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# Analysis of Numeration Difficulties of Class V Students of Waringin Islamic Elementary School In The Independent Curriculum

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**Abstract**

The aim of the research is to find out the causes of low numeracy skills in class V students at the Waringin Islamic Elementary School. To find out what factors cause numeracy difficulties in class V students at Waringin Islamic Elementary School for the 2024/2025 academic year. To find out the obstacles faced by teachers in implementing the independent curriculum for class V students at Waringin Islamic Elementary School for the 2024/2025 academic year. The method used in this research is descriptive qualitative. Data collection techniques and instruments are interviews, observation and documentation. With research subjects as fifth grade students, fifth grade teachers, and school principals.The results of this research show that the difficulties experienced by class V students at SDI Waringin are: students have difficulty understanding numeration concepts such as differentiating the root of 5 from the power of 5, difficulty connecting concepts with existing statements and difficulty in reading fluently.The factors that hinder students from having difficulty with numeracy or reading difficulties include students being lazy about studying, students like to sleep in class so they cannot concentrate, lack of attention from parents in helping students repeat lessons at home even though this can increase children's interest in learning. The obstacles faced by teachers in implementing the independent curriculum for class V students at Waringin Islamic Elementary School include a lack of experience with the independent curriculum, limited references or a lack of books on the independent curriculum and related time management provided.

**Keywords:** *Numeracy Difficulties, Independent Curriculum, Islamic Elementary School*

## INTRODUCTION

N society, a lot of information is presented in various forms of symbols which are representations of the information itself. This information is usually presented in numerical or graphical form. In fact, in lessons, especially mathematics, it is often considered difficult by students, due to a lack of understanding of the concepts and use of this learning, such as difficulty understanding mathematical structures with relationships or patterns in problems, difficulties in the process of formulating problems and difficulties interpreting the context of real situations into mathematical models.

Numeracy itself includes the skill of applying mathematical concepts and rules in real everyday situations when problems are often unstructured, have many ways of solving or even no complete solution, and are related to non-mathematical factors. Ill structured problems are usually in a real life context rather than ordinary questions. This means that the unstructured problem solving process requires knowledge from a specific domain. Difficulties that arise usually involve social, economic problems or issues that can be resolved through interpretation and negotiation.

Numeracy difficulties can be interpreted as a condition that shows characteristics of obstacles in activities using various kinds of numbers and symbols related to basic mathematics and analyzing information displayed in various forms (graphs, tables, charts, etc.). To solve practical problems in various contexts of daily life.

Student numeracy problems refer to the challenges or difficulties faced by students in developing numeracy skills, which involve understanding mathematical concepts, application of procedures, knowledge of facts, and use of mathematical tools, so, our ability to read information that is numerical or graphic in nature needs to be studied and understood. In this case, learning numeracy and understanding numeracy is emphasized. Students' numeracy skills are very important to face future challenges, for example in the world of work and everyday life. There are several factors that can influence students' numeracy skills, including students' low interest in mathematics, lack of introduction and practice of numeracy-based questions, and others.

Judging from the results of the Program for International Student Assessment (PISA) survey which measures children's abilities in reading literacy, mathematics and science. In PISA 2018, Indonesia was only ranked 72nd out of 79 countries. Indonesia's mathematics ability scored 379 below the average score for the Organization for Economic Co-operation and Development (OECD) countries, namely 489.6. PISA assesses students' mathematics performance through questions related to content, process and context. The questions tested measure the ability to reason, solve problems and argue more than the questions that measure standard techniques related to memory and calculation alone. From the survey, it appears that Indonesian students' mathematics abilities are still relatively low.

There are several root problems in the low numerical ability of students, including the teacher's lack of understanding of the mathematics content that will be taught to students, then related to mathematics teaching methods, and the existence of bias from teachers, especially towards students' ability to develop. Students are considered to lack talent in mathematics or perhaps lack intention and do not like mathematics. This is an obstacle for teachers to improve students' abilities because they think they are just stuck there.

As times change so rapidly, it requires us to adapt, including in the field of education, and cannot be separated from the curriculum as one of the factors that can determine the learning process. Science and technology is developing rapidly so that mathematics is needed in everyday life to increase efficiency and productivity.

The Ministry of Education and Culture has begun renovating the Indonesian education system through an independent curriculum. Nadiem Makarim changed and implemented the independent curriculum as an improvement on the previous curriculum on December 10 2019.

