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Research Article

Analysis of Numeracy Skills of Grade V Students in Solving Minimum Competency Assessment Questons at SDI Aekela

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ABSTRACT

The purpose of this study was to analyze students' numeracy skills in solving Minimum Competency Assessment (AKM) questions in class V. This type of research uses descriptive analysis method with a qualitative approach. This research was conducted at SDK Aekela. The subjects of this research were grade V students with a total of 6 students. The data collection techniques used were interviews, direct observation, and documentation. Data analysis was carried out through three stages, namely data reduction, data presentation, and conclusion drawing. Based on the results of the numeracy AKM analysis, there was an increase in the post test results. The average pre-test score obtained is 41%. While the average score on the post test results is 78%. The description of the score is obtained from 20 indicators. The same score comparison between the pre test and post test is found in indicators 10 and 12, where indicator 10 scored 50% and indicator 12 scored 67%. It can be concluded that students' ability to carry out numeracy AKM at SDI Aekela is classified as moderate. So that it is necessary to improve and increase the ability of students supported by educational institutions.

Keywords: Numeracy Skills; Minimum Competency Assessment

1. INTRODUCTION

In carrying out the learning process, it is necessary to conduct an evaluation to determine student understanding. The teacher will conduct an assessment as one of the considerations for improving the learning process. The assessment process is carried out on students both individually and several students or groups, this process is called assessment, (Linanda & Hendriawan, 2022). Assessment is the key in learning activities, where before starting learning the teacher must know the initial picture of his students, so that the teacher can determine or make lesson plans, media selection, and methods according to the characteristics of the students. Assessment or assessment can be interpreted as a measurement and non-measurement process to obtain characteristic data from students with established rules, (Hastuti & Marzuki, 2021). In conducting assessments, there are several things that are often used in the learning process, namely measurement, assessment, and tests.

Primary school is the basic level of formal education in Indonesia. Elementary school is taken for 6 years starting from grades 1 to 6. After the Ministry of Education and Research enacted national assessments, now elementary school students no longer run national exams, but take part in the Computer-Based National Assessment (ANBK), (Mujiburrahman, et al 2023). According to Wildan (2022), ANBK is a program implemented to assess the quality of schools, madrasah, and equivalency programs at the primary and secondary education levels. In its implementation, the national assessment can be carried out using the minimum competency assessment instrument (AKM). Minimum competency assessment is an assessment of the basic abilities needed by all learners in order to be able to grow their capacity and play an active role in activities that have positive value in society, (Klarita & Syafi'ah 2022). This assessment is also one of the assessments made and must be carried out by teachers, to find out the abilities of students. This minimum competency assessment is often carried out in grades 5, 8 and 11. Where this assessment aims to measure students' literacy and numeracy abilities, with various types of levels at the level, (Asryjanti, 2020).

Minimum Competency Assessment (MCA) has been implemented in various schools since 2021. AKM itself is applied to grade 5 students, on the grounds that at that age students can develop their competencies and participate actively in interacting with the surrounding environment. So that the implementation of AKM can also help teachers to ensure that the material taught can be understood by students. In addition, the implementation of AKM carried out in grade 5 also aims to prepare students to move up to grade 6 where they will prepare themselves to take the graduation exam.

When carrying out the teaching campus program Batch 7 at SDI Aekela, researchers carried out an AKM made for grade 5. This AKM is the initial foundation for researchers to measure students' numeracy skills, before continuing the program

designed to improve the literacy and numeracy skills of SDI Aekela students. Numeracy skills can be defined as a person's ability to formulate, apply and interpret mathematics in various contexts, including the ability to reason amatically, and use concepts, procedures and facts to describe, explain or predict an event, (Ekowati, et al 2019). Numeracy skills aim because students are able to apply the concept of numbers / numbers and skills in counting operations and interpret quantitative information contained in the surrounding environment or daily life, (Patriana, et al 2021). The AKM assessment aims to measure students' numeracy skills and understanding. This AKM is conducted in the form of pretest and post-test questions. The questions developed in the class AKM require students to think critically and also to determine their level of literacy and numeracy skills (Anggraini & Setianingsi, 2022). The need to know the ability of students in the numeracy aspect later so that educators can find out the extent of students' critical thinking skills in applying the knowledge gained in everyday life (Nasrullah, et al 2022).

