

CLASS VII MATHEMATICS LITERATION ABILITY PROFILE AT SMP NEGERI 2 DENDANG

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Abstract

The ability of students in Mathematics is not only to have the ability to count, but also to be able to use Mathematics in solving daily problems faced by students. Literacy ability is a person's ability to reason systematically and structurally using concepts, procedures, and facts about a real event. Good Mathematical Literacy if students can analyze, reason, and describe their knowledge of Mathematics effectively. This study aims to analyze the level of Mathematical Literacy ability of students of SMP N 2 Dendang in grade VII using a qualitative descriptive research method. Factors that affect students' Mathematical Literacy skills include lack of motivation to learn, difficulties in understanding the material, and lack of practice questions. This study also presents several recommendations that are useful to improve students' Mathematical Literacy skills.

Keywords: Literacy, Mathematics, Teacher

1. Introduction

In the world of Literacy Education is a person's ability to read, write, understand, and use information effectively. According to (Bu'ulolo, 2021) literacy skills are important abilities that must be possessed by every student to master various kinds of subjects studied. Literacy is an important learning in improving students' reading skills. Literacy in the current era shows a fairly drastic decline, this is due to technology that is more fun than reading a book. Literacy is also not just reading, but also must understand what is read and what meaning is implied by a book and story that students read. Literacy can be applied in various ways, such as watching illustrated and moving videos that make students interested in literacy.

Mathematics is more than just numbers and formulas, mathematics is the art of logical and systematic thinking, mathematics trains students to find patterns, make connections, and make decisions based on data. Mathematics is formed as a result of students' thinking related to ideas, processes, and reasoning. Problem solving in mathematics is not only a problem in the form of routine problems but more problems faced on a daily basis. Based on the results of a survey conducted by the Programme For International Student Assessment (PISA), the mathematical literacy skills of students in Indonesia are still low. Indonesia is below the international average (Kusumawardani, 2018) In order to improve mathematical literacy, teachers, the government and part of Education need to first understand what mathematical literacy is. Not only that, it is necessary to realize why this mathematical literacy needs to be a concern in mathematics learning.

This article discusses the importance of mathematical literacy and its effective application in applying it and knowing the understanding of Mathematical Literacy at SMP Negeri 2 Dendang. This research method is a qualitative descriptive method where, this article gets information by sharing several mathematical literacy questions with



students and then collecting data on how well students understand mathematical literacy.

2. Methods

Mathematical literacy methodology includes approaches and strategies designed to improve students' ability to understand and apply mathematical concepts in the context of daily life. The methodology used in this study is:

2.1. Contextual Teaching and Learning (CTL)

The Contextual Teaching and Learning (CTL) contextual learning model is a learning strategy that emphasizes the process of full involvement of students to find the material they will learn and then connect it with situations in real life, so that students are encouraged to be able to apply it in their lives (Afriani, 2019) This CTL connects the learning material with the real situation that will be faced by students. This approach encourages learners to make connections between new knowledge and their experiences, making learning more meaningful. The questions that will be given in this study include questions related to real life and experienced by students.

The CTL approach is a learning concept that helps teachers to relate the material taught to the real-world situation of students by encouraging students to make connections between the knowledge they have and their application in daily life as family members and the community. The teacher's task in implementing this model is to help students achieve learning goals, teachers only manage the classroom as a team that works together to find something new for students (Abdi, 2019)

2.2. Problem-Based Learning (PBL)

PBL is a method in which students learn by solving complex and relevant problems, it encourages the development of critical thinking skills and the ability to apply mathematical concepts in real situations. PBL is a learning model that uses problems as the first step in collecting and integrating new knowledge, at the beginning students are given problems at the beginning of learning by the teacher then during the implementation of learning students solve the problem which then students integrate the solution of the problem into the form of a report (Abdullah & Ridwan, 2008). With teacher guidance that is carried out repeatedly, it will encourage and direct them to ask questions and find solutions to the problems they are facing, students who learn to complete tasks independently for their future lives (Febiani Musyadad et al., 2019).

3. Results and Discussion

3.1. Definition of Literacy

According to (Fadillah, 2016) literacy in general is an individual's ability to process and understand information when reading or writing which is obtained through a process throughout time. Literacy in English, namely literacy, comes from the Latin word "litera" which means mastery of writing and agreements. Literacy can also be interpreted as a person's ability to read and write which is increasingly developing including the process of reading, writing, speaking, listening, imagining, and seeing.

