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Analysis of Students' Interest in Learning Mathematics in Online Learning

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Abstrak

During the Covid-19 pandemic, online learning is one of the steps that teachers can take to still be able to deliver learning materials to students. This study aims to determine how students' interest in learning mathematics and the factors that influence student interest in class X SMK Uswatun Hasanah in learning mathematics online. This study uses a descriptive qualitative approach. Data obtained by using observation, interviews, and documentation. The research was conducted by involving 28 students in class X. The analysis technique used was data collection, data reduction and data presentation and checking the validity of the data by triangulation and member check. The results of this study indicate that students' interest in learning mathematics in online learning is quite good. It is evident from several indicators and factors measured, the results obtained from the data of 28 students that as many as 79% or 22 students have a high interest in learning, and 21% or 6 students have a moderate interest in learning. Teachers can vary the learning provided online as a learning solution that can be carried out properly and effectively and provide meaning and a good learning experience for students.

Keywords: interest in learning, mathematics, online learning.

1 INTRODUCTION

Learning is an activity that is carried out by a person intentionally in a conscious state to acquire a new concept, understanding or knowledge so as to allow a relatively permanent change in behavior both in thinking, feeling, and in acting that is in a person. Gagne in (Slameto, 2018) adds that learning is the mastery of knowledge or skills obtained from instruction. Therefore it takes a process that must be taken by students so that they can have mastery of knowledge or skills in a subject. This process is called a learning. Learning is a process of interaction between teachers and students and learning resources in a learning environment. Since the outbreak of Covid-19 in Indonesia in March 2020, the learning process in schools has been slightly hampered because the interaction between teachers and students cannot be as flexible as before the pandemic. The solution taken by the government is to make policies for online learning.

The impact of the COVID-19 virus occurs in various fields such as social, economic, tourism and education. With the COVID-19 virus in Indonesia currently impacting all human life on earth including education. Circular issued from the government in 2020 March 18, all indoor and outdoor activities in all sectors were temporarily suspended in order to reduce the spread of corona, especially in the field education (Handayani, et al., 2021). The Covid-19 pandemic has shocked all circles of society because not all fields of education have done online learning before. Thus, schools and teachers make maximum efforts to find ways or learning methods and media choices that are considered effective for students when online learning is carried out.Starting from the WhatApps, Line, Telegram, Zoom, Youtube, and Google Classroom applications are used by almost all teachers to find the right communication application in the learning process. Unfortunately

there are quite a lot of obstacles from using some of these applications because in order to maximize their use, support from several factors, both internal and external, is needed. One of the factors is the family which plays an important role in the learning process carried out by students at home. Not only teachers and students are involved, but parents at home also monitor the ongoing learning. Parental support and motivation and encouragement are needed for children to quickly adjust.

The online learning process provides a positive thing, namely a lot of space for teachers and students to learn more through books and the internet. Students have plenty of time at home to freely study and be creative without time limits. Teachers can also improve their skills so that they can be maximized in the learning process with the free time they have. Online learning provides effective learning methods, such as practicing with related feedback, combining collaborative activities with independent learning, personalizing learning based on student needs and using simulations and games (Adhe, 2018). Online learning makes communication so fast, with internet networks and increasingly sophisticated applications, students and teachers can communicate anywhere and anytime. According to Hidayat (2018), student interest in learning can be interpreted as a condition of students who can foster a sense of love and can arouse self-motivation in carrying out an activity that can be measured through liking, being interested, having attention and being involved in following the learning process. Rusmiati (2017) argues that students who have a high interest in learning will do more and faster activities.

Interest acts as a driver of one's will, a passion amplifier and as a driving force in doing something that comes from within to do something with certain goals and objectives in daily activities. This is in line with the results of a number of studies that have proven how interested students are in learning during the Covid-19 pandemic. Handayani, et al. (2021) has researched student interest in learning during the Covid-19 pandemic which showed quite good results. Suggest that there is an influence from holding online learning on interest in learning (Jusmawati et al., 2020). This is in line with research (Yunitasari & Hanifah, 2020), which stated that online learning during the Covid-19 pandemic greatly affected student interest in learning. Sumarni (2020) found that there were 63%-80% of students who showed a high enough interest in learning in online learning (Hanifah, 2020), who stated that online learning during the Covid-19 pandemic greatly affected student interest in learning. Sumarni (2020) found that there were 63%-80% of students who showed a high enough interest in learning in online learning (Hanifah, 2020) who stated that online learning during the Covid-19 pandemic greatly affected student interest in learning. The results of research (Sarahutu, 2020), show that interest in learning is still quite high but online learning is not yet effective because there is still a desire for students to relax.

The research listed above has proven how the interest in learning that students have even in online learning during the Covid-19 pandemic is not detailed along with the factors that influence this interest. On this basis, this study not only aims to find out how students are interested in online learning but also examines what factors influence students' interest in online learning.

2 RESEARCH METHODS

This study aims to determine how students' interest in learning mathematics online and what factors influence the interest in learning. The research method used is descriptive qualitative method and the sampling technique used is purposive sampling technique. This research was carried out in 2 cycles, namely validating the instrument and then applying it as a tool to research so that a number of data were obtained.

