Learners' interest in online learning of mathematics

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Abstract: This study aims to determine (1) The extent of the tendency of students’ interest in learning mathematics online. (2) To what extent the tendency of students’ interest in learning mathematics towards the use of Zoom Meeting and Google Classroom. This research is a descriptive research with a qualitative approach. The research was conducted at SMP Kanisius Sumber Dukun with a sample of 30 students selected using Purposive Sampling technique. Data collection techniques using observation, interviews, questionnaires, and documentation. The research instruments used were interview guidelines and interest questionnaires. While data analysis techniques using data triangulation include data reduction, data presentation and conclusion drawing. The results of this study indicate that (1) The tendency of students’ interest in learning mathematics online is included in the high category with a percentage of 72.01%. (2) The tendency of students’ interest in learning mathematics whose learning uses Zoom Meeting is included in the very high category with a percentage of 77.42%, while the learning interest of students whose learning uses Google Classroom is included in the very low category with a percentage of 22.58%. This means that the tendency of mathematics learning interest of Kanisius Sumber Junior High School students towards the use of Zoom Meeting is higher than Google Classroom.

Keywords: Google Classroom; Learning interest; Online learning; Zoom meeting


INTRODUCTION

At the end of 2019, the world was shocked by the emergence of a new disease caused by a virus, namely Coronavirus (SARS-COV-2) and the disease is called Coronavirus. Disease 2019 (Covid -19) (Kusumaningrum & Wijayanto, 2020). This virus was first discovered in the city of Wuhan, Hubei Province, China, on December 31 2019 (Kusumaningrum et al., 2020). Covid - 19 is an infectious disease and can be spread, either directly or indirectly, from one person to another (Kementerian Kesehatan Republik Indonesia, 2020). This virus can be transmitted through the eyes, nose and mouth which then enters through the throat and attacks the lungs (Kuncoro et al., 2021). The human pulmonary system is susceptible to infection because it is related to other body parts. The activity of the eyes, nose and mouth can affect the level of lung health. Eyes, nose and mouth that have been contaminated with this virus can cause the lungs to become unhealthy so that colds, coughing and shortness of breath can even cause death (El & Järhult, 2020).

In an effort to break the chain of spreading the virus, the government created the Work From Home (WFH) policy, which means working from home (Setiana et al., 2021). The WFH
policy is stipulated in the Circular Letter of the Minister of Administrative Reform and Bureaucratic Reform Number 50/2020 concerning the Second Amendment to the Circular Letter of the Minister of PAN & RB Number 19/2020 concerning Adjustment of the State Civil Apparatus Work System in Efforts to Prevent the Spread of Covid-19 within Government Agencies. The policy is one way to prevent the transmission of Covid-19 by limiting community interaction or physical distancing (Arigiyati et al., 2021). However, the physical distancing policy can hinder the rate of growth in various fields of life, both economic and social, including in the field of education (Menteri PAN & RB, 2020; Sulistyowati et al., 2021).

The WFH policy in the education sector requires the learning implementation process to be carried out online (Irfan et al., 2020). Teachers and students no longer conduct learning directly in the classroom, but learning is carried out indirectly or online (in the network) (Kusumaningrum et al., 2021). The policy is contained in the Ministry of Education and Culture (Kemendikbud) Circular Letter No. 4 of 2020 concerning the Implementation of Education Policies during the Emergency Period of the Spread of Coronavirus Disease (Covid-19). The letter contains 4 points about the Learning Process from Home, one of which is an appeal to all levels of education to conduct distance learning (online) and study at their respective homes. This appeal was responded swiftly by each educational institution to carry out the teaching and learning process via online in their respective homes (Ministry of Education and Culture, 2020).

Online teaching and learning activities certainly have some obstacles. One of the toughest obstacles in online learning is mathematics. In teaching mathematics subjects, complete accuracy and patience are needed so that there are no misconceptions about students. It is still problematic that mathematics is considered a difficult subject. Mathematics is considered a difficult subject because of the characteristics of mathematics which are abstract, logical, systematic, and full of confusing symbols and formulas (Auliya, 2016).

