Analysis of Numeracy Ability in 4th grade Students at SDN 128 Haurpancuh Bandung

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Abstract. The culture of numeracy in Indonesia is low. The factor that influences the low numeracy in Indonesia is the lack of interest in reading among Indonesian people. Numerasi itself can be linked to skills in certain fields. This research uses descriptive qualitative research. The aim of this research is to analyze the numeracy abilities of 4th grade students. The subjects of this research involved 26 4th grade students at SDN 128 Haurpancuh. The research instruments were used in this research is interview sheets and student evaluation sheets in the form of number pattern questions to analyze students' numeracy abilities. Based on the results of research from 26 students who worked on worksheets in the form of number pattern questions, there were 5 students who had low level numeracy abilities, 9 people had medium level numeracy abilities, and 11 students had high level numeracy abilities. So it can be concluded that the numeracy literacy skills of 4th grade students at SDN 128 Haurpancuh are at a medium level.

Keywords: Numeracy Ability

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INTRODUCTION

Mathematics is an important subject at every level. But in reality students find it difficult to understand these mathematical concepts. This can be seen from students' low interest on mathematics. This subject is also considered scary for some students. Based on the results of interviews conducted at SDN 128 Haurpancuh, students didn't like mathematics because mathematics were considered as the most difficult among other subjects. This is also supported by the statement of the homeroom teacher at SDN 128 Haurpancuh who said that the lowest accumulated score was the score in mathematics.

Along with the development of science, the term literacy has experienced an expansion of its meaning, one of which has been expanded to numeracy. Numeracy itself is the ability to develop knowledge and skills in dealing with mathematics by thinking critically or rationally in all aspects of life.

Mathematics learning is related to numeracy skills in its implementation. Numeracy ability is the knowledge and ability to use various kinds of numbers and symbols in the context of basic mathematics to solve problems in various conditions of daily life and analyze information presented in various forms (diagrams, tables, graphs, etc.) and then use the interpretation of the results to make predictions and decisions. (Han, 2017, p. 3). In simple terms, numeracy is meant as the skill of applying number concepts and the ability to apply mathematics in everyday life. Numeracy ability can be defined as a person's ability to formulate, apply and interpret mathematics in various contexts, including the ability to reason mathematically, and use concepts, procedures and facts to describe, explain or predict phenomena/events." (Ekowati in Cahyanovianty and Wahidin, 2021, p. 1440). It is about understanding and analyzing statements related to symbols or the mathematical language of everyday life and being able to express these statements in writing or verbally.

According to Mahmud and Pratiwi (2019, p. 84) there are three aspects contained in the context of numeracy abilities, namely: (1) the numeracy aspect, covering the ability to apply counting, subtraction, multiplication and solving; (2) numbering relationships which include the

ability to describe sets; and (3) mathematical operations include the ability to perform basic mathematical concepts such as addition, subtraction, and so on. In general, numeracy skills are related to the ability to think critically to solve problems and draw conclusions on mathematical problems.

According to Pulungan (2022, p. 267) the ability to understand numeracy is needed in mathematics, because it is not only related to formulas, but also requires logical thinking or critical thinking from students in answering each given problem. Numeracy skills also help students understand mathematical concepts when solving problems in everyday life. Lestari (2019, p. 15) stated that learning mathematics is important for progress in a country, so the application of numeracy skills is very important for elementary school students.

Numeracy learning is important for elementary school students so that students can determine the progress and development of a nation. Numeracy skills are also useful for enabling students to overcome everyday problems and the foundation of numeracy literacy is very broad to apply. (Lestari, 2019, p. 19)

Based on the results of observations made by researchers at SDN 128 Haurpancuh, there were 14 students who still experienced obstacles in their numeracy skills, namely in working on 12 questions about Number Patterns. The obstacles faced by 4th grade students at SDN 128 Haurpancuh in implementing numeracy skills include: (1) lack of stimulus for students in carrying out mathematical reasoning activities; (2) there is little or no literature to develop innovation in implementing numeracy programs. These obstacles are experienced by students which cause the numeracy skills of 4th grade students at SDN 128 Haurpancuh to be still lacking. There are still many students who think that learning mathematics is considered boring. Because students think mathematics is a difficult and boring subject. So here, the role of the teacher is important in improving the numeracy skills of 4th grade students at SDN 128 Haurpancuh.

Based on the following explanation, the researcher is interested in conducting research by analyzing numeracy abilities with the research title "Analysis of Numeracy Ability in 4th grade Students at SDN 128 Haurpancuh Bandung".

METHOD

The research method used in this research is descriptive qualitative type. According to Moleong (2016, p. 6) qualitative research is research that aims to understand phenomena related to the researcher's experience, for example behavior, observation, motivation, action, etc. comprehensively and with verbal and linguistic descriptions in a reasonable context and using natural methods. Meanwhile, according to Safitri (2021, p. 37), the qualitative analysis method is a method that is related to ongoing events. The descriptive qualitative type aims to describe in full and in depth the social reality that occurs (Rio and Pujiastuti, 2020, p. 73).