The subjects involved in this study were 28 students of class X SMK Uswatun Hasanah, East Jakarta. In obtaining primary data, researchers performed various data collection techniques, namely observation, questionnaires, unstructured interviews and documentation. Observations and interviews were conducted on students, parents and

related teachers, as evidenced by documentation. Before the results of the questionnaire were obtained, instrument validation was carried out which then selected valid instruments to be distributed to respondents and the results were 20 statements from 4 predetermined indicators. The following are indicators along with the number of statements included in the questionnaire.

Table 1. Questionnaire instrument indicators

Indicator	Number of Statements	Statement	
		Positive	Negative
Students' happiness for participating in learning	5	1, 4, 8	11, 4
Students' attention to learning	5	2, 10	12, 16, 20
Student interest in learning	5	6, 7, 9	17, 19
Student involvement in learning	5	3, 5	13, 15, 18
Total	20		

The data obtained were then analyzed using data analysis procedures, namely data reduction, data display and data verification to find out the truth about several phenomena and member checks to check data so that the information obtained will be used in report writing. In data reduction, the researcher summarizes and sorts out the main things and focuses on the things that are important. Obtained from the results of questionnaires, observations and interviews. Then the data is presented in the form of a brief description, or chart. After data analysis has been carried out then the data will be verified by drawing conclusions based on the reduction and display of data that has been made previously. Anggito & Johan (2018) suggest that drawing conclusions in qualitative research is a new finding that has never existed.

3 RESULTS AND DISCUSSION

Data about students' interest in learning mathematics online can be seen from observations made during the learning process and from interviews with related parties who have a role in the online learning process.

3.1 Analysis of Research Results

After conducting the online learning process and interviewing the Mathematics teacher of SMK Uswatun Hasanah, data was obtained for the purpose of needs analysis. The analysis was conducted to find out how students' interest in learning mathematics online and the factors that influence interest in learning online were conducted. Based on the research conducted, the results of the presentation of students' interest in learning mathematics in online learning were collected through a questionnaire instrument with 4 indicators of student interest in learning which can be seen in Figure 1.

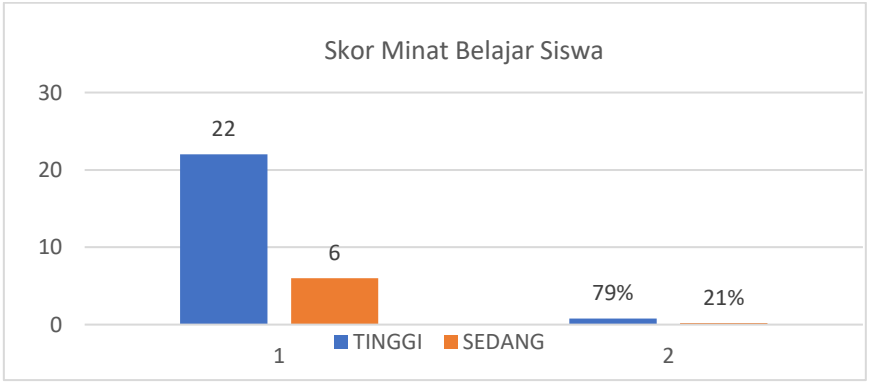

Figure 1. Student Interest Score

3.2 Discussion

Based on the analysis of the results of the research that has been done, it shows that there is a considerable difference between high and moderate learning interest. From the two problem formulations studied and the results obtained, the discussion of the research findings in the field is summarized through data reduction, data presentation and conclusions.

Table 2.The results of the percentage of the questionnaire "how are students' interest in learning mathematics online"

Number Questions	Question	SS	S	KS	TS
1	I feel happy when math class starts	25%	75%		
2	I pay close attention to the teacher when the teacher explains	42.90%	57.10%		
3	I will ask the teacher if there is any math material that I don't understand	42.90%	53.60%	3.50%	
4	I feel happy when learning math because math is challenging for me	25%	75%		
5	Every math lesson I always take notes completely and neatly so I can study it again	42.90%	53.60%	3.50%	
7	I want to express my opinion in class discussions and group discussions	25%	75%		
8	I am always enthusiastic and cheerful when I take math lessons	25%	75%		
9	I am able to work on problems through presentations and explain to other friends in online presentations	42.90%	57.10%		
11	I think math is a difficult subject	7.10%	3.60%	64.30%	25%
13	I don't do anything if there is math material that I don't understand		3.50%	78.60%	17.90%
14	I feel bored while taking math lessons		10.70%	64.30%	25%
15	I often daydream when I take math lessons in online presentations	3.70%	7.10%	57.10%	32.10%
17	During online group discussions I prefer to be quiet and not be seen in the discussion	7.10%	3.60%	50%	39.30%
19	When the teacher asks students to work on the questions on the answer sheet and asks students to explain in online presentations, I prefer to be silent even though I know the steps for solving the problem.	3.60%	17.90%	50%	28.60%

For the formulation of the problem "How are students' interest in learning mathematics online", the data reduction obtained is an explanation thatInterest in learning is a student's sense of enthusiasm or curiosity in something or learning that makes him happy to do work or learning and want to know more about it. From the data reduction, data can be presented that interest in learning has psychological and emotional aspects, where the psychological aspect is from experience and what can be learned from the environment, while the emotional aspect is through behavior towards activities or objects that generate interest in learning. In addition, interest in learning consists of indicators including feelings of pleasure, student interest, student attention and student involvement. Then the conclusion of the data reduction can be illustrated from the results of the questionnaire presented in Table 2.

