

Distance Learning from the Teachers' Perspective and Students' Learning Experience Based on Self Confidence.

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Abstract

This study aims to describe learning mathematics from the teacher's point of view and the experience of learning mathematics based on self-confidence. The results of research related to distance mathematics learning with reference to 4 aspects (learning strategies, pedagogic models, learning technology, and assessment) found that the learning strategy carried out by the teacher is to make students active by conducting questions and answers during video conferences, giving rewards and punishments, and delivering material assisted by electronic media such as PowerPoint, YouTube, and learning videos. The pedagogic model used is still providing problem-solving questions that are also integrated with group learning and the use of other learning resources. The assessment is carried out by considering the activity and intelligence of students, assisted by the Google Forms application. In addition, it was also found that student self-confidence had an impact on most of the indicators of the experience of learning mathematics at a distance, and vice versa.

Keywords: Self-Confidence, Distance Learning, Teacher, Student.

Abstrak

Penelitian ini bertujuan untuk mendeskripsikan pembelajaran matematika dari sudut pandang guru dan pengalaman belajar matematika berdasarkan kepercayaan diri. Hasil penelitian terkait pembelajaran matematika jarak jauh dengan mengacu pada 4 aspek (strategi pembelajaran, model pedagogik, teknologi pembelajaran, dan penilaian) ditemukan bahwa strategi pembelajaran yang dilakukan oleh guru adalah membuat siswa aktif dengan melakukan tanya jawab selama video conference, pemberian reward dan punishment, dan penyampaian materi dibantu dengan media elektronik seperti PowerPoint, YouTube, dan video pembelajaran. Model pedagogik yang digunakan masih memberikan soal-soal pemecahan masalah yang juga diintegrasikan dengan pembelajaran kelompok dan pemanfaatan sumber belajar lainnya. Penilaian dilakukan dengan mempertimbangkan aktivitas dan kecerdasan siswa yang dibantu dengan aplikasi Google Forms. Selain itu, ditemukan juga bahwa kepercayaan diri siswa berdampak pada sebagian besar indikator pengalaman belajar matematika jarak jauh, begitu pula sebaliknya.

Kata Kunci: Kepercayaan Diri, Pembelajaran Jarak Jauh, Guru, Siswa.

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INTRODUCTION

Distance learning can also be referred to as online or in-network learning. Online learning is a learning activity in a virtual space using internet access and creating appropriate interactions between educators and students in the learning process (Septiani & Purwanto, 2020). Distance learning requires educators to use information and communication technology in carrying out the learning process (Wahab et al., 2022). It is also able to make learning closer to students' lives when delivering material so that it can facilitate understanding of abstract subjects for junior high school students, such

as learning mathematics. Distance learning requires devices in the form of laptops or cellphones as learning aids (Susiloningsih et al., 2023). In addition, distance learning also requires a digital platform that is already available or created by the school itself as a place for the learning process to take place (Nofirman, 2020). Platforms that are often used for teaching and learning processes include WhatsApp, Google Classroom, Zoom, Google Meet, and Microsoft Teams (Aini, 2020).

Changes in the learning process in the world of education result in psychological disturbances for students such as excessive anxiety, less effective learning, and a lack of interaction with others. This can affect the attitude of students toward their learning, which also plays an important role in achieving the goals of a lesson (Megavitri et al., 2023). In remote mathematics learning, there are also several other obstacles, namely, when students find it difficult to do their assignments, they can easily give up. In addition, students also do not do their own assessment of the results of the learning process. Therefore, the role of parents is also very much needed to continue to motivate and support students in learning that is far from educators and their friends (Fitriani & Nurjannah, 2019).

One of the positive attitudes of students that can support student success in learning is student self-confidence, as well as in learning mathematics. Mathematics is one of the compulsory subjects at every level and is very useful in everyday life. Learning mathematics at the junior high school level is the initial stage when students can think more abstractly and symbolically regarding the application of mathematical concepts. Therefore, the students' attitude of self-confidence is needed to learn mathematics (Salehan et al., 2022). At the time of distance learning, students can be said to be quite confident. The results of research by Hidayat and friends stated that one of the indicators of independence is student self-confidence (Hidayat, 2020). These results are at a moderate level, so it can be said that students' self-confidence in online learning is quite high (Munir, 2009). Students' self-confidence can lead to positive thoughts and a positive self-concept towards mathematics. Self-confidence is an attitude or a person's belief in their abilities, so that the person can feel free and responsible in acting, is warm and polite in interacting with others, can accept and respect other people, has self-motivation to achieve, and knows the good potential and weaknesses of himself (Lubis, 2021; Octari et al., 2021).

Students who have self-confidence in learning mathematics are able to think positively about mathematics, are active, do not give up easily, are able to accept suggestions or criticism, are able to explore themselves in solving a problem, and understand the mathematics material, so that it is possible for students to get maximum results (Lubis et al., 2019). In line with several studies related to students' self-confidence in learning mathematics, it was stated that there was a positive relationship between self-confidence and students' learning outcomes in mathematics. In addition, previous researcher results that student self-confidence is directly proportional to solving students' mathematical problems; when a student's self-confidence increases by one unit, students' problem-solving abilities in learning mathematics also increase (Luturmas et al., 2022).

