

ANALYSIS OF STUDENTS' MATHEMATICS LEARNING DIFFICULTIES CLASS V ELEMENTARY SCHOOL HERA

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Abstract

This study aims to determine students' difficulties in learning mathematics and the factors that contribute to their difficulties. This study used a qualitative approach with a descriptive qualitative research method intended to describe students' difficulties in learning mathematics. The subjects were ten students in grade V EBC 3.theciclo Hera. The results of this study indicate that the tendency of difficulties experienced by students is conceptual difficulties, where students do not fully understand the concept of fractions, students have difficulty determining the numerator and denominator, reversed in writing fractional values, and difficulty distinguishing the symbols more than „>“ and less than „<“. The factors that make students have difficulty learning mathematics are low student attitudes and interests, where students do not like mathematics lessons which make students not pay attention to the teacher during mathematics lessons so that students feel unmotivated during mathematics lessons.

Keyword: Mathematics, Difficulty Factor, Elementary School Students

1. INTRODUCTION

Elementary schools are government-managed and regulated institutions that provide formal education, lasting six years from first to sixth grade, for students throughout Timor-Leste. As formal education for the nation's next generation, elementary schools are structured based on the nation's character and culture, which are then established through a curriculum. This curriculum then drives and implements the educational process. In its implementation, elementary school education is provided to students with a number of materials or subjects that must be mastered. These subjects include: religious education, Tetum language, Portuguese language, English language, natural sciences, social sciences, mathematics, physical education and sports, arts and crafts.

Mathematics is a science that plays a vital role in various aspects of life. Its role enables all aspects of life in this world to develop so rapidly. The development of the economy, technology, and even industry is inseparable from the involvement of mathematics. Given this crucial role, mathematics is taught from elementary school through university.

Mathematics instruction should transform students' perceptions that mathematics is more than just numerical calculations. Many students perceive mathematics as a difficult subject. This perception often leads them to give up before they even begin learning it.

Students tend to memorize concepts from textbooks or those presented by their teachers without understanding their meaning and content. Learning difficulties are a common issue that can occur during learning activities. Learning difficulties, in this case, can be defined as students' difficulty in receiving or absorbing lessons at school. Learning activities don't always go smoothly for each individual. Sometimes they're smooth, sometimes they're not; sometimes they grasp what they're learning quickly, and sometimes they struggle

to grasp what they're learning. In terms of motivation, sometimes they're high, but sometimes they're low, making it difficult to concentrate on the lesson.

Many students experience learning difficulties, especially in learning mathematics. This is based on the results of observations in one of the V EBC 3.theThe Hera ciclo conducted on January 30, 2025, from the results of interviews with several teachers at the school, it was found that in general, some students make mathematics the most avoided subject so that many of the students get low learning outcomes.

The lack of understanding of multiplication is also still low. Students' lack of understanding of a material concept and the frequent forgetfulness of students are also factors that make students' practice scores at home and at school low. Low scores were also found on daily tests. Based on the daily test score data obtained, it states that the minimum completeness criteria (KKM) score for mathematics in EBC 3 ciclo hera is 70. Of the total number of fifth grade students totaling 54 students, 30 students received a low average daily test score.

If left untreated, students' learning difficulties in mathematics will have detrimental consequences. Students will become increasingly less interested in learning mathematics. Mathematics will continue to be their most avoided subject. Students will also become more easily bored and tired of learning mathematics. Therefore, it's important to detect learning difficulties early. These difficulties can become apparent as early as elementary school. Therefore, understanding and immediate intervention are essential for students experiencing learning difficulties in mathematics.

Many factors contribute to learning difficulties in mathematics, including a lack of interest and motivation in learning mathematics, and a lack of parental and community support for students' mathematics lessons due to their lack of understanding of mathematics. Therefore, students experiencing learning difficulties should be provided with adequate support and motivation to enable them to participate in mathematics lessons and enjoy mathematics.

2. METHOD

This research uses a qualitative approach with a qualitative descriptive method that is in accordance with the research objectives, namely describing the analysis of mathematics learning difficulties in class V. This research was conducted at one of the V EBC 3theThe subjects of this study were fifth grade students of EBC 3.theHera's ciclo which consists of 10 students.