The difficulties that exist in mathematics subjects demand the creativity of mathematics teachers to develop their learning, both in terms of methods and media used. Teachers are also required to master science and technology in order to be able to use and develop various learning media that can be used to advance education. To implement online learning, online-based learning media is needed. Online media that can be used include Google Classroom, Zoom Meeting, WhatsApp, YouTube, Quizzes, and so on. A teacher must make maximum efforts in increasing students' interest in learning during online learning.

Interest is an internal factor and has an important role in supporting student learning achievement (Pangestu et al., 2015). Interests play a very important role in the lives of students and have a major impact on attitudes and behavior. Students who are interested in learning activities will try harder than students who are less interested in learning (Aprijal et al., 2020). Interest in learning affects the quality of student learning, interest in learning as a product and perceptions of self-efficacy which will affect student motivation in the learning process (Tamardiyah, 2017).

Students with a high learning interest will ultimately achieve better learning outcomes than students with a low learning interest (Sulistyawati, 2020). Students who are not interested in the subject matter will show an unsympathetic, lazy and unenthusiastic attitude (Lisma, 2019). The importance of interest in learning in the learning process requires that learning has an interesting atmosphere that is able to provide a stimulus that can trigger students' interest in learning (Nasution & Fridani, 2020). So, to create students' interest in learning, learning is needed according to the conditions of students.

In an effort to prevent the spread of the Covid-19 virus and to comply with the policy of the Ministry of Education and Culture, SMP Kanisius Sumber Dukun implemented online learning during the Covid-19 pandemic, especially in math subjects. Online learning in math subjects at SMP Kanisius Sumber is carried out using online media Zoom Meeting and Google Classroom. Zoom Meeting is a face-to-face conference/meeting platform where educators and learners can directly interact as if meeting in person. Zoom makes online courses very popular because it saves the cost of travel time, fuel costs, and its impact on the environment.
Google Classroom is an application that allows the creation of classrooms in cyberspace. In addition, Google Classroom is also a means of distributing assignments, submitting assignments and even assessing collected assignments (Japar, 2019). However, in its implementation, there are still some students who show less happy, less interested, less attention and involvement in online learning using online media Zoom Meeting and Google Classroom.

The results of observations made by researchers during internship III at SMP Kanisius Sumber showed that the enthusiasm of students' learning decreased slightly because online learning was less fun, many students were less interested in learning mathematics online, students also paid less attention to the explanation of the subject matter given by the teacher, and even lack of participation in discussions during online learning. This resulted in students' learning achievement not being maximized.

Research on students' interest in learning mathematics during online learning at SMP Kanisius Sumber is very important to find out students' interest in learning mathematics during online learning because learning interest is one of the factors that can determine the success of students' learning. Students' learning interests can be used by teachers as a consideration in planning the online math learning process. With interest, a person will try harder to get what he wants. Interest makes a person feel happy and happy in carrying out activities. Without interest, a person cannot do something or feels depressed in carrying out activities that he does not want. In addition, people who have an interest will also get better results (Syahputra, 2020).

As the objectives in this study are to find out (1) To what extent is the tendency of students' interest in learning mathematics whose learning is online, (2) To what extent is the tendency of students' interest in learning mathematics towards the use of Zoom Meeting and Google Classroom, researchers are interested in conducting research with the title "Students' Learning Interest in Online Mathematics Learning".

**METHOD**

This research is descriptive research with a qualitative approach. Qualitative research is an inquiry strategy that emphasizes the search for meaning, understanding, concepts, characteristics, symptoms, symbols and descriptions of a phenomenon, focus and multimethod, natural and holistic, prioritizing quality, using several methods, and presented narratively (Sidiq & Choiri, 2019). Qualitative research is a research procedure that produces descriptive data in the form of words, written or spoken from people whose behavior is observed (Ayuwirdayana, 2019). This research was conducted at SMP Kanisius Sumber, Magelang Regency, Central Java Province in the 2021/2022 academic year. The sample in this study was 30 students who were selected using Purposive Sampling technique.

