewed from all indicators that influence it lies at 36.47% and is in the interested category. This means that YKPP Dumai Junior High School students in the even semester 2023/2024 school year predominantly have an interest in learning mathematics.

INTRODUCTION

Education is a very important part of the development process of a nation and state. This is because, without education, a person will have difficulty doing something. After all, they do not have mature knowledge in themselves. But unfortunately, the education system

in Indonesia still has obstacles so there are problems that occur in the world of education. According to (Novilanti, Susanti, & Suripah, 2021), the problem of education is an important thing to discuss because education is a need that must be fulfilled throughout life to improve the quality of human resources. The problems that occur in education in Indonesia lie in the education system. One of the causes of problems in the education system is the low desire to learn.

The desire to learn is called interest in learning. Interest in learning affects students' academic ability or a learning achievement. Thus, according to S. Suripah, Firdaus, & Novilanti, (2022) learning achievement is the result of the process and a measure of success. However, not all students have the good academic ability or learning achievement in all lessons. Therefore, a person must have a mental tendency in each individual that involves feeling happy.

According to Yeh, Cheng, Chen, Liao, & Chan (2019), interest is a mental tendency in each individual that involves feelings of pleasure and seriousness in carrying out an activity to achieve a goal. About learning, according to Fitriwati (2018), interest in learning is a tendency of attention or preference to obtain learning outcomes. Thus, learning interest has several indicators. An indicator is a tool or component of a material to achieve a goal. This means that the learning interest indicator is a tool or important component to review the learning interest of students. According to M. Suripah (2015), the indicators of interest in learning are feelings of pleasure, learner interest, learner attention, and learner involvement. Indicators of interest in learning are influenced by internal and external factors in students. Furthermore, the thing that most influences students' interest in learning is dependent on the teacher.

Teachers are educators whose job is to teach and guide students. However, it turns out that the role and function of a teacher are not just teaching and guiding his students. Although the roles and functions of teachers are numerous, teachers must have effectiveness and success in teaching to attract students' attention to learning. According Alzaber, Suripah, & Susanti (2021), one of the aspects that teachers need to pay attention to is the process of stimulating and arousing students' curiosity because this can indicate that students are excited, motivated, and passionate about starting, exploring, and analyzing things needed in the learning process. Therefore, teachers are obliged to maintain and increase students' interest in learning through the way teachers teach, especially in learning mathematics by creating a pleasant learning atmosphere.

Teachers are obliged to create a pleasant learning atmosphere so that students can recognize and control themselves. This opinion is supported by the National Education System Law No. 20 of 2003, it is explained that efforts are made consciously and planned to create an atmosphere in the learning process so that students are better able to actively develop their potential for self-control, intelligence, community skills, religious spiritual strength, personality, and noble character (Permendiknas, 2003). However, teachers must be able to make careful preparations in the learning process. According to Zetriuslita, Suripah, Dahlia, & Rohana (2022) to achieve learning objectives, teachers must be able to make careful preparations before the learning process is carried out, especially in learning mathematics. This is because math is the most frightening and boring lesson so teachers must be able to make careful preparations.

Math is one of the most frightening and boring subjects for students. In math learning, it is not uncommon for students to feel bored learning. Math is a subject that is easy to do if you understand the mathematical concepts given. However, according to Alpar & van Hoeve (2019), learning mathematics is not just about understanding the concepts, but everything that happens in the process of learning mathematics is something that must be appreciated. In learning, the process greatly affects success. So in fact, learning mathematics is not just getting good at counting, but a lot of knowledge and more abilities gained from learning mathematics such as the ability to think critically, the ability to solve problems, the ability to analyze, and others in living everyday life. Therefore, mathematics is an important science in everyday life and is one of the fields of study taught in formal educational institutions.

According to Yolanda & Sthephani (2021), math is a basic science that is taught at all levels of education, from elementary school to college. But in fact, there are still many students who are afraid and dislike math lessons so students' interest in learning math is still low. Students' low interest in learning math is generally influenced because they always think that math is always difficult and is the most boring lesson when done.