Students' low numeracy skills are thought to be due to students' difficulties in understanding and applying mathematical material in everyday life. Understanding and applying mathematical material is needed by students to solve math problems, both problems in the form of numbers, pictorial and story problems, (Muti'ah & Irmayanti, 2020).So that student numeracy must be improved by requiring learning support from the school environment, in the form of processing and renewal that can provide opportunities for students to hone their abilities in order to prepare themselves to solve problems with their mindset and reasoning, (Indah Nur et al, 2016). In the numeracy ability component, applying concepts consisting of numeracy ability indicators in the form of designing problem solving strategies coherently, using mathematical concepts, facts, procedures, and reasoning, as well as solving problems appropriately.

Based on this background, researchers are interested in conducting research on the numeracy skills of grade V students in solving class AKM. The purpose of this study is to describe the numeracy skills of grade V students at SDI Aekela in completing the minimum class competency assessment questions. The benefit of this research is to provide information about the numeracy skills of students which can later be used as reference material by further researchers. "Analysis of the Numeracy Ability of Grade V Students in Solving Minimum Competency Assessment Questions at SDI Aekela".

2. RESEARCH METHOD

The method used by researchers is descriptive analysis with a qualitative approach, which is an effective method for analyzing events, phenomena, or circumstances directly (Makbul, 2021). The qualitative approach was chosen to understand the process and find the meaning behind the problem being analyzed. (Sayangan, 2024). The focus of data collection is grade V students. The subjects of this study were grade V students totaling 6 people and the informants taken were grade V homeroom teacher, principal and 2 grade V students. The number of informants was 4 people. The data collection instruments that researchers use are observation, interviews, and data analysis. The data analysis process includes three main stages, which are obtained through several data collection techniques such as interviews, direct observation, and documentation. Data analysis is carried out through three stages, namely data reduction, which includes selecting important data through triangulation for further analysis, ending with conclusions as crystallization and verification of researcher data (Sayangan, 2024). The data processing is cyclical, and interactive. Miles and Hubermen (1992) describe the qualitative data analysis process is carried out through four stages, namely, data collection, data display, data reduction and conclusion.

The data scrolling process is cyclical and interactive, not linear. Miles and Hubermas (1992) describe the qualitative research data analysis process as follows:

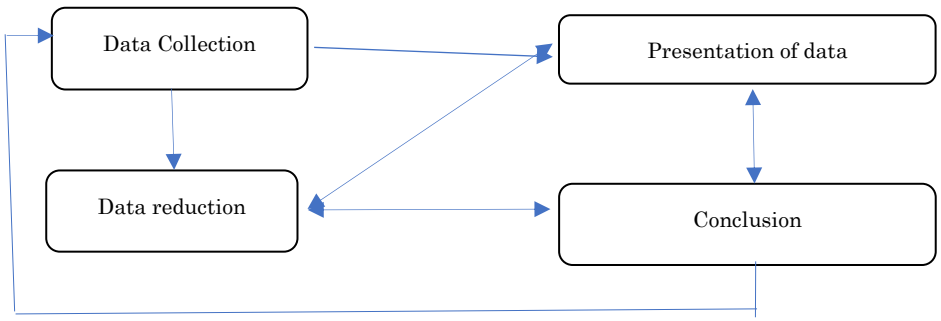

Figure 1. Data Analysis Process

3. RESULTS AND DISCUSSION

3.1 Results

Assessment is a very important tool to support the learning process. It can be said that assessment is the main key in carrying out the learning process. The implementation of the Minimum Competency Assessment (MCA) was carried out in class V with 6 students. Based on the results of the research conducted at SDI Aekela while carrying out the teaching

campus program 7, it was found that Aekela while running the teaching campus program 7 found that the ability of students who took the minimum competency assessment in solving pretest and posttest questions on numeracy problems can be presented in percentage form. The following are the results of the numeracy AKM.

