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Teacher Difficulties in Learning Mathematics Class V Elementary School

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Abstract

This study was motivated by teacher difficulty teaching mathematics in elementary schools. Therefore, the purpose of this study is to identify the obstacles that elementary school teachers experience when teaching mathematics. This study uses a qualitative approach, with case study research selected utilizing a purposive sample technique. The research subject was a fifth-grade teacher at SD Negeri 20 Paninjauan. The researcher serves as the research tool. In this study, data was collected through interviews and documentation. The data and information collected are then examined using the Miles and Huberman model. The findings of this study indicate that teachers face a number of challenges when teaching mathematics, including 1) students' limited ability to grasp basic mathematical concepts; 2) low student interest in learning mathematics; 3) low mastery of mathematical formulas; and 4) student anxiety about mathematics learning.

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INTRODUCTION

Mathematics is a very fundamental knowledge (Anggraini et al., 2023; Permanasari & Pradana, 2021; Pradana & Noer, 2023) in the development of modern science and technology, which encourages human thinking and analysis. Mathematics is often classified as an abstract subject (Aprianda & Siregar, 2022). Mathematics is thought to have distinct qualities from other subjects.

Mathematics is regarded as one of the most important disciplines since it helps students think clearly, critically, rationally, attentively, effectively, and efficiently. As a result, students must master mathematics knowledge as soon as feasible because the learning process requires student involvement both physically and emotionally.

Mathematics is taught at all stages of education, including elementary school (SD), middle school (SMP), high school (SMA), and college (Fauzi et al., 2020). Mathematics study focuses on improving logical, analytical, systematic, critical, and creative thinking (Safrizal et al., 2022). In elementary school, the mathematics learning process will cover basic mathematical concepts and tools that will assist students with their arithmetic work at a higher level (Suparno, 2013).

Mathematics is not only taught at all levels of education, but it is also employed in everyday life for special and general purposes. Thus, mathematics is designated as one of the subjects that is made a compulsory subject, especially in elementary schools

In fact, there are still many students who have difficulty learning mathematics

(Permanasari & Pradana, 2021; Sundari et al., 2022), which without realizing it has co-opted students' minds. So, when dealing with mathematics (Gazali Yuliana, 2016) students also think so. Aside from being challenging, students also believe that mathematics is a boring topic (Indriani, 2016) and as a terrifying monster (Adila & Harisah, 2020).

Based on the facts above, teachers must be able to emphasize to students that mathematics is fun learning (Pradana et al., 2022). So, the teacher's function is very important; the teacher must be aware of the condition of the class, the condition of the students participating in the lesson, the teacher's own abilities, and even the appropriateness of the existing facilities and infrastructure. Mathematics learning necessitates the teacher's capacity to optimize the teaching and learning process in order to achieve satisfactory learning outcomes.

One of the recent complaints from elementary school teachers is that they are having problems presenting kids with material on specific topics. In this case, one of the teachers stated that mathematics is a tough topic to teach to kids. These issues can be apparent in pupils' inability to finish fundamental mathematics, responsiveness and recall, as well as their focus and limited time allocation. This is due to the poor mathematical concepts provided to students from the beginning of school. Even while basic mathematics demands understanding, it greatly enhances students' capacity to comprehend more sophisticated maths when solving a problem.

Teachers' problems in learning mathematics must be considered. According to the results of observations, teacher issues develop when students are asked to memorize mathematical formulas. However, due to technological advancements, most students now hunt for shortcut answers on the internet to questions based on the previously provided formulas. This will make it difficult for teachers to explain the content to their students.

This research aims to analyze the difficulties experienced by elementary school teachers when learning mathematics. It is intended that the analysis results would contribute to the development of new evaluation materials for schools, allowing them to improve the quality of mathematics learning in elementary schools in the future.

RESEARCH METHODS

This is a case study research using a qualitative approach to produce clear and complete information regarding teachers' issues teaching mathematics. The subjects of this research were grade 5 teachers at SDN 20 Paninjauan, Sepuluh Koto District, Tanah Datar Regency, West Sumatra. The data collection technique is purposive sampling. The researcher themselves serves as the study instrument, using resources such as interview guides, observation guides, and cameras. Data analysis techniques were carried out using the Miles and Huberman model, namely data reduction, data display and conclusion drawing.

Figure 1. Miles and Huberman Model

Before conducting observations, the researcher observed the teacher's actions and the challenges she experienced when implementing mathematics learning at SDN 20 Paninjauan.