However, based on the results of interviews at SMP YKPP Dumai between researchers and mathematics teachers, student interest in learning mathematics is still low. When associated with indicators of interest in learning, it shows that students are still minimal who are happy, interested, attentive, and involved in learning. This is due, among other things, to habit factors during the 2020 pandemic which made children lazy to study, or the gadget factor at home. Thus, there are still many students who do not understand basic math material when they were in elementary school or at the previous level so the teacher must explain the most basic material.

In addition, through observations made by researchers, students' abilities are very diverse, some are active and some are passive. Teachers provide material in a relaxed manner so that math learning is not stressful and frightening for students. Thus, students focus on the delivery of material presented by the teacher. However, there are still students who do other activities when learning takes place such as drawing. In addition, students there also try to answer questions given by the teacher. Thus, although the learning process has been going well and optimally, of course, teachers and students experience several obstacles in teaching.

Based on the description of the problem above, the researcher is interested in conducting a study entitled "Analysis of Mathematics Learning Student's Interest of SMP YKPP Dumai" to analyze the category of students interest in learning mathematics at SMP YKPP Dumai.

RESEARCH METHOD
Types of research

The type of research used in this research is quantitative descriptive. This analysis is intended to analyze data regarding the interest in learning mathematics of YKPP Dumai Junior High School students. According to Jayusman & Shavab (2020), descriptive research is carried out by seeking information, collecting data, and planning an activity based on existing symptoms or facts and clear objectives. Furthermore, according to Ramdhan (2021),

quantitative research is an investigation of a phenomenon systematically by collecting data so that it can be calculated through numbers. The research design is shown as follows:
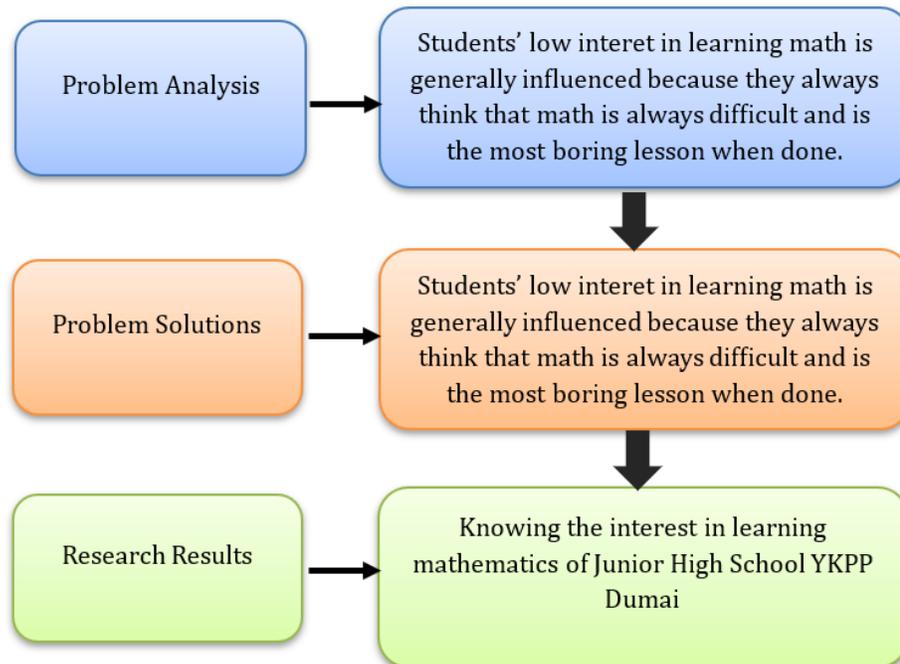

Figure 1
Research Design

Time and Place of Research

This research was conducted at SMP YKPP Dumai located at School Street, Bukit Datuk Village, South Dumai District, Dumai City, Riau Province. The time of this research is in the even semester of the 2023/2024 school year.

Population and Sample

The population in this study were all students at SMP YKPP Dumai in the even semester of the 2023-2024 school year. Unlike the sample, the sample is a small part of the population. The sampling technique in this study was simple random sampling. The sampling technique in this study was simple random sampling. The sampling technique for filling out the questionnaire was to randomly select 170 students at SMP YKPP Dumai without regard to existing strata. While the sampling technique for interviews is to randomly select 3 people per each grade level, so that it consists of 1 student of grade 7, 1 student of grade 8, and 1 student of grade 9. This is done to strengthen the analysis of students' interest in learning mathematics. According to Sugiyono (2018), simple random sampling is taking sample members without regard to strata and is done randomly. After determining the sample, data collection techniques can be carried out by researchers.