A qualitative approach was chosen because it was carried out based on events that occurred and was related to the current situation. This research was carried out by describing the numeracy abilities of 4th grade students at SDN 128 Haurpancuh. The research was conducted in April 2023 in mathematics subjects. The research subjects involved 26 4th grade students at SDN 128 Haurpancuh. The research tool used by researchers is the results of student evaluation sheets in the form of questions about number patterns to determine students' numeracy abilities. After completing the results of the student evaluation sheet, the researcher conducted interviews with the students as one of the ingredients in the validity of analyzing numeracy abilities. The student evaluation sheet instrument given is in the form of 12 questions to fill in. The actions that will be taken in this research are based on Miles and Huberman's data analysis techniques.

According to Sugiyono (2015, p. 246), there are several stages in data study, namely: (1) collecting data, namely collecting data obtained from the results of student evaluation sheets to see students' numeracy abilities; (2) data reduction, namely summarizing, selecting the main points, and focusing the results of observations related to the numeracy program on important issues; (3) information presentation, namely presenting information obtained after applying mathematical literacy in the form of descriptions; (4) conclusion or confirmation, namely that there is no implementation of calculations at SDN 128 Haurpancuh based on the research results. The following is an overview of the components in data analysis.

The research was carried out by collecting data regarding students' numeracy abilities and grouping them into the categories that have been explained, namely the low, medium and high categories. Data reduction, the researcher summarizes the important points he observed during the research and summarizes the research results. Presenting the data, the researcher presented the data in descriptive form and displayed the results of the evaluation sheet that had been completed by class IV students. Finally, at the conclusion, the researcher summarizes the research results he obtained and confirms what actually happened in the research.

RESULTS AND DISCUSSION

The following are the results of research conducted by researchers.

1. Indicators for assessing numeracy skills in 4th grade students

According to Law Number 20 of 2003, Article 4 paragraph 4 concerning Principles of Implementing Education states that the numeracy literacy program refers to the principles of implementing education by developing reading, writing and arithmetic habits for the entire community. Numeracy is a component of mathematics that students must master. Numeracy skills help students solve mathematical problems that arise in everyday life. Therefore, the term mathematics refers to skills such as formulating, interpreting, describing, defining and applying mathematics in various real or real problem solving contexts. Based on this description, the conclusion is drawn that numeracy ability is the ability to combine mathematical knowledge to solve mathematical problems in everyday life. In this context, students must be able to develop the various basic mathematical concepts they have acquired to solve crucial problems in everyday life.

There are indicators to measure students' numeracy abilities. According to Han (2017, p. 3), indicators that contain descriptions related to numeracy skills are: (1) using various numbers and symbols related to mathematics to solve problems in different daily life contexts; (2) analyze information presented in various formats (diagrams, tables, graphs, etc.); (3) interpreting the results of the analysis to make predictions and take decisions. Based on the three indicators that have been explained, namely abilities related to numbers and symbols in mathematics, analyzing information presented in various formats and solving problems or making decisions. Numeracy skills prioritize the use of numbers and symbols for students to be able to use them or to solve mathematics they encounter in everyday life.

2. Numeracy Skills in Class IV Students of SDN 128 Haurpancuh

Based on information obtained from 26 students who were research subjects, three levels of numeracy ability were obtained. The three class levels consist of basic, intermediate, and advanced. Five students have low level numeracy abilities, this can be seen from the student evaluation sheets provided by the teacher.

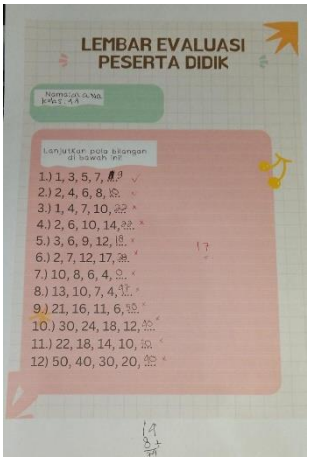

Figure 1. Results of low level student evaluation sheets

Based on interviews, students revealed that in the questions they were working on, students had difficulty connecting the concept of number patterns they were studying to the questions they were given. The student is still confused about differentiating between the sequence of number patterns and the rules. Based on the results of the evaluation sheet, students have not been able to apply critical thinking to numeracy skills in determining the correct way to solve a problem. Second, 9 students have numeracy skills in the medium category.

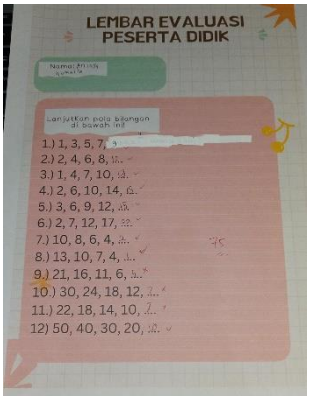

Figure 2. Medium level student worksheet results

Through the interviews conducted, students encountered difficulties in working on number pattern problems which have a decreasing rule with large tens digits. However, students can connect it to the concept of number patterns, because they previously had direct experience of solving problems related to number patterns in groups. So it can be concluded that students can relate and apply numeracy skills in finding the right way to solve the problems they face. Third, 11 students have mathematics reading skills in the high category.