Data collection techniques in this study used observation, interviews, questionnaires, and documentation. The instruments in this research are interview guidelines and interest questionnaires. The interview guideline instrument is an outline of the problems to be asked which is used to support the results of the interest questionnaire. The interest questionnaire instrument consists of 12 statements for elements of the online learning process in general and 11 statements for elements of the learning process using Zoom Meeting and Google Classroom media.

A valid instrument means that the instrument can be used to measure what should be measured. A valid instrument has high validity. Conversely, a less valid instrument means it has low validity (Sugiyono, 2013). Before the questionnaire instrument is used, content validation is first carried out to measure whether the instrument used is feasible or not to be distributed to students. Content validation was obtained from the consideration of experts, 2 lecturers of Mathematics Education at Universitas Sarjanawiyata Tamansiswa Yogyakarta. The interest questionnaire data analysis technique uses a percentage technique with the formula:  \[ P = \frac{F}{N} \times 100\% \]

Where \( P \) = Percentage, \( F \) = Total Ideal Sample Score, \( N \) = Total Ideal Maximum Score.
and 100% = General Conditions / Fixed Questionnaire. While the interview data analysis technique uses data triangulation including data reduction, data presentation and conclusion drawing (Sugiyono, 2013).

RESULTS AND DISCUSSION

In the questionnaire, there are 12 statements (numbers 1-11, & 21) for online learning elements to find out how students' online learning interest during the Covid-19 pandemic and 11 statements (numbers 12-20 & 22-23) to find out how students' online learning interest during the Covid-19 pandemic using Zoom Meeting and Google Classroom media. The results and data analysis obtained based on the questionnaire instrument for students' interest in learning are shown in Figure 1.

![Figure 1. Interest questionnaire statistical diagram statement numbers 1-11 & 21](image)

Based on the data in Figure 1, the total ideal score of the sample is 1037 and the ideal maximum score of 12 statements is 1440 so that the total percentage is obtained: \( \frac{1037}{1440} \times 100\% = 72.01\% \). This means that students' interest in learning falls into the high category. This shows that students of SMP Kanisius Sumber have a high interest in participating in online math learning, even though this does not necessarily affect the learning outcomes of students who are receiving online learning. This research is in line with research conducted by Sarahutu showing that the mean value of the learning interest score is 36.40, this value indicates that students' learning interest is in the high category (Sarahutu, 2020).

In this study, the indicators to measure learning interest are students' feelings of pleasure, interest, involvement, and attention to mathematics learning during online learning (Slameto, 2003). It can be seen that most students feel happy and not forced to participate in online mathematics learning. Interest in online mathematics learning is shown by learners' curiosity about the questions and problems given by the teacher. The involvement of learners can be seen from the majority of learners who stated that they were actively asking questions, discussing, and answering questions given by the teacher during online learning. This is supported by the results of the researcher's interview with students who stated that they sometimes asked questions and discussed during the learning process.

The attention of students was shown by the majority of students who stated that they were always concentrating when participating in online learning, always paying attention when the teacher was explaining learning material and taking notes on the material being explained. In learning mathematics, high focus and concentration are needed in order to understand the material presented by the teacher. This was shown based on the researcher's interviews with students that what was done to stay focused and concentrate when participating in online learning was to have the intention to master the material being explained and students also sometimes washed their faces so they would not be sleepy and focused while learning was taking place.
The results of the study showed that the majority of students felt happy, interested, involved and had an interest in online learning. This means that students have an interest in learning. The results of this study are in line with the theory that interest in learning is shown by a deep concern for an object, in where this attention creates a desire to know, learn, and prove further (Darmadi, 2017). Most students have a high learning interest, but there are still some students who find it difficult to understand the material. Based on the results of interviews conducted by researchers, some students stated that they still felt awkward because they were not used to online learning methods so they still needed to adapt to these online learning methods. Students also stated that they often felt lazy with online learning. This feeling of laziness is caused because students during online learning often wake up late so they are lazy to prepare themselves. In addition, students also stated that they felt bored when participating in online learning because they only studied alone at home and did not meet their friends.