Table 1. AKM pre and post test results Numeracy

No.	Competences	Number of students	Number of students Answering correctly (Pre Test)	Number of Students Answering correctly (Post Test)
1	Solve simple equations using operations	6	2	6
2	Solve simple equations using addition operations	6	2	6
3	Solve simple equations using addition operations	6	2	6
4	Solve simple equations using addition operations	6	5	6
5	Solve simple equations using addition operations	6	4	6
6	Using addition/subtraction/multiplication/division of numbers	6	3	6
7	Using addition/subtraction/multiplication/division of numbers	6	4	5
8	Using addition/subtraction/multiplication/division of numbers	6	0	6
9	Using addition/subtraction/multiplication/division of numbers	6	3	4
10	Using addition/subtraction/multiplication/division of numbers	6	6	0
11	Understand counting numbers (up to four numbers including symbols)	6	3	5
12	Understand counting numbers (up to four numbers including symbols)	6	2	4
13	Present analyze, and interpret data in the form of taurus	6	4	4
14	Present analyze, and interpret data in the form of taurus	6	1	0
15	Present analyze, and interpret data in the form of taurus	6	2	0
16	Identify the characteristics of quadrilaterals, triangles, squares, and circles	6	1	6
17	Determine the length and weight of objects using standard units	6	4	6
18	Explain the direction of movement (forward, left turn, right turn) on the map	6	0	2
19	Explain the direction of movement (forward, left turn, right turn) on the map	6	1	6
20	Explain the direction of movement (forward, left turn, right turn) on the map	6	2	6

Judging from the table above, the results of the Numeracy pre-test AKM from the 20 indicators that students have done show unsatisfactory results. Where it can be seen in the indicators of questions number 8 and 18, out of 6 students no student answered correctly. Then in indicators 14, 16 and 19 only one person answered correctly or 17%. The average student score on this pre-test is 41%. Then the pre-test results can be seen in the **Figure 2**.

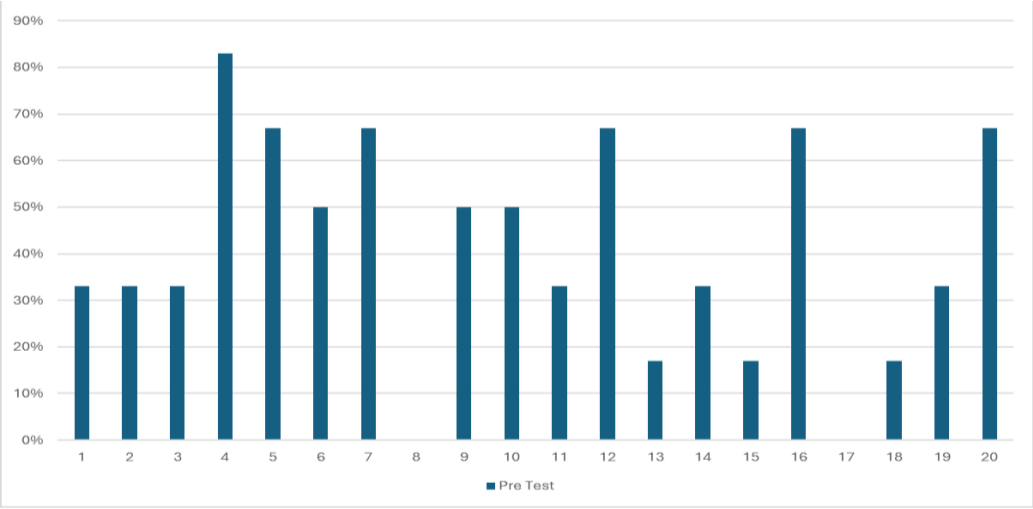

Figure 2. Results of the Pre-test

Based on **Figure 2**, results of the pre-test, we can see that the percentage of several items, with students who answered correctly still greatly decreased. To find out the low results of the numeracy pre-test, the researcher conducted an observation stage where this observation aims to find out the cause of students' low understanding of numeracy questions, the observation was carried out during math learning. Based on the results of observations, researchers found that in learning students actually lack understanding of the basic concepts of mathematics and also the low skills of students in arithmetic operations, especially multiplication and division. so that in the indicators of questions with complex multiple choice questions where the questions use the calculation operations of addition, subtraction, multiplication and division, more or less only some students answer correctly. And in indicator number 8 all students could not answer the question.