RESULTS AND DISCUSSION

The research issue in this study is on the problems that teachers face when teaching mathematics at SDN 20 Paninjauan. Based on the explanations given by the relevant teachers, researchers can describe the difficulties faced by teachers into several categories, namely:

Students' Limited Ability to Grasp Basic Mathematical Concepts

Understanding basic concepts in mathematics allows students to master the subject topic. Understanding of mathematical concepts is a key component of implementing the mathematics learning process (Sakdiah et al., 2023) and relates to students' abilities in solving problems in mathematics learning such as KABATAKU (multiplication, divide, add, subtract).

In general, it can be understood that difficulties in learning mathematics are more often influenced by students' inability to master basic mathematical skills, starting from weaknesses in calculating, not understanding the place value of a number, difficulty mastering spatial shapes, patterns and relationships, geometry, measurement, collecting and compare (Sulthon, 2020). This is in line with the data from interviews that have been conducted, the following information was obtained:

> *"In mathematics, the material for grade 5 students is already at a more complicated level, where learning is starting to become difficult. However, for basic learning such as multiplication, students have not yet mastered it. For grade 5 students themselves, only a few students have mastered the multiplication material. This is very influential on the material that will be discussed. KABATAKU, which is just the basics, has not yet been mastered. So, it could be said that basic mathematical skills are still lacking. For example, it's better if you arrange it down several times, not at all, perhaps it could still be said 25%".*

Based on interviews conducted by researchers, it can be seen that one of the difficulties experienced by teachers is that students' basic mathematical abilities are still low in understanding concepts such as counting, addition, subtraction, multiplication and division. This is in line with previous research, namely not mastering concepts in Mathematics, which causes difficulties when these concepts become the basis (requirements) and are related to mathematical solutions (Sulthon, 2020). This will of course affect other materials and also the student's next level of education.

In this case, it is hoped that learning will not only focus on the teacher, but students will also be active in building an understanding of the concepts given. This is consistent with prior research, which found that mathematics learning, which should be provided with activities and active participation from students, is now exclusively offered by focusing on the teacher. Using suboptimal learning strategies and models leads to a saturated and monotonous mathematics learning process (Safrizal et al., 2022). Students should not simply accept what is handed to them, but also engage in critical thinking when solving mathematical problems.

Low Student Interest in Learning Mathematics

Interest is a situation in which students pay attention to something while also wanting to study and learn about it, until they reach the point where they want

to develop and prove something more quickly (Prayuga & Abadi, 2019). Interests have a very important role in students' lives and have a big impact on attitudes and behavior. Students who are interested about learning will work harder than those who are not.

Students' lack of interest in learning mathematics is one of the difficulties experienced by teachers when teaching mathematics at school. This is similar to the data from interviews that have been conducted, the following information can be obtained:

> *" Then there is less student intereset, as students do not understand formulas/concepts. If there is a lack of student engagement, it could be because the students believe mathematics is tough and dull, and they simply study numbers. However, it relies on how the teacher makes mathematics appealing to them."*

From the interviews conducted by the researchers above, information was obtained that there was a lack of interest in studying mathematics for students at SDN 20 Paninjauan due to the students' perception that mathematics was difficult, boring, and only learning about numbers. This makes them not interested in studying mathematics, does not pay attention to the teacher explaining the material and makes them lazy in understanding the material given.

Students just tend to accept and remain silent about material they don't understand. Students tend to be shy and also afraid to ask the teacher. Apart from the learning process, many students do not respond well to the teacher and do not pay attention to the teacher explaining the lesson. Students do not respond well to teacher explanations, thus teachers must employ effective tactics and procedures. Teachers must always urge students to focus on learning in order to boost students' enthusiasm in learning mathematics and avoid boredom during the learning process.

Students experience learning difficulties in learning mathematics related to material that is quite complicated to solve, because it is difficult to apply in everyday life. As in the documentation obtained during observations by researchers.

Figure 2. Students are daydreaming while their friends focus on the math problems given

From Figure 2 above, it is clear that there are students who are not interested in studying mathematics. Students who are bored tend to become quiet and seek out their own activities. The assignments are sometimes imitated or asked for answers from friends close by so that the student does not miss any of the teachings taught by the teacher.

Low Mastery of Mathematical Formulas

Mathematics is a very important subject and has many benefits in everyday life, but is often feared by students in

general. This is because students assume that mathematics has material that is difficult to understand because it is always related to calculations, numbers and formulas (Adhiyati et al., 2022). This makes students often complain and have difficulty learning mathematics, which results in their mathematics scores being low and unsatisfactory. As a result, students must acquire mathematical information as soon as feasible because a learning process is defined by student involvement and willingness.

