

NUMERATION LITERACY OF 5TH GRADE STUDENTS OF SD NEGERI GANDADULI 02 BREBES

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Abstract

The purpose of this study was to determine the numeracy literacy skills of elementary school students. The approach used in this research is a quantitative approach. The population in this study were grade 5 students at SD Negeri Gandasuli 02 Brebes in 2021/2022 which consisted of 2 classes (Class 5A and 5B) with a total of 64 students. The sample in this study was 30 students who were AKM participants and the Ministry of Education and Culture took random samples. The data collection technique used is documentation in the form of result values *try out* AKM and a list of student names and a written test. The results of this study indicate that the numeracy literacy skills of Grade 5 students at SD Negeri Gandasuli 02 Brebes are in the moderate category namely 63.3%, which indicates that students have sufficient understanding of this literacy.

Keywords: literacy, numeracy, primary school literacy

1. INTRODUCTION

Reading and writing is one of the most important things. learning process based on reading ability. Deep reading ability Every child will make a degree of success in social and open environments better chance of success in life. Ministry of Education and Culture through Ministerial Regulation number 23 of 2013 launched a literacy movement schools to cultivate noble character attitudes to children through Language. Broadly speaking, literacy means more than just reading and writing. It also includes how a person communicates in society. Literacy also means practices and social relations related to knowledge, language, and culture. The inculcation of noble ethical values is carried out from an early age produce intellectually intelligent, emotionally and spiritually intelligent people. Admittedly, one of the big mistakes in our education system is very only prioritize intellectual intelligence, but put it aside learning that contains moral values. No wonder there are so many people now smart, highly educated, but do not know manners, do not have an attitude of consideration feeling, lack of empathy, and so on.

Elementary school is the period of children at the golden age so that important to instill the values of noble character. Here the teacher has a role important in motivating students to learn. In carrying out learning, teachers must use a comprehensive and progressive approach in order to motivate students' curiosity and trigger students to think critically. It will successful if the teacher is able to develop appropriate learning so that learning that is implemented can improve literacy skills and potential whole student. In the development of learning, teachers must also be able selecting and utilizing teaching materials, such as encouraging students to read quality books, because reading activities are in line with the process critical thinking that allows students to be more creative and inventive.

Literacy skills are a prerequisite for 21st century life skills that are developed through integrated education within the family, school and community. As part of literacy skills, it is important for everyone to have numeracy literacy. Numerical literacy skills are needed to solve everyday problems using mathematical knowledge, both symbols and numbers. Numerical literacy requires logical thinking to make it easier for someone to understand mathematics. With this ability someone will be helped, both in understanding the material, analyzing problems, and solving problems. Numerical literacy is defined as the ability to apply number concepts and arithmetic operations skills in everyday life and the ability to interpret quantitative information that exists in the student's environment. According to Lange, 2006 (in the research journal Patriana, 2021) defines numeracy literacy as knowledge and skills to use various kinds of numbers and symbols related to solving practical problems, and analyzing various information displayed in the form of graphs, tables, diagrams or charts then use the interpretation results to predict

and make decisions. Students' numeracy literacy skills, in general, in Indonesia have not met expectations. The gap in numeracy literacy skills is shown from the results of PISA and TIMSS. PISA results (OECD, 2018), Indonesia gets an average math score of 386 out of the highest average score of 490. Results (TIMSS, 2015) Indonesia gets a math score of 397 from the highest score achieved by Singapore, which is 618. From the results of the large-scale PISA assessment and TIMSS shows that there is a gap in numeracy literacy skills. The gap that occurs is explained by Febrilia & Juliangkary, 2019 due to the teacher's ability to design math problems in learning to encourage students' critical thinking skills is not optimal. The minister of education in Indonesia in the 21st century made changes in national exam with the National Assessment which consists of three parts 1) Minimum Competency Assessment (AKM); 2) Character Survey; 3) Environmental Survey (Education, 2019). According to Ayuningtyas in AD Cahyanovianty's research, 2021 AKM is a fundamental competency assessment by all students for develop self-capacity and participate positively in society and the government made this update in order to familiarize students in critical thinking that is contextual with everyday life and avoids from the tension of students in working on exam questions that contain only content in learning only. The numeration content in AKM consists of: numbers, geometry measurement data, algebra, data and uncertainty (Kemdikbud, 2020).

In order to support the cultivation of numeracy literacy, in 2021 a Minimum Competency Assessment (AKM) will be carried out which includes reading literacy and numeracy. Starting from this thought, elementary school (SD) teachers should focus more on learning mathematics on needs, namely the development of AKM-oriented mathematics learning management aspects of numeracy literacy. The development of elementary mathematics learning refers to the concept of collaborative, thematic and integrated learning. According to Zambrano et al., 2019 (in the research journal Patriana, W. D. et al, 2021) explains that groups of students with collaborative learning have cognitive efficiency in solving problems that require high-level thinking, so teachers need to design an effective collaborative learning environment. Learning design in elementary schools is designed with a thematic approach by integrating themes in both national and international curricula that are compatible with

the purpose of learning mathematics, especially in improving numeracy literacy competencies in various good life contexts *science, occupational, personal, and social* (Kristanto, (2017); Munayati, (2015)) in the research journal Patriana, 2021. In learning mathematics in elementary schools there are obstacles experienced, namely the lack of student interest in learning mathematics, the ability to understand formulas is lacking, traditional learning systems that is still dominant, the use of thematic books is not maximized, and the teacher's ability to develop material is not optimal (Fauzi, 2020). The problem is that the teacher's ability to design AKM-oriented learning is not optimal because teachers still need to understand the National Assessment implementation system, National Assessment Participants, National Assessment question forms, and aspects assessed in the National Assessment (Novita, 2021).