Another thing that researchers found was the lack of training in numeracy problems. In addition to observing researchers also conducted interviews with students regarding students' low understanding of numeracy from the results of interviews researchers found that students were less interested in learning mathematics, they thought that mathematics was a difficult and very boring subject, this had a negative effect on their learning motivation, so that when working on AKM questions students felt the problem was very difficult and they did not understand how to do it correctly.This is an evaluation material for researchers, where researchers see or re-correct questions that are considered difficult by students, and provide numeracy guidance or assistance. The results of the interview with the V grade homeroom teacher, stated that the cause of students' low understanding of numeracy, because from within students there is no willingness to learn or find out difficult things even when the teacher is not in class, students do not use their time to study, so a lot of time is wasted by doing things that are not actually important. However, homeroom teacher V also said that what made students find it difficult to solve problems was because they were not given enough practice problems related to numeracy. Meanwhile, based on the results of an interview with the principal of SDI Aekela regarding the decline in students' understanding of numeracy, he stated that in general students at SDI Aekela for numeracy did decline it was seen from the results of the Education quality report card. The principal also said the same thing that the low numeracy skills of students are due to the lack of willingness of students to learn independently, the second is that many teachers do not go to class because currently the teachers are busy with taking care of all PMN administration, so that the teaching and learning process in the classroom does not run effectively, and learning materials are late. However, the principal hopes that in the future teachers must be able to manage time well so as not to sacrifice students. To test students' numeracy skills again, researchers conducted a post-test with the same indicators. The average score on the results of this post test is 78%. The post test results can be seen in **Figure 2**.

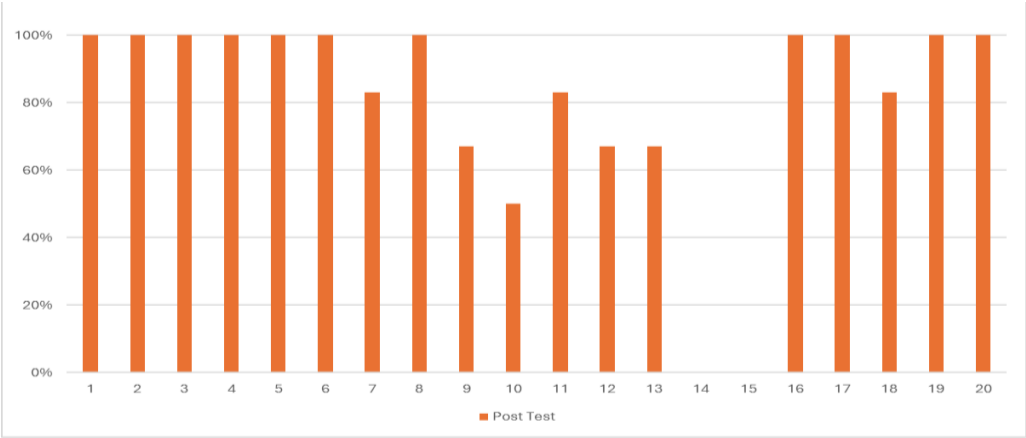

Figure 2. Results of the Post test

It can be seen that the results of the post test conducted after the pretest show very satisfactory results. There are 11 indicators of questions that show satisfactory results, where all students answer correctly with a score of 100%. After conducting the two tests, the researcher conducted an analysis, where the researcher compared the results of the two tests. The comparison results can be seen in **Figure 3**.