Literacy-based learning will condition students to become diligent by reading, increasing literacy skills in learning in line with the goals of education in Indonesia,



namely the development of students' potential to become human beings who believe in and devote themselves to God Almighty, have a good start, are healthy, knowledgeable, capable, creative, and independent (Bu'ulolo, 2021).

Literacy is a program held by PISA (Programme For International Student Assessment), with the aim of evaluating the extent to which 15-year-old students in participating countries have mastered the literacy of reading, mathematics, and science necessary to face real-world challenges. With the results of the PISA assessment, it is hoped that countries can carry out education reforms that focus on improving literacy and skills in the 21st century for students. In increasing students' interest in reading, there are several programs that can support a literacy activity such as the School Literacy Movement (GLS) and create a positive reading environment. At SMP Negeri 2 Dendang, it has just started to implement GLS.

3.2. Definition of Mathematics

Mathematics is described as the science of logic about shapes, arrangements, quantities, and concepts that are interconnected. James and James (1976) said that mathematics is the science of logic regarding shapes, arrangements, quantities, and concepts related to each other. Mathematics is a symbolic language that is used to express quantitative and spatial relationships, as well as to make it easier to think. Mathematics is generally defined as a field of science that studies patterns, structures, changes, and spaces. So it can be concluded that the learning outcomes of students in mathematics subjects are the abilities that students have towards mathematics lessons obtained from experiences and Exercises during the teaching and learning process take place to illustrate students' mastery of mathematics learning materials which can be seen from mathematical values and students' abilities in solving a problem in mathematics (Komariyah & Laili, 2018)

3.3. Definition of mathematical literacy

Mathematical literacy is the knowledge to know and use the basics of mathematics in daily life. In this sense, students who have good mathematical literacy skills have sensitivity to which mathematical concepts are relevant to the phenomenon or problem at hand. From this sensitivity, it is then continued with problem solving with mathematical concepts. According to OECD (2013), mathematical literacy is the capacity of students to formulate, apply, and interpret mathematics in various contexts.

3.4. Results of student assessments

This research took grade VII at SMP Negeri 2 Dendang, by giving story problems about mathematics and then giving these problems to students. The low mathematics learning outcomes of students are caused by several factors, including mathematics is one of the subjects that is considered to be a difficult subject by students so that there is a lack of students' interest in learning mathematics, many formulas that must be learned and problems that are difficult to understand, so that students' interests and talents do not develop in learning mathematics lessons.

Therefore, students' interest and talent in learning mathematics must be developed, so that talent is an innate potential possessed by humans, while interest is created because of a strong interest in something. These two things are often associated with the factor of intelligence and a person's success in learning mathematics to obtain maximum



results. The thing that causes the learning achievement of students is still low, which is usually shown by the average score of mathematics subjects that is less than KKM (Minimum Graduation Criteria), there are several things that cause student learning achievement, namely because there is still a lack of understanding of students in the previous material, when learning is taking place students' attention to the material is still low and the activeness of students during class is still low (Putri & Sri, 2017)

From the results of the study, in grade VII, it is still seen that students are lacking in literacy and mathematics, which makes the results of these scores relatively low. So there is a need to grow interest in literacy and mathematics for students. In fostering students' interest in learning, especially learning mathematics, it can be done in various ways. For example, by providing learning methods and learning media to students so that students' learning outcomes in learning mathematics increase and students who have interests and talents in themselves will more easily achieve success in learning activities.

Before working on the questions, students receive material from the teacher using the methods that have been determined. From the results of using this method, it can be seen that students can understand the material more easily because using a fun method is not just watching the teacher deliver the material without involving students in learning.

4. Conclusions

Literacy in general refers to a person's ability to read and write. However, the concept of literacy has evolved over time. Today, literacy is not only limited to reading and writing skills, but also to understand and use information, think critically, and be creative. Mathematics is the study of patterns, structures, and relationships between various quantities. Mathematics is often called the "Universal Language" because it is used all over the world and in a variety of fields, from the natural sciences to the social sciences. This study aims to find out the extent to which students know about mathematical literacy, from the research that has been carried out it can be concluded that in SMP Negeri 2 Dendang students cannot understand too much what they read, with this it can also be concluded that mathematical literacy can be improved even better. School principals, teachers and students must first understand the concept of mathematical literacy to realize schools even better.



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