Interest in learning is one of the most important things in the smooth running of the online learning process, so it is important to generate students’ interest in learning. This research shows that there are some students who still have low learning interest. This should also be a concern for teachers to increase students’ learning interest. Teachers can make learning more interesting in order to increase interest in learning and maintain students’ interest in learning. Based on the results of the interviews, students provided input/suggestions for teachers, namely in conveying material via PDF, decorations could be added to make it more attractive, the learning media used was made more creative, maybe they could use Kahoot as a learning medium for entertainment and understanding of each material provided.

Based on the data in Figure 2, the total ideal score of the online learner sample whose learning uses Zoom Meeting is 1022 and the ideal maximum score of 11 statements is 1320 so that the total percentage is obtained: $\frac{1022}{1320} \times 100\% = 77.42\%$. These results show that the percentage of learning interest of online students whose learning uses Zoom Meeting is 77.42%, including in the very high category. While the percentage of students’ interest in learning online whose learning uses Google Classroom is $\frac{298}{1320} \times 100\% = 22.58\%$. This means that the tendency of interest in learning mathematics of Kanisius Sumber Junior High School students whose learning uses Zoom Meeting is higher than Google Classroom.

Based on the research, it can be seen that the majority of learners feel happy and very enthusiastic about participating in online learning using Zoom Meeting because it is easier to use for discussion. Most learners are more interested in using Zoom Meeting than using Google Classroom. This is supported by the results of interviews regarding learners’ interest in the learning media used that of the three learners interviewed, all three prefer Zoom Meeting to Google Classroom. This means that learners are more interested in using Zoom Meeting as a learning media.
The results showed that most students prefer to take part in math learning using Zoom Meeting media. The reasons for students' answers to these statements are that Zoom Meeting is easier to access, Zoom Meeting is easier to use, learning material is easier to understand if taught using Zoom Meeting because the material is explained directly and can ask directly with the teacher when learning math takes place. Learners also find it easier to discuss if learning is done using Zoom Meeting media. This shows that there is an interest in learning from students in the use of Zoom Meeting. The results of this study are supported by the results of a study which states that the most preferred application for respondents is the Zoom application with a percentage of 37%, the Google Meet application is 35%, Google Classroom 6%, WhatsApp 15%, and other applications are 7% (Arba & Ummah, 2021). This means that Zoom Meeting is the most popular application compared to Google Classroom.

Although most learners have a very high interest, learners also have obstacles during learning using Zoom Meeting. Most learners stated that the obstacle experienced was an unstable internet network connection. The obstacle to the internet connection is because most learners use a cellular internet connection. The instability of the mobile internet connection is because the village where the learners live is difficult to signal. This is supported by the researcher's observation that the signal in the village where the learners live is inadequate, especially when there is rain which causes signal difficulties. This also causes other obstacles when accessing Zoom Meeting such as frequent in and out during Zoom Meeting, frequent errors when sharing images, and the teacher's voice during Zoom Meeting is often intermittent.

This trend can be used as a reference for teachers to maximize the use of Zoom Meeting so that it can increase students' interest in learning in achieving learning goals. Learning interest is one of the important things in the smooth learning process both face-to-face and online, so it is important to increase students' interest in learning. Teachers can use interesting media in order to increase learning interest and maintain learning interest in students.

CONCLUSION

Based on the results of the analysis and discussion in this study, it is concluded that the tendency of students' interest in learning mathematics online seen from the results of the study shows that the percentage of students' interest in learning online is 72.01%. This means that students' interest in learning is included in the high category of online math learning. Despite having a high interest in learning, some students stated that it was difficult to understand the material during online learning and felt awkward because they were not used to online learning methods.

The tendency of students' interest in learning mathematics towards the use of Zoom Meeting and Google Classroom seen from the results of the study shows the online learning interest of students whose learning uses Zoom Meeting is included in the very high category with a percentage of 77.42%, while the learning interest of students whose learning uses Google Classroom is included in the very low category with a percentage of 22.58%. This means that the tendency of interest in learning mathematics of Kanisius Sumber Junior High School students whose learning uses Zoom Meeting is higher than Google Classroom. Despite having a very high interest in learning, most students stated that learning using Zoom Meeting experienced obstacles due to internet limitations, logging in and out during Zoom Meeting, frequent errors when sharing images, and the teacher's voice during Zoom Meeting was often intermittent.

REFERENCES