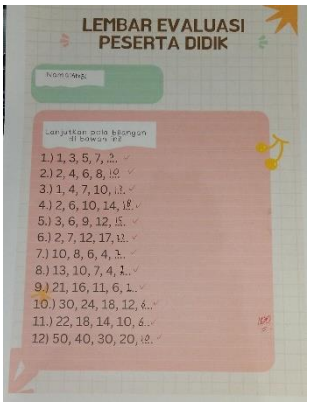

Figure 3. High level student worksheet results

The results of interviews with these students revealed that they felt familiar working on the questions that were distributed. Students have no difficulty connecting the concept of number patterns to everyday life. Students stated that they often do independent study exercises at home and feel that they do not experience difficulties when they get questions to solve problems regarding number patterns.

Based on research that has been carried out, researchers know that the majority of the 26 class IV students at SDN 128 Haurpancuh have moderate numeracy abilities. Students can solve problems in number pattern problems and are able to relate them to problems they have encountered in everyday life. However, it was still found that several questions were still not solved correctly, because students had difficulty understanding or applying the rules for subtracting number patterns. The class teacher's role is to carry out enrichment or improvement activities on questions that students feel are still not well mastered so that later the results of numeracy skills in class IV can improve well.

Students who have low numeracy abilities reveal that they experience difficulty in solving the questions given. These students are less able to solve the problems given in the questions and are not able to relate them to problems they have encountered in everyday life. So, the next role of the teacher in improving students' numeracy skills is to enrich or improve material that the students think is difficult or difficult to do. If students are able to make improvements to material they feel they have not mastered well, they can improve their numeracy skills in class IV. Therefore, the role of teachers is important in improving numeracy skills. Students who have the ability to read mathematics at a high level feel able to do it and relate it to problems they have encountered in everyday life. When working, students felt familiar with the questions given because they often did independent practice at home with the help of their parents. So the role of the teacher can be to provide rewards or awards to students who have high numeracy abilities so that these students remain enthusiastic in learning mathematics.

CONCLUSION

This research was conducted on class IV students at SDN 128 Haurpancuh. Based on the researchers' results, class IV students at SDN 128 Haurpancuh have moderate numeracy abilities. Looking at the results of the student evaluation sheet, namely about number patterns, there were five students who had low numeracy abilities, then 9 students had moderate numeracy abilities, and 11 other students had high numeracy abilities. According to the questions given, students who have low numeracy abilities have difficulty understanding the context of the questions even though the questions given are related to everyday life. Meanwhile, students have high numeracy abilities. can understand the context of the questions and don't feel strange when working on the questions given because they often practice independently at home.

Based on the results obtained, researchers provide suggestions including: (1) teachers need to provide learning innovations related to numeracy activities that do not make students feel bored and enjoy doing learning activities; (2) schools can add adequate facilities and infrastructure to improve students' numeracy skills; (3) Not only the role of schools and teachers, numeracy abilities can be assessed by the level of concern and attention of students' parents in supporting students in numeracy literacy activities during independent study at home.

The school's efforts to increase student numeracy are to provide adequate facilities and infrastructure and support students in numeracy activities. Schools can also channel students who have high numeracy to take part in competitions. This was done to motivate students to be enthusiastic about learning mathematics. Not only does it motivate students who excel, but also motivates other students to follow in the footsteps of their friends in improving their numeracy. Usually elementary school students are easily motivated to follow friends who excel in academic or non-academic areas, especially in numeracy skills.

Teachers' efforts in giving rewards or awards to students who have a high level of numeracy literacy can motivate and foster a sense of desire in other students to learn and improve their abilities in learning numeracy. Apart from giving awards to students, teachers also need to make improvements to students who still do not understand how to complete the material on number pattern questions given by the teacher. Especially in the digital era, students are more interested if teachers can utilize numeracy learning using interesting media.

Not only that, teachers also need to create learning innovations that are interesting and can arouse students' enthusiasm for learning so that they don't get bored and the learning provided is fun, especially in mathematics learning. Most students don't like mathematics, so teachers need to provide stimulus and innovation so that learning mathematics is fun for students. Numeracy learning can be provided in interesting forms, such as making a presentation model via the Canva application or providing an interesting reading book for students to be interested in reading mathematics.

Apart from teachers' efforts to improve students' numeracy skills, parents' efforts at home are also important. Parents' efforts are to guide students when studying independently at home. Parents can monitor how students carry out numeracy literacy at home with accompanying books obtained from school or books found at home. Parents can relate math story problems to activities that students usually do at home with their own habits.

Through the efforts of schools, teachers and parents, it is hoped that students can improve and motivate students to develop numeracy skills. Not only is it beneficial for schools, but it can be beneficial for students themselves because it improves human resources and strengthens their thinking about mathematics and how to solve it.

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