The research process included initial observations, initial interviews, research observations, research interviews, tests, and documentation. Data collection techniques in this study were divided into two: first, data collection on students' mathematics learning difficulties using observation, interviews, and tests. Second, data collection on factors affecting students' mathematics learning difficulties using observation, interviews, and documentation. For more details, see the table below:

Table 1.Data Collection Techniques

No	Data Captured	Data source	Source person	Appendix Appendix
1	Difficulties in Learning Mathematics	Observation	Student	Observation Guidelines
		Interview	Student	Interview Guidelines
		Hands	Student	Question
2	Factors Causing Difficulties in Learning Mathematics	Observation	Students & Teachers	Observation Guidelines
		Interview	Students & Teachers	Observation Guidelines
		Documentation	Students & Teachers	Taking pictures

3. RESULT AND DISCUSSION

3.1 Understanding Mathematics Learning Difficulties

Every student in principle certainly has the right to get the opportunity to achieve satisfactory academic performance. However, from everyday reality it is clear that students have differences in terms of intellectual abilities, physical abilities, family backgrounds, habits and learning approaches that are sometimes very striking between one student and another. This is in line with the opinion of Djamarah (2015) who stated that learning difficulties or learning disabilities which are also commonly referred to as learning disorders or learning difficulties are a condition where students cannot learn naturally, due to threats, obstacles or learning disorders. From Djamarah's opinion that has been explained above, it can be seen that learning difficulties are difficulties that are definitely experienced by students where students feel uncomfortable when participating in lessons due to coercion by people around them, a history of illness that students have that makes it difficult to concentrate on learning or disturbances from the surrounding environment.

Abdurrahman (2013) states that learning difficulties can be defined as a deficiency in one or more academic areas, whether in specific subjects such as reading, writing, mathematics, and spelling or in various more general skills. From Abdurrahman's opinion, it can be understood that learning difficulties experienced by students are deficiencies that students have in both academic and non-academic fields. Deficiencies in understanding some or all of the material that has been taught or deficiencies in skills that are not related to academics, for example drawing skills and other skills. Another definition of learning difficulties is expressed by Ahmadi & Supriyono (2013) who state that learning difficulties are a condition where students cannot learn as they should, that is what is called learning difficulties. From the opinions of Ahmadi & Supriyono that have been explained, it can be seen that learning difficulties experienced by students are not always caused by low intelligence factors, but can also be caused by non-intelligence factors. Thus, a high IQ does not necessarily guarantee learning success.

Based on these opinions, it can be concluded that learning difficulties in mathematics are a condition in which students are unable to learn academically, particularly in mathematics, naturally, and thus are unable to learn as they should. Generally, students experiencing learning difficulties in mathematics exhibit difficulty learning and completing tasks involving numbers or symbols.

Karso (2013) argues that fractions are numbers that can be represented, a is called the numerator and b is called the denominator where a and b are integers and $b \neq 0$. The form can also be interpreted as $a : b$ (a divided by b). From Karso's opinion that has been explained, it can be seen that fractions are numbers that represent the comparison of equal parts of an object to the whole object. In other words, an object is divided into several equal parts, then the comparison of each part with the whole object creates the basic symbol of a fraction.

Another definition is expressed by Heruman (2017), who states that a fraction can be interpreted as a part of something whole. From Heruman's opinion that has been explained, it can be seen that a fraction is a number that, when illustrated in a picture, the part in question is the part that is considered, which is usually marked with shading. This part is called the numerator. The whole part is the part that is considered as a unit, and is called the denominator.

Tampomas (2003) fractional numbers are rational numbers expressed in the form $X = a/b$, with a an integer and b a natural number, where a is not divisible by b . a is called the numerator and b is called the denominator (Untari,

2013). From Tampomas's opinion, it can be seen that Tampomas's opinion is almost the same as Karso and Heruman's opinion, where a fraction is a number that has a numerator and a denominator. In this form of number, the numerator is read first, followed by the denominator. When stating a fraction, the word "per" must be inserted between the numerator and denominator. For example, for the number $\frac{2}{3}$, then we can call it "two thirds" and the same goes for the number $\frac{1}{5}$, you can read it as "one per five" or "one-fifth." If a fraction has the same value or the same value when the numerator and denominator are multiplied or divided by a non-zero number, then the fraction is called an equivalent fraction.

Based on the above experts' understanding of fractions, it can be concluded that fractions can be interpreted as part of something whole that can be symbolized, a is called the numerator and b is called the denominator where a and b are integers and $b \neq 0$. The form can also be interpreted as $a : b$ (a divided by b) where a is not divisible by b.

The test results revealed that some students had learning difficulties. These difficulties were identified through observations, interviews, and tests. Data obtained from the observations, tests, and interviews revealed that students had difficulty understanding concepts, mastering skills, and solving problems.