Based on the question formulation questionnaire "How is interest in learning in learning mathematics online" it can be concluded that from the data of 28 students, 79% of students have high learning interest and 21% of students have moderate interest in learning. From the questionnaire, it is known that 96.5% of students are active in asking questions but the rest are not active in asking questions, 100% of students are enthusiastic and cheerful in mathematics, 100% of students enjoy learning mathematics online, and 100% of students enjoy learning mathematics because of mathematics. challenging lessons, as many as 100% of students pay attention to online learning seriously, as many as 96.5% of students take notes during online learning. As many as 89.3% of students do not feel bored following online learning, as many as 100% of students want to express opinions, as many as 89.3% consider mathematics a not difficult subject. As many as 89.3% of students were not silent during online group discussions. As many as 78.6% of students want to explain in online presentations. As many as 96.5% of students actively seek information in learning mathematics that has not been understood. As many as 100% of students complete math assignments given online. As many as 89.2% of students do not daydream when participating in mathematics learning in online presentations.

Table 3.The results of the percentage of the questionnaire "factors that influence students' interest in learning mathematics online"

Number Questions	Question	SS	S	KS	TS
6	I carry out all the orders and tasks that the teacher gives me seriously	42.90%	57.10%		
10	I care about other friends who have difficulty in accepting the material explained by the teacher	42.90%	53.60%	3.50%	
12	When the teacher explains math material in an online presentation, I don't listen		10.70%	67.90%	21.40%
16	When the teacher gives an assignment, I do it by copying my friend's assignment		14.30%	53.60%	32.10%
18	I'm lazy to take online math lessons because no one helps me with my assignments		14.30%	50%	35.70%
20	I am indifferent to other friends who have difficulty understanding the material explained by the teacher	3.70%	7.10%	57.20%	32.10%

For the formulation of the problem "Factors that affect students' interest in learning mathematics online" the reduction of the data obtained isFactors that influence interest in learning are based on the way teachers make fun learning methods, teacher-student

interactions during online learning, encouragement or motivation from people around such as parents, the desire of students to want to learn online through applications, network consistency on when at home. From the data reduction, data can be presented that the factors that influence interest in learning are divided into 2 factors, internal factors are based on the students themselves while external factors are based on teachers, parents, networks and learning applications, namely how teachers make fun learning methods, teacher interaction to students during online learning, there is encouragement or motivation from people around such as parents. Then the conclusion of the data reduction can be illustrated from the results of the questionnaire presented in Tabel 3.

Based on the questionnaire "factors that influence learning interest in online mathematics learning" it was concluded that from the data of 28 students, it was seen that 96.5% of students helped each other in difficulties when receiving the material explained by the teacher. As many as 89.3% of students listen to the teacher when math material is presented online. As many as 85.7% of students are not lazy to take part in online learning even though no one helps them with their assignments. As many as 100% of students were able to work on the questions and explain to their friends. As many as 14.3% of students did the assignment by copying from a friend's assignment. As many as 89.2% of students are indifferent to friends who have difficulty understanding the material. External factors consist of how learning methods are carried out online, the methods used such as interviews with mathematics subject teachers that the methods used are quite good. The role of parents is also important in students' interest in online learning, such as motivation and helping students when doing assignments. Obstacles in learning such as student networks are also included in factors that affect interest in learning.

Previous research examining interest in learning has been widely discussed. (Santika, et al., 2020) stated in the results of their research that students' interest in learning during the online learning process changed significantly, marked by student interest in subjects and learning materials, for those who did not have interest in the material or subjects made these students not enthusiastic in participating in the learning process. . Likewise with the results of (Yunitasari & Hanifah, 2020) research which states that online learning affects student interest in learning where interest will be low because of boredom when learning is less interesting. Therefore, more effort is needed from teachers to create interesting online learning.

4 CONCLUSION

The findings in this study have proven that students' interest in learning in online learning has 2 different results. Based on the results and discussion of the research that has been stated previously, the analysis of students' interest in learning mathematics online in accordance with the results of research sourced from questionnaires is fairly high with 22 of 28 students showing high learning interest results while the rest are moderate, this means students have an interest in online mathematics learning. Likewise, the factors that influence interest in learning, according to the results of research sourced from questionnaires, indicate that there is a relationship with factors that influence interest in learning. Of the 2 factors, namely external and internal,

These findings indicate that teachers can provide updates in the methods used when carrying out online learning. Likewise, students can pay attention to external and internal factors that must be optimized so that online learning can run well and can be followed optimally by students. Further research is needed to prove that the effectiveness of online mathematics learning can be seen from students' enthusiasm or interest in learning in following the learning process.

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