The issuance of the Decree of the Minister of Education, Research, Culture and Technology of the Republic of Indonesia Number 56/M/2022 concerning guidelines for implementing the curriculum in the context of learning development and learning recovery as a form of full support for improving the curriculum in Indonesia to create an advanced Indonesia that is sovereign, independent and has personality through the creation of Pancasila students who reason critically, are creative, independent, have faith and are devoted to God Almighty and have noble character.

The curriculum is a crucial pillar in the Indonesian education system which is undergoing repeated transformations, following developments in time and science. The existence of an independent curriculum is a response to society's demands for a link between the conventional curriculum, student needs and the changing dynamics of the job market.

The independent curriculum aims to provide students with skills according to the needs of the times, while exploring the potential of students' reasoning abilities and interests. More than just changing the way students learn, this curriculum spurs a change in the role of teachers to become facilitators, mentors and guides to student exploration. This change is expected to improve the overall quality of education.

Based on the Pre-Survey through interviews to obtain information by interviewing one of the teachers at the Waringin Islamic Elementary School, it can be seen that the numeracy difficulties experienced by students are because there are still some students who are not very proficient in reading. This causes students to have difficulty understanding numeracy learning, the lack of student interest in learning, especially learning mathematics, coupled with teachers only teaching ordinary mathematical concepts in the classroom, this sometimes means that students' mastery of the learning process is not effective and efficient, especially now that the government has issued an independent curriculum. Teachers are not ready to implement this policy, teachers are still weak in mastering the material because human resources and supporting infrastructure are not yet ready.

Based on the problems above, the author wants to research related to these problems. The title of this research is "Analysis of the Numeracy Difficulties of Class V Students of Waringin Islamic Elementary School, Suralaga District in the Independent Curriculum". The numeracy difficulties of students at the Waringin Islamic Primary School must be addressed immediately so that at least the numeracy difficulties that exist there can be minimized.

## RESEARCH METHODS

The approach used in this research is a qualitative approach. Qualitative research is a research procedure that produces descriptive data in the form of written or spoken words from people and observed behavior. A qualitative approach is research that places greater emphasis on collecting qualitative data (not in the form of numbers) and uses qualitative analysis in presenting data, analyzing data and drawing conclusions. The aim of this approach is to understand a situation by describing in detail what happened in the field.

In accordance with the problem to be researched, this research uses a descriptive qualitative method, namely to get a general picture of things related to the difficulties of students' numeracy knowledge with efforts through the independent curriculum.

## RESEARCH RESULTS AND DISCUSSION

This study aims to analyze the numeracy difficulties experienced by fifth grade students at Waringin Islamic Elementary School, especially in the context of implementing the Merdeka Curriculum. Based on data collected through observation, interviews with teachers, and numeracy tests given to students, several main difficulties were found that students faced in learning numeracy.

Difficulty Understanding Basic Mathematical Concepts Most students have difficulty understanding basic mathematical concepts, such as addition, subtraction, multiplication, and division. Some students are still confused about recognizing the relationship between numbers and mathematical symbols, as well as in applying basic concepts to more complex problems.

Difficulty in Solving Problems Based on Context In problems involving the context of everyday life, students have difficulty connecting the theories they have learned with the situations around them. Even though they have been taught how to solve story problems, many students are unable to identify relevant information in the problem.

Lack of Mastery of Problem Solving Strategies Some students show limitations in using effective strategies to solve math problems. For example, they cannot choose the right way to solve a problem or are unable to solve a problem with systematic steps.

Low Level of Concentration and Focus Some students also face problems in terms of concentration and focus during numeracy learning. This results in delays in solving problems and errors in calculating, even though they already understand the basic concepts.

Based on the results of observations made regarding the Analysis of Numeracy Difficulties for Class V Students at Waringn Islamic Elementary School, Suralaga District in the Independent Curriculum.

Description of the results of research carried out by class V students at Waringin Islamic Elementary School. After the researchers conducted observations and interviews with class V teachers, class V students and the principal, and the results of the documentation, data was obtained regarding numeracy difficulties for class V students at Waringin Islamic Elementary School in the Independent Curriculum.

Based on these results, it can be seen that the level of difficulty in numeracy for class V students at Waringin Islamic Elementary School is classified as ''not good''. The difficulties faced by class V students at SDI Waringin range from students having difficulty understanding numeration concepts such as differentiating the root of 5 from the power of 5, difficulty connecting concepts with existing statements to difficulty in not being able to read fluently.