Conceptual understanding reflects students' basic comprehension skills. This can be seen in observations that have been conducted, where several students still seem to have difficulty distinguishing between the denominator and the numerator and have difficulty distinguishing the symbols less than and greater than. Likewise, the results of written tests that have been taken, many students still do not understand the concept of fractions. Lack of conceptual understanding causes students to have difficulty working on problems because teachers who teach in an inappropriate way and do not use concrete examples related to everyday life.

Difficulties in calculations usually arise from students' inattention in solving the problems. Furthermore, difficulties in calculations can also arise from students' lack of understanding of the problem or from students' lack of understanding of the concept. A common mistake students make is misusing the two fractions.

Problem-solving difficulties arise when students struggle to understand concepts and perform calculations. Students who don't understand the concept of a problem or the material will inevitably make errors in their calculations, making it difficult to solve the problems. Test results indicate that students who struggle with concepts also struggle with calculations, resulting in incorrect answers to all their problem-solving questions.

Of all the questions given, students were found to have difficulty solving problems for each number. Students who have difficulty understanding concepts certainly also have difficulty solving problems. Students who do not fully understand the concept of the material, resulting in students being confused when given questions. Because of this confusion, students answer the questions haphazardly or according to what is in their minds, resulting in incorrect calculations and ultimately incorrect problem solving. Factors that cause students to have difficulty learning are attitudes and low desire to learn.

Based on the interview results, it was found that most students with learning difficulties have no interest in mathematics lessons. They consider mathematics lessons too difficult, often confusing, too many formulas to use, and children simply do not like calculations. Likewise, with the learning attitudes of students with learning difficulties, many of them do not pay attention when the teacher explains the material, they prefer to chat with their deskmates or play alone in their desks.

This is in accordance with the opinion of Ahmadi and Supriyono (2013) that "a child's lack of interest in a lesson will cause learning difficulties". Low learning motivation possessed by students can affect students' learning attitudes. Students who have low learning motivation do not have the enthusiasm to follow mathematics lessons. Based on the results of the interview, it is known that students who have learning difficulties have low motivation. This can be shown in the results of the interview, many of them admitted that they did not review the lessons they had received, they only studied if there was a test, and they would disturb their friends if they felt bored when the teacher was explaining mathematics material.

Using media or tools appropriate to the material can help students understand concepts well. Conversely, using inappropriate media will result in students being less interested in paying attention to mathematics lessons. Based on the results of interviews with students who have learning difficulties, it was found that teachers never use learning media during lessons. Based on the results of interviews with students who have difficulty learning mathematics, it was found that five students admitted that their teachers never use media or teaching aids in fractions. This results in students being unable to fully understand the concept of fractions, so students are unable to solve the problems given correctly and experience difficulties.

Ahmadi and Supriyono (2013) state that "incomplete learning materials result in poor lesson presentation, thus creating learning difficulties." Students can certainly learn better and enjoyably if a school can meet all their learning needs. The problems that students face in learning are relatively small. Students' learning outcomes will certainly be better. Based on the results of interviews with students who have difficulty learning mathematics, it was found that they did not feel comfortable with their classrooms. Because the classrooms are divided into two parts or two classes, the classroom atmosphere often feels noisy, resulting in divided concentration. This is in line with what Ahmadi and Supriyono (2013) stated that "the condition of buildings or classrooms that do not meet requirements will create a less than optimal learning situation, thus hampering learning.

4. CONCLUSION

After the researcher discussed the data obtained from the research results, the researcher drew the following conclusions: There are students who have difficulty learning mathematics. The location of the difficulty experienced by students in learning mathematics on fractions is in the concept section where the most common mistakes made by students include errors in writing fraction values, errors with greater than ($>$) and less than ($<$) signs, errors in writing the numerator and denominator values, and not understanding the problem completely. Students also experience difficulties in arithmetic skills where the most common mistakes made by students are, errors in calculating the two subtraction operations on fractions and students make mistakes in calculating the difference in fraction values. Meanwhile, students who experience difficulties in the problem-solving section, the most common mistakes made by students are, errors in the final solution of the problem and errors in filling in certain parts so that the answer is not perfect. Factors that cause students to have difficulty learning include, low interest and attitude to learning, most of them consider mathematics lessons too difficult, often make them confused, too many formulas are used and some of them do not like mathematics lessons. In addition, low motivation is also another factor that students can have difficulty learning. They admitted that they rarely review the lessons they have received

after school, they will only study when there is a test. The use of learning media is also a factor that makes students have difficulty learning, this is because teachers rarely or never use learning media when explaining fraction material. The next factor is school facilities and infrastructure, half of them feel uncomfortable with their learning class being divided into two with other classes so that it makes them less focused on learning.

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