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LITERACY AND NUMERATION INTEGRATED IN PHYSICAL EDUCATION LEARNING THROUGH THE PROGRAM EDU-FUN-HEALTH

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Abstract. Numeracy literacy is very important as a basic competency for students to prepare them to face challenges in real life. This study aims to improve students' numeracy literacy through the EDU-FUN-HEALTH program. This type of research is classroom action research with a two-cycle model. The subjects of the study were 16 fifth grade students at Padomasan 03 Elementary School, Padomasan District, Jember Regency. The research instruments included observation, skill tests, and knowledge tests. Data were analyzed using percentages, with the achievement level set at 75%. The results showed that the use of game modifications succeeded in improving student learning outcomes in manipulative motor skills. The percentage of learning completion increased from 62.5% in cycle 1 to 87.5% in cycle 2. In addition, there was also an increase in numeracy literacy, which changed from the Good category to Very Good between cycle 1 and cycle 2. Regency.

Keywords: numeracy literacy; learning models; fun health; skills

INTRODUCTION

Physical education learning serves as a means to prepare students for the future through various activities contained therein. In line with the contents of the first paragraph, in the 2019-2024 National Medium-Term Development Plan (RPJM), one of the main visions of the Government of the Republic of Indonesia is the development of Human Resources (HR). This includes the readiness of national education personnel in facing global challenges, where the boundaries between countries in various aspects of life are fading (Mujahir, 2022) . This vision conveys the message that every learning activity needs to equip students with the skills that enable them to collaborate in real life. Includes the ability to interact, not only with fellow citizens of one's own nation, but also with communities across countries at the global level.

Analysis of the potential that may arise when there are no limitations in the social patterns of the nation and state. This can produce two main possibilities: first, the opening of opportunities for collaboration in community life; second, the emergence of competition in various aspects of life, the role of teachers as agents of change becomes very important to understand the future conditions of students. Teachers must be able to equip students with relevant competencies. Learning activities that provide real experiences to students are expected to focus on developing *skills* , *knowledge* and *attitudes* (Luqmanul, 2022).

Efforts to develop student competencies are carried out through increasing numeracy literacy since elementary school level. At the basic learning stage, after students are familiar with letters and numbers, the next step is to emphasize the importance of students' ability to analyze and process the information systematically, which is now called numeracy literacy. The implementation of numeracy literacy-based learning includes the ability to understand the concept of numbers and mathematical operations, starting from introduction, reading, writing, to its application in everyday life. (Khakima, 2021) . This means that students do not only need to understand the concept, but must also be able to apply it in everyday life, especially in decision making to solve various problems they face.

The obstacles faced in several schools, based on the results of the study, are the limited ability of teachers to design numeracy literacy-based learning. For example, research by (Sinaga, 2023) shows that in learning practices, teachers tend to prioritize the

efficiency of teaching time compared to deepening the understanding of concepts possessed by students. Given the importance of numeracy literacy, teachers are expected to focus more on students' conceptual understanding so that their numeracy literacy skills can be improved. This is also seen at SDN Padomasan 03, Padomasan District, Jember Regency, which is considered not to have focused on developing numeracy literacy. Learning at the school does not yet display the characteristics
numeracy literacy-based learning, coupled with low student motivation in material related to numeracy literacy.

Based on the results of these observations, efforts are needed to improve numeracy literacy at SDN Padomasan 03, one of which is through implementing physical education learning activities based on numeracy literacy. Research conducted by (Gusteti, 2023) show that activity physical education based on literacy Numeracy is effective in increasing students' learning motivation and mathematical knowledge. This effectiveness is demonstrated by the very satisfactory average score of the assessment index. By referring to these findings, efforts to increase students' numeracy literacy at SDN Padomasan 03 will be carried out through the media of game activities which are integrated into Physical Education learning.

The characteristics of Physical Education learning which is rich in game modifications provide great opportunities to design activities that suit needs, one of which is increasing numeracy literacy. In this case, numeracy literacy will be improved through Physical Education learning by modifying various games, Through the *EDU-FUN-HEALTH program* . This program is a form of learning that is modified with various games. It is hoped that through variations in game activities in Physical Education learning, students' numeracy literacy, especially at SDN Padomasan 03, Padomasan District, Jember Regency, can increase significantly.

METHOD

This research is classroom action research (CAR) which is carried out in a cycle at certain grade levels. (Rukminingsih, 2020) explains that research methods aim to obtain data scientifically with specific objectives. In this context, classroom action research is used as a step to improve numeracy literacy skills through Physical Education learning on basic manipulative movement material using various modified games. The

action research model applied refers to a model developed consisting of several cycles (Rahma, 2020) . Each cycle includes four main stages: planning, action, observation, and reflection.

The sample in this classroom action research was 16 students of grade 5 of SDN Padomasan 03, Padomasan District, Jember Regency. The implementation of this research involved collaboration with Physical Education teachers and grade 5 teachers. The research instruments used included observation sheets to measure manipulative movement skills and numeracy literacy skills. In addition to the observation sheets, this study also utilized test instruments in the form of questions designed to evaluate the level of numeracy literacy of grade 5 students of SDN Padomasan 03, Padomasan District, Jember Regency.

To determine the achievement of objectives in this classroom action research, data analysis is needed. Data analysis is a series of processes that aim to solve one or more problems based on the data that has been collected, then integrate it into the research components. (Rahma, 2020) . This study uses a percentage formula as a scoring method for each predetermined criterion. The categorization of the assessment results is as follows: Very Good for a value of 76%-100%, Good for a value of 51%-75%, Sufficient for a value of 26%-50%, and Less for a value of 0%-25%.

RESULTS AND DISCUSSION

Classroom action research which focuses on using variations of game modifications to increase the numeracy literacy of grade 5 students at SDN Padomasan 03, Padomasan District, Jember Regency, consists of two cycles. Before implementing the cycle, a pre-action stage was carried out involving Physical Education learning activities on manipulative movement material. In planning classroom action research, one of the activities is to prepare a learning plan with the teacher. Data from observations in the first cycle showed that there were several shortcomings, especially in the development of learning designs. These deficiencies include game design, the variety of games chosen, the learning methods used, and assessment instruments for learning activities. The results of the final assessment of students related to manipulative