Data Sources, Instruments, and Data Collection Techniques

Data collection techniques are ways to collect data or research objects. Data collection techniques will make it easier for researchers to conduct research. This is because this technique already has an initial direction before conducting research. In this study, data

collection techniques through distributing questionnaires and interviews. In filling out the questionnaire, the number of samples was 170 students of SMP YKPP Dumai. While the number of samples to be interviewed is 3 students as level representatives, consisting of 1 grade 7 student, 1 grade 8 student, and 1 grade 9 student. This aims to strengthen research on the analysis of students' interest in learning mathematics at SMP YKPP Dumai so that researchers interview students through the questions in the questionnaire so that the validation of the interview instrument has been carried out simultaneously with the validation of the questionnaire instrument. Thus, the instrument used is a learning interest questionnaire.

According to Yusup (2018), research instruments are tools for collecting data or objects from research variables. According to Nasution (2016), things that need to be considered in compiling research instruments are the problems and variables studied, data sources, instrument information, and data types. The types of instruments in this study are questionnaires of interest in learning mathematics and interviews. Therefore, to test the learning interest questionnaire instrument, the validity test and reliability test were carried out.

The validity test in this study was not conducted again because the questionnaire instrument had been adopted from S. Suripah (2015), entitled "Comparison of the Effectiveness of Cooperative Learning Models of Student Teams Achievement Divisions (STAD) Type and Think-Pair-Share (TPS) Type given Achievement and Interest in Learning Mathematics of Junior High School Students in Grade VII in the 2011/2012 Study Year" so that this study interest questionnaire has proven its validity, both expertly and constructively. After the validity test does not need to be done again, the researchers conducted a questionnaire reliability test.

A reliability test is a reliable measuring instrument due to the suitability of the measuring instrument being measured. According to Syamsuryadin & Wahyuniati (2017), several reliability tests of an instrument that can be used are test-retest, equivalent, and internal consistency. The internal consistency reliability test technique consists of the split half test, KR 20, KR 21, and Cronbach's Alpha. According Aliman & Astina (2019), reliability testing for instruments that have more than 1 correct answer such as essay-shaped instruments, questionnaires, or questionnaires can use the Cronbach Alpha test. Therefore, the reliability test technique in this study uses the Alpha-Cronbach reliability formula. The Alpha Cronbach reliability formula is:

$$r_i = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum s^2 i}{s^2 t}\right]$$

Description:
r_i = Intrument Reliability
k = Number of Question items
$\sum s^2 i$ = Sum of item variances
$s^2 t$ = Total variance

The reliability test in this study used the Cronbach Alpha test where an instrument is declared reliable if the reliability coefficient value is as follows:

Table 1
The reliability test criteria

Coefficient	Value Relationship Level
0.000-0.199	Very low
0.200-0.399	Low
0.400-0.599	Medium
0.600-0.799	High
0.800-1.000	Very High

Data Analysis Techniques

This analysis is intended to analyze data regarding the interest in learning mathematics Junior High School of YKPP Dumai. According to Aholongan & Suripah (2021), data processing is then carried out obtained through the calculation of percentages on each indicator of the student interest questionnaire assessment and conclusions will be drawn from which will be classified according to the percentage criteria. According to Gunawan (2015), this descriptive analysis determines the price of mean, mode, median, standard deviation, and frequency distribution. In addition, the tendency of each variable to categorize the level of interest is classified into 4 (four) categories, namely:

Table 2
Intervals and Interest Category

Interval	Interest Category
$X > M + 1.Stdev$	Very interest
$M < X \leq M + 1.Stdev$	Interest
$M - 1.Stdev < X \leq M$	Less interest
$X < M - 1.Stdev$	Not interest

REARCH RESULT AND DISCUSSION
Research result

SMP YKPP Dumai is located at School Street, Bukit Datuk Village, Dumai Selatan District, Dumai City, Riau Province. This school is one of the favorite private schools in Dumai city. The school has a strategic area so that it has a reach with the community. In this even school year of 2023-2024, this school has a total of 53 students in class VII, 56 students in class VIII, and 115 students in class IX, making a total of 224 students. For now, the classrooms for VII grade students are 2 classes, VIII grade students are 2 classes, and IX grade students are 4 classes. With this large number of students, researchers get the results of analyzing the learning interest of SMP YKPP Dumai students.