Based on this explanation, it can be concluded that the factors causing numeracy difficulties experienced by class V students at SDI Waringin are very diverse, starting from students' incomplete reading skills to problems in the family.

The obstacles faced by teachers in implementing the independent curriculum for class V students at Waringin Islamic Elementary School include a lack of experience with the independent curriculum, limited references or a lack of books on the independent curriculum and related time management provided.

The steps taken by teachers and principals at the Waringin Islamic Elementary School for students who experience difficulties with low numeracy skills at school include repeating the material taught when there are students who do not understand the material that has been presented, this is one of the things teachers do to overcome students' learning difficulties in understanding learning, providing evaluations in each lesson. Providing assignments so that students study material they don't yet understand, and providing resources and books for students to study, as well as utilizing learning media available at school.

In this discussion, the analysis of students' numeracy difficulties will be dissected in more depth by referring to the factors that influence these difficulties, including the implementation of the Independent Curriculum. The Influence of the Independent Curriculum on Numeracy Learning The Independent Curriculum provides flexibility to teachers and students in the learning process. Although this can facilitate more flexible learning that is in accordance with students' needs, in practice, some students have difficulty adjusting to a more independent learning approach. This happens because students who were previously accustomed to a more structured approach to learning mathematics now have to learn to be more active participants in a more open learning process and do not always follow fixed steps.

Limitations in Resources and Infrastructure Although the Independent Curriculum provides flexibility, its implementation at Waringin Islamic Elementary School still faces obstacles related to limited resources and infrastructure. Some students have not had adequate access to learning aids that can support understanding of numeracy concepts, such as digital learning media or additional reference books. This makes it difficult for students to develop a deeper understanding of mathematics material.

The Role of Teachers in Overcoming Students' Difficulties Teachers play an important role in helping students overcome the numeracy difficulties they experience. However, not all teachers feel sufficiently prepared or trained to implement the Independent Curriculum optimally. A more flexible curriculum requires teachers to be more creative and innovative in compiling teaching materials, but limited training and understanding of new approaches are often barriers. Several teachers also said that they felt burdened by the demands of accommodating students' diverse learning needs simultaneously.

Students' Cognitive and Psychological Factors In addition to external factors such as curriculum and facilities, internal factors such as students' cognitive and psychological conditions also play a role in numeracy difficulties. Some students may have learning difficulties due to a lack of logical thinking skills or other problems related to their cognitive

development. In addition, motivational factors are also important in developing students' numeracy skills. Students who are less motivated to learn mathematics often show poor results in numeracy tests.

The Role of Parents and Home Support Parental support also greatly influences the development of students' numeracy skills. At Waringin Islamic Elementary School, not all parents have sufficient educational backgrounds to accompany their children in learning mathematics. Lack of support from parents in the household can be a significant inhibiting factor.

## CONCLUSION

Based on the results of the study and discussion, the numeracy difficulties experienced by fifth grade students of Waringin Islamic Elementary School can be caused by various factors, including a lack of understanding of basic mathematical concepts, difficulty in linking material to real-life contexts, and limitations in problem-solving strategies. In addition, the implementation of a flexible Merdeka Curriculum requires readiness from both teachers and students, as well as support from infrastructure and parents to achieve success in numeracy learning. Therefore, more intensive training is needed for teachers, improvements to educational infrastructure, and parental involvement in supporting children's learning at home.

Based on the results of research conducted by researchers at SDI Waringin, it can be concluded that the Analysis of Numeracy Difficulties for Class V Students at Waringin Islamic Elementary School, Suralaga District in the Merdeka Curriculum is that the difficulties experienced by class V students at SDI Waringin are: students have difficulty understanding numeration concepts such as differentiating the root of 5 from the power of 5, difficulty connecting concepts with existing statements and difficulty in not reading fluently.

The factors that hinder students from having difficulty with numeracy or reading difficulties include students being lazy about studying, students like to sleep in class so they cannot concentrate, lack of attention from parents in helping students repeat lessons at home even though this can increase children's interest in learning.

The obstacles faced by teachers in implementing the independent curriculum for class V students at Waringin Islamic Elementary School include a lack of experience with the independent curriculum, limited references or a lack of books on the independent curriculum and related time management provided.

The steps or solutions given by teachers to students who experience difficulties and do not understand numeracy learning related to the independent curriculum are, giving assignments so that students study material they do not yet understand and providing resources and books for students to study. As well as utilizing learning media available at school, sometimes using the environment as the medium.

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