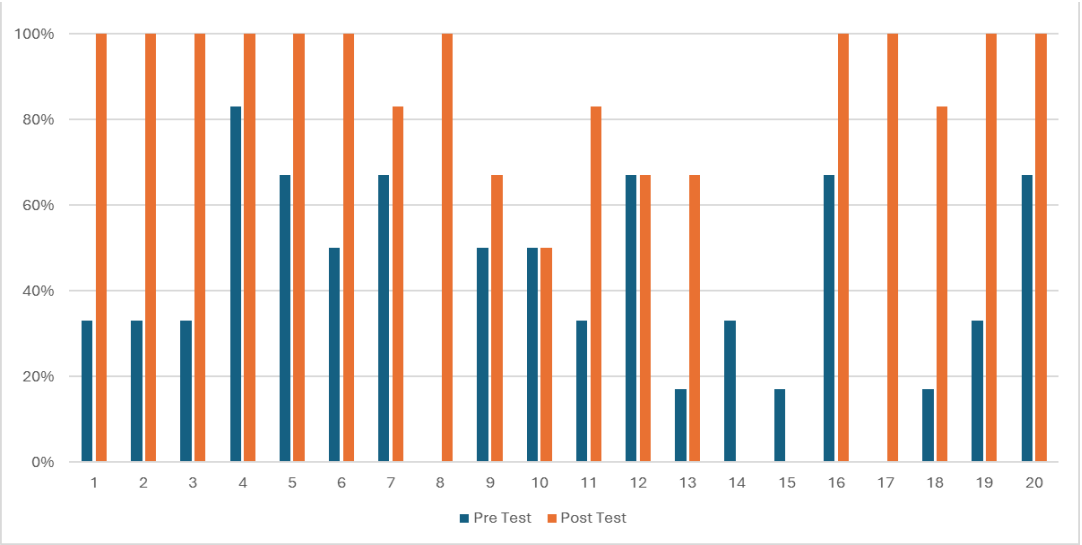

Figure 3. Comparison Chart of post test and pre test

Based on the **Figure 3**, the comparison graph, we can see that there are differences in the results obtained from the pre test and post test. These results show that the post test results show very significant results compared to the pre test results. In the post test there are 11 indicators whose results get a score of 100%. This means that there are 11 indicators of questions, students answer them correctly. Compared to the pre-test results previously carried out from 20 indicators, no student answered correctly. In the post test results too, of the 20 indicators that must be achieved, there are still several indicators whose results are not maximized. The decrease in score is found in indicators 14 and 15. The decrease score of these indicators is 0%. This means that none of the students answered correctly. The same score comparison between the pre test and post test is found in indicators 10 and 12, where indicator 10 obtained a score of 50% and indicator 12 obtained a score of 67%. Comparison of the results of the pre test and post test there are 2 indicators of the same question, where out of 6 students, only some of them answered correctly. namely on indicators. The pre-test results on indicator 14 obtained a score of 17% and indicator 15 obtained a score of 33%. While in the post test indicators 14 and 15 all students did not answer correctly.However, from the results of the pre-test and post comparison, there was an increase in the post-test results. The numeracy post test results of class V students of SDI Aekela showed an increase of up to 78% after various guidance, mentoring and also training on numeracy questions. From these results it can be said that the numeracy skills of SDI Aekela students are good, depending on how the role of a teacher in guiding, motivating students and providing training on questions related to numeracy. So that way students will become accustomed to and not consider that math is a burden.

3.2 Discussion

In implementing AKM, there are several learning levels, namely, level 1, 2, 3, 4, 5 and 6. At the SD/MI level, the standard AKM level is up to level 6. The implementation of AKM in elementary schools is generally carried out in grade 5. Researchers conducted this research at SDI Aekela, where the target was grade 5. Researchers analyzed students' numeracy skills in solving AKM questions, because based on observations, students' numeracy skills were still very low. Numeracy is the ability to understand and use various kinds of numbers and symbols related to mathematics where students must be able to solve practical problems in everyday life. According to Indah, et al (2022), numeracy can be said to be the application of mathematical concepts in the real world, as is the case when students are faced with unstructured problems. From the results of data analysis, it can be seen that the pre-test and post-test results have differences. Where in the pre test results obtained a score of 41% and in the post test results obtained a result of 78%. From the pre test results that decreased, it shows that students do not have learning readiness. A person can only learn something well if he has the internal readiness to learn it, (Puspitasari, 2020).. According to Sri (2020), students with high mathematical ability are able to use various kinds of numbers or symbols related to basic mathematics to solve mathematical problems, able to produce information in the form of graphics, tables, charts and others in solving problems. It can be supported by the results of research conducted by Klarita & Syfi'ah (2022) that the numeracy skills of fifth grade students at SDN 3 Jabalsari have a medium level of ability which identifies that students have basic mathematical skills, basic competencies in the form of direct equations, basic concepts related to geometry and solve simple routine mathematical problems.