After conducting research at SMP YKPP Dumai, researchers obtained results that referred to the questionnaire of students' interest in learning mathematics and interviews. The sample collection technique used in this study used a simple random sampling technique which amounted to 170 students. After the sampling technique is carried out, data analysis techniques can be carried out. Data analysis techniques were carried out by researchers using the help of SPSS and Microsoft Excel. However, this data analysis technique includes several activities that must be carried out.

Data analysis techniques include several activities, namely data collection and data analysis, and concluding. The validity test in this study was not conducted again because the questionnaire instrument had been adopted from Mrs. Suripah's research in her master's thesis in 2012 entitled "Comparative Effectiveness of Cooperative Learning Models of Student. Teams Achievement Divisions (STAD) Type and Think-Pair-Share (TPS) Type given Achievement and Interest in Learning Mathematics of Junior High School Students in Grade VII in the 2011-2012 Study Year" so that this learning interest questionnaire has proven its validity, both expertly and constructively. However, because this questionnaire will be reused for different subjects and a relatively long time, it is necessary to test its reliability again. The researcher tested Izah, Sylva, & Hait (2023), the reliability of the questionnaire using Cronbach's Alpha formula and reached 0.845 a very high level (See Fig. 3). Thus, based on the results of the questionnaire received, proves that the student interest questionnaire provides reliable results. The reliability of a questionnaire is when the Cronbach alpha value is > 0.6.

Tabel 3
Uji Reliabilitas
Reliability Statistics

Cronbach's Alpha	N of items
.845	30

To analyze of the data on learning interest, is done by describing the data through mean, median, mode, frequency distribution, and standard deviation. Thus, the research results from the student learning interest questionnaire have been presented in tabular form with descriptive statistics to make it easier to understand.

Of the four indicators of learning interest which include the attitude of pleasure, attitude of attention, attitude of involvement, and attitude of student interest in learning, the total of all questions is obtained with details: the average (mean) of 88.59, median (Me) of 89.00, mode (Mo) of 85, and standard deviation of 10.051. However, to see the category of interest in learning mathematics of SMP YKPP Dumai students from all influencing indicators, a frequency distribution table is needed. The frequency distribution Table is as follows (Table 4):

Table 4
Frequency distribution on all indicators of student interest in learning

Interest Category	Interval	f	Percentage
Very interest	$x > 98,64$	30	17,65%
Interest	$88,9 < x \leq 98,64$	62	36,47%
Less Interest	$78.54 < x \leq 88.59$	53	31,18%
Not Interest	$x < 78,54$	25	14,71%
	Total	170	100%

Based on the table, it can be concluded that out of 170 students of SMP YKPP Dumai, when viewed from all interest indicators that influence learning interest, including happy attitude,

attention attitude, involvement attitude, and student interest attitude towards learning, students who have a very interested category in learning mathematics are 17.65%, 36.47% are interested, 31.18% are less interested, and students with a not interested category are 14.71%. Thus, the highest percentage of SMP YKPP Dumai students regarding the analysis of interest in learning mathematics when viewed from all interest indicators is at 36.47% and is in the interested category. This means that SMP YKPP Dumai students even in 2023/2024 predominantly have an interest in learning mathematics. However, if examined further, it was found that as many as 45.89% of students at SMP YKPP Dumai were still in the low interest category, namely in the category of less interested or even not interested at all in learning mathematics. This is certainly a special concern for researchers to be followed up further. The description of the data can be presented as in Figure 2 below.
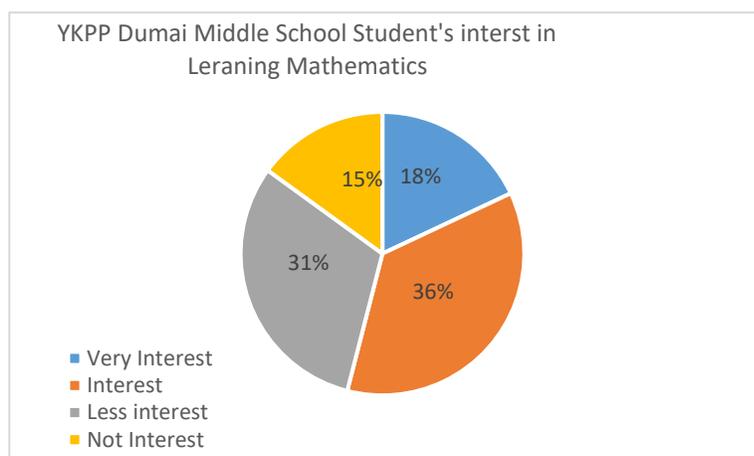