The AKM aspect of numeracy literacy is contextual, measures problem solving competency, and stimulates students to think critically. The national assessment program, namely the numeracy literacy AKM which will be implemented in October 2021, requires schools to design new habits in mastering numeracy competencies. Numeracy-oriented learning in elementary schools must be optimally managed so that students' numeracy abilities are optimal. Management of learning is done with a process that starts with planning, implementation, and assessment. Planning, implementing and evaluating learning depends on the teacher's creativity, skills, sincerity and perseverance (Sutama, 2020). In order for mathematics learning to be effective, a) the teacher offers conditions, b) students build their own knowledge, c) the presence of relevant mathematical content (Sutama, 2020) in the research journal Patriana, 2021.

2. METHODOLOGY

The approach used in this research is quantitative research. Considered pure research that can be explained by exact numbers. According to Ferdinand, 2014 (on Darwin's research, 2021) quantitative research is a type of research that is often used by students for complete the final task. The ease in the research is indicated there is a prefix research hypothesis that is built for further facilitation students prove the hypothesis with various research procedures structured. According to Sugiyono, a quantitative approach is a type of approach research using survey and experimental methods.

The sample is a selected part of the population selected through several processes with the aim of investigating or studying certain characteristics of the core population. "Sample is a *selected subset of a*

population chosen by some process usually with the objective of investigating particular properties of the parent population” (Everitt & Scrandal, 2010) in Swarjana's study, 2022. The sampling technique in this study was simple random sampling, which is a method of sampling where each population is given the same opportunity to be sampled. The sample in this study were AKM participants who were randomly selected by the Ministry of Education and Culture. Data collection techniques are the methods used to obtain data in research. Data collection techniques used in this study are documents and tests.

3. RESULTS

This research is a quantitative study which was conducted from 10 to 28 May 2022 in grade 5 SD Negeri Gandasuli 02 Brebes. The curriculum applied is K-13 in each class. The population in this study are students in grades 5A and 5B in 2021/2022. The sampling technique is using the technique *random sampling*. The sample in this study used Minimum Competency Assessment (AKM) participants, totaling 30 students. The AKM participants were randomly selected by the Ministry of Education and Culture so that researchers only took data on AKM participants that had been previously determined by the Ministry of Education and Culture.

In this study the data used to determine numeracy literacy skills is using the result *valuetry out* AKM. The following is a table describing numeracy literacy data:

Table 1. Numerical Literacy Data Description

No.	Data Distribution	Mark
1	Rate-Rate/Mean	73,93
2	Modus	80
3	Median	76
4	Standard Deviation (Sd)	6,92
5	Variance	47,86
6	The highest score	82
7	Lowest Value	60

Based on table 1, the average value of numeracy literacy is 73.93 with the highest value achieved is 82 and the lowest value is 60. The mode value is 80 which indicates that the highest number of numeracy literacy ability scores is 80, and the median is 76. Shows that in terms of the overall numeracy literacy of students is quite good. The variance is 47.86 and the standard deviation is 6.92.

Then the value of numeracy literacy is categorized into three, namely high, medium, and low. Look at the following table:

Table 2. Numeracy Literacy Category Formula

Category	Formula
Height	$X \geq \bar{X} + \text{Standard Deviation}$
Currently	$\bar{X} - \text{Standard Deviation} < X \leq \bar{X} + \text{Standard Deviation}$
Low	$X \leq \bar{X} - \text{Standard Deviation}$

Then do the calculations with the operation of the formula above and the following results are obtained:

Table 3. Numeracy Literacy Outcome Category

Category	Class Range
Height	$X \geq 80,85$
Currently	$67,01 < X \leq 80,85$
Low	$X \leq 67,01$

The frequency distribution can be calculated based on the high, medium, and low categories from the table above. The calculation results from the numeracy literacy value category can be seen in the table below:

Table 4. Frequency Distribution of Numerical Literacy Categories

Category	Frequency	Presentase (%)
Height	4	13,3
Currently	19	63,3
Low	7	23,3
Total	30	100

Based on table 4, 4 students (13.3%) have high numeracy skills, 19 students (63.3%) have moderate numeracy skills, and 7 students (23.3%) have low numeracy skills. It can be concluded that the average numeracy ability of Grade 5 students at SD Negeri Gandasuli 02 is in the moderate category, indicating that students have sufficient numeracy skills.

4. CONCLUSION

Based on the results of the research and discussion that the researchers carried out in grade 5 of SD Negeri Gandasuli, it can be concluded that the numeracy literacy of students in grade 5 SD Negeri Gandasuli 02 is in the moderate category, namely 63.3%, which indicates that students have sufficient understanding of numeracy literacy.

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