Judging from the results of the numeracy pre and post tests that have been carried out, schools need to provide guidance or assistance related to numeracy. That is, it needs to make improvements. Improvements are not only from internal students, improving their abilities but from external ones such as support from schools about AKM. According to Meriana, et al (2021), school preparation after participating in the AKM socialization to find out the AKM standards that will be implemented for schools, with participants selected by socio-economic stratification by Kemdikbud. Based on the acquisition of data, the researcher conducted an interview with the homeroom teacher, regarding the cause of the low ability of class V students in solving class AKM numeracy problems. Based on the homeroom teacher's explanation of low student numeracy, because students have no willingness to learn or find out difficult things, and lack of practice in questions related to numeracy AKM. this is supported by a statement from research conducted by Monica, et al (2024), stating that low numeracy skills are due to students not being accustomed to working on problems that have context and still not using AKM questions for learning evaluation. According to Wardani in Rosita & Pratikno (2024), that students will get used to working on AKM questions if they are often given practice questions in advance before the implementation of AKM and provide quick tricks in answering questions. Difficulty solving numeracy-type AKM problems that prioritize understanding problems and higher reasoning, which takes a long time, (Fauzan, et al 2020). This is in line with the opinion of Chayanovianty & Wahidin (2021) that the ability of students in the AKM test is categorized as sufficient or moderate, namely if students can take the AKM test according to their abilities but need to prepare, study, and do training in working on AKM questions. Likewise, research conducted by Safuwan et al (2022), states that students with moderate numeracy categories can formulate problems well, are less able to apply concepts well, and are less able to interpret the results of answers appropriately. These students prefer to work on problems with number material. The reason can be done and understood because the problem is often encountered in student learning in class. This can be seen from the test results given, in this category students have a slightly better understanding. Students in this category have an understanding of the context to solve math problems, but still cannot answer completely. In line with this, Muslimah & Pujiastari (2020) stated that the higher the student's ability level, the higher the tendency to solve problems correctly, and vice versa, the lower the student's ability level, the lower the tendency to solve problems correctly.

Based on the results of the research on the analysis of the numeracy results of fifth grade students of SDI Aekela, it can be concluded that students' numeracy skills will increase, making students understand each problem, when the teacher familiarizes students with the questions, provides good assistance and above all always gives them motivation. it can help students in Strengthening and honing students' numeracy knowledge and skills in interpreting data, numbers, tables, graphs, and diagrams then Improve students' verbal skills, analytical skills, thinking skills, and concentration skills.

4. CONCLUSION

Assessment is very necessary to be implemented. Assessment is a very important tool to support the learning process. It can be said that assessment is the main key in carrying out the learning process. The implementation of AKM was carried out in class V with 6 students. Based on the results of the research conducted at SDI Aekela while running the teaching campus program 7, it was found that the ability of students who took the minimum competency assessment in solving pretest and posttest questions on numeracy questions could be presented in the form of a percentage. Where in the pre-test results obtained a score of 41% and showed unsatisfactory results. the results of the post test conducted after conducting the pretest showed very satisfactory results. There are 11 indicators of questions that show satisfactory results, where all students answer correctly with a score of 100%. It can be seen that the results of the post test conducted after the pretest show very satisfactory results. There are 11 indicators of questions that show satisfactory results, where all students answer correctly with a score of 100%. The average score on the results of this post test is 78%. Judging from the results of the numeracy pre-test and post-test that have been carried out, schools need to provide guidance or assistance related to numeracy. That is, it needs to make improvements. Improvements are not only from internal students, improving their abilities but from external such as support from schools about AKM.

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