Figure 2.
Categories of learning interest of student interest in learning

Discussion

Based on the research results, information and descriptions related to students' interest in learning mathematics were obtained. The interest of students in the highest category is in the criteria of being interested in learning mathematics, however, there are still many students who are in the criteria of being less interested in learning mathematics. Therefore, it is necessary to explore further why this condition is so. According to Yeh et al., (2019),Aholongan & Suripah, (2021), interest in learning is the tendency of individuals to have a sense of pleasure in learning without coercion from any element so that it can cause changes in knowledge, skills, and behavior. Learning interest is also closely related to needs and desires.

Furthermore, according to Susanto, (2016), interest is closely related to needs and desires. Interest in learning does not arise suddenly but through experience or participation in learning. If someone has a great spirit of enthusiasm and motivation in his life, has principles in himself, can bring himself in a better direction, has an unyielding spirit, has a high willingness to learn, or is even accompanied by a hereditary factor that has a high spirit of learning, then it is likely that someone has a high interest in learning as well. Thus, the role or component in controlling oneself by each needs to be maintained and improved. Based on

the results of interviews, shows that the desire of students, in general, to be interested in learning mathematics is because they want to get high scores. Thus, to strengthen the research on analyzing the interest in learning mathematics of SMP YKPP Dumai students from all influencing indicators, researchers conducted interviews with students through question items. The following are examples of statements from representatives of SMP YKPP Dumai students that support all indicators of student interest in learning mathematics.

"Being happy in learning math depends on the conditions and can be classified as ordinary in learning math, you say you like it, you don't say you don't like it, you don't say you don't like it either. So it's normal...but I'm still happy with the math teacher at this school. Of the 2 math teachers at school or can be given the initials teacher A and B, I prefer teacher A because the explanation given by the teacher is easier to understand, while the explanation given by teacher B is difficult to understand even though the learning is still relaxed..." (Student 9)

"For example, paying attention to the teacher also depends on the condition, if I am sleepy I don't pay attention and my concentration is reduced..." (Student 9)

Based on the interview above, shows that students already have an attitude of pleasure, attitude of attention, involvement, and interest in learning, although some of them still do something according to conditions and situations. Therefore, because SMP YKPP Dumai students have fulfilled the indicators of interest in learning, of the course students have targets, desires, and future views that can produce something for themselves. According to Harefa, (2023), with an interest in learning, someone will do something that can produce something for him. As in learning, a child will study hard if there is a target that he wants to pursue. The targets he pursues can be in the form of achievements and valuable experiences in his life. So that interest greatly affects a person's ability and success. In addition, with high interest, it becomes an important component that can be used to achieve the goals he wants to achieve (Wibowo, Friana, & Pelipa, 2018).

CONCLUSIONS

Based on the results of data analysis, it is concluded that out of 170 students of SMP YKPP Dumai when viewed from all indicators of interest that influence interest in learning, the highest percentage of SMP YKPP Dumai students regarding the analysis of interest in learning mathematics when viewed from all indicators of interest that influence it lies at 36.47% and is in the interested category. So, the purpose of this study has been achieved, namely to find out the analysis of interest in learning mathematics of SMP YKPP Dumai students, namely student SMP YKPP Dumai even 2023/2024 students predominantly have an interest in learning in mathematics.

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