METHOD

The research method used in this research is descriptive research with a quantitative approach. The population used in this study were students in class VIII. The sampling technique used in this study is convenience or accidental sampling. So, the sample used in this study consisted of 327 students and 10 math teachers. The primary source in this study was a closed questionnaire regarding students' confidence in distance learning mathematics and distance learning for students. In addition, an open questionnaire is also used as a data collector related to the process of distance learning mathematics. The data analysis in this study used descriptive statistics.

RESULT AND DISCUSSION

The perception activity that most teachers do is direct students to recall the material they have learned. This activity is carried out by the teacher to make it easier for students to understand the next material by associating it with what is already known. To increase student activity, the teacher also opens a discussion-based learning system. Discussions carried out by most teachers in remote mathematics learning involve asking and answering material or math questions with direct interaction using video conferencing. The teaching materials prepared for distance mathematics learning for class VIII mathematics teachers still use textbooks and worksheets, but the use of technology such as power points, YouTube videos, and appropriate learning videos is also added. The majority of teachers deliver material via video conferencing. Furthermore, in closing the lesson, the majority of mathematics teachers reflect on and review the material they have just learned. This is done by the teacher with the aim of making it easier for students to know the essence of learning and helping the teacher find out the students' understanding of the material that has been delivered.

The process of learning mathematics at a distance is carried out by the majority of teachers using a simpler syllabus that has been adapted due to emergency conditions. The teacher stated that the most significant change was in the allocation of class time. Efforts to increase students' knowledge when learning mathematics remotely are also carried out by giving them math problem-solving questions. Some teachers often apply individual math problem-solving questions. However, there are also not a few teachers who only occasionally apply this to develop student knowledge, and this is usually done by combining it in student group discussions. Distance mathematics learning is implemented using synchronous and asynchronous learning technologies. Evaluations or assessments carried out by teachers in distance mathematics learning that have just been carried out are mostly carried out by teachers by giving practice questions, assignments, or daily tests of what has been learned and analyzing the results to be given to students as a continuation of the learning process.

The learning environment has an impact on students' self-confidence when learning mathematics. The majority of students who have a supportive learning environment have medium, high, or very high self-confidence, while only some students have a supportive learning environment for students with very low self-confidence. When learning mathematics remotely, the learning

environment becomes one of the supporters of the distance learning process. When learning mathematics remotely, the majority of students with very high to very low self-confidence has adequate facilities to support learning, such as cellphones and laptops. Learning facilities are owned by students when they are remote as a support for the implementation of the learning process. This is in line with Munir (2009) regarding the support of infrastructure, electronic facilities, and internet networks for distance learning. Furthermore, students with very high to very low self-confidence have also been able to properly utilize and use relevant learning resources, both those obtained from teachers and those they explore themselves, to support the success of learning mathematics remotely. In line with Fitriani and Nurjannah (2019), regarding the role of learning resources during distance learning for students to dig up information so as to help them understand.

Furthermore, in applying their knowledge, students with very high and high self-confidence were more able to apply their knowledge than students with moderate, low, and very low self-confidence. This can be caused by an attitude of belief in high and even very high self-abilities, which makes a person freer to explore his knowledge. Student confidence in learning mathematics has no impact on student assessments related to learning mathematics. The majority of students do not evaluate learning mathematics at a distance positively, so they cannot maximize their learning. Many students are not enthusiastic about participating in learning mathematics, feel unpleasant, and feel that the assignments given are a burden. This can also be caused by a lack of student motivation when learning mathematics remotely. Such as the results of research by Oetari, Rahmadya, and Pangaribuan (2021) regarding the lack of motivation in learning, which can have an impact on students' passivity and lack of enthusiasm in learning.

The learning strategy is that the teacher makes students active. Conducted with an average time of 60–90 minutes per meeting. Implemented reward and punishment. Submission of material and discussion with questions and answers are carried out via video conferencing. The teaching materials and media used take into account the ease of access and understanding of students and are presented with the help of electronic media such as power points, YouTube, or learning videos. And learning is closed with reflections and resumes together. The pedagogic model used is that the teacher still provides math problem-solving questions, which are sometimes combined with group discussions and also used as one of the skill assignments while remote. Apart from that, other skill assignments are making learning videos or media/visual aids. Group discussions were carried out with the help of communication technology. Providing practice questions or quizzes supported by rewards in the form of additional value is a stimulus for students to apply their knowledge. It is also recommended to be able to take advantage of other learning resources.

CONCLUSION

Learning technologies that are used synchronously to convey material and facilitate the question and answer or discussion process are Zoom and Google Meet. Meanwhile, asynchronously,

it is used to share material, collect information, and give assignments via WhatsApp, Google Classroom, and e-mail. Apart from WhatsApp and Google Form, many assignments are made through Google Classroom. The assessment is carried out by taking into account the level of intelligence and activity. Practice questions, assignments, and quizzes are presented in the form of essays or multiple choice, while summative assessments such as PTS and PAS are presented in multiple choice form using Google Forms and are done on time. However, some teachers also present it in essay form. Furthermore, it was also found that the self-confidence of students had quite an impact on the experience of learning mathematics at a distance, and vice versa. Students with very high and high self-esteem have a supportive learning environment, while students with very low self-esteem only have a supportive learning environment. Confidence also has an impact on students' understanding of mathematics material, student participation in the learning process, their ability to apply their knowledge, and their use of media. However, there is no difference or impact on the level of confidence with the mathematics learning experience that students get, namely the learning facilities, the learning resources, and the students' assessment of their learning.

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