The second challenge teachers have when teaching mathematics in elementary schools is their low grasp of mathematical formulas. This is as shown from the results of interviews that have been conducted, and the following information can be obtained:

> *"Then there is less student interest, students who don't master formulas/concepts..." Teacher, there are a lot of formulas, I have a hard time memorizing them." That's how students complain."*

Berdasarkan wawancara yang dilakukan peneliti di atas, siswa kesulitan menguasai rumus matematika, sulit menghafalnya, dan mengeluhkan banyaknya isinya. This is in line with previous research conducted (Fauzi et al., 2020) which states that students are lazy in studying and memorizing formulas so that students quickly forget the material given during today's learning. Students prefer to rely on the internet to help them do their assigned assignments.

From these issues, it is clear that complaints from teachers and students are related to a lack of mastery of formulas, beginning with complaints from students who believe the formulas are difficult to memorize and the material is too much, and ending with complaints from teachers about these students' complaints. Teachers must provide enthusiasm for learning to students, especially in learning mathematics, teachers must be more extra in teaching mathematics and arouse students' enthusiasm for learning so they don't always rely on what is available, such as the internet and other instant sources.

Teachers must also use appropriate methods and strategies such as the use of interactive teaching materials. Thus, it is hoped that teachers as implementers of learning can develop teaching materials that suit student characteristics. Having teaching materials made by the teacher himself will make it very easy for the teacher to carry out the learning process in the classroom, so that learning objectives can be achieved effectively (Novitasari & Yuberta, 2022), and the learning process will run well and will not impact student learning outcomes later.

Student Anxiety About Mathematics Learning

Anxiety is one of the emotional factors of students. Anxiety is the feeling of discomfort, tension, or fear when facing a problem. Mathematics anxiety is a form of a person's feelings, whether in the form of feelings of fear, tension or anxiety in facing mathematical problems or in carrying out mathematics learning with various forms of symptoms that arise (Saputra, 2014). Students who experience anxiety tend to constantly worry about bad situations that will happen to them. This is as shown from the results of interviews that have been conducted, and the following information can be obtained:

> *" Yes... students have consulted me. Mathematics is scary for me, the lessons are difficult, there's a lot of material, especially the numbers and everything. So, we as teachers should not scare students, don't be afraid of mathematics. We will be able to do it if we have the desire and are active. So, starting today we must love matamtika. Don't think of matamtika as a scary monster. If we are able to*

convey concepts to students, we like mathematics, we love mathematics, then we will be interested in learning mathematics. That fear will disappear. After that, we can organize from the start and overcome difficulties in learning mathematics, especially those in grade 5".

According to the interviews done by the researchers above, students experienced fear and anxiety about mathematics because they perceived mathematics to be a monster for them, with a large amount of material and difficulty. Students' fear and anxiety regarding learning mathematics in elementary school will tend to require them to do mathematics problems. Anxiety and fear arise when mathematics learning takes place. Students encounter changes in their moods and thoughts. According to Nurjanah & Alyani (2021), Mathematics anxiety influences everything from understanding mathematical concepts to student learning outcomes. As in the documentation obtained during observations by researchers.

Figure 3. Students who begin to feel restless and worried when assigned assignments

Based on Figure 3 above, it shows that the students of SDN 20 Paninjauan class V are not ready when the mathematics lesson will take place. As a result, when the teacher explains something to the students, they do not pay attention, and when the teacher assigns math problems, they are unable to complete them. As a result, when the teacher explains something to the students, they do not listen, and when the teacher assigns math problems to them, they are unable to complete them. Hal ini sejalan dengan penelitian terdahulu, ketika siswa diminta untuk mengerjakan soal yang ada di papan tulis. This is consistent with previous studies, which asked students to work on questions on the blackboard. Students instantly become restless and alert, so they answer the teacher's inquiries with hesitancy and nervousness (Rifdayanti & Wardana, 2020).

Students begin to have difficulty focusing and concentrating. This feeling occurs during mathematics learning in the classroom. When the teacher asks a question, students are afraid to answer; some keep silent and do not respond, while others answer with things they do not comprehend.

Students' dread and anxiety stem from the obstacles that teachers face. Teachers must always encourage students not to regard mathematics as a monster, but rather to like and adore mathematics in order for students to get interested in it and make it a fun subject.

CONCLUSIONS AND SUGGESTIONS

Based on the results and discussion presented above, it can be concluded that there are many difficulties for elementary school teachers in learning mathematics, including 1) students' limited ability to grasp basic mathematical concepts; 2) low

student interest in learning mathematics; 3) low mastery of mathematical formulas; and 4) student anxiety about mathematics learning.

The importance of understanding mathematical ideas for students in elementary school necessitates that teachers work tirelessly to discover solutions to the challenges they face. The solution made by the teacher regarding the difficulties faced by the teacher is by providing encouragement and motivation to students in learning mathematics with the aim of increasing students' motivation in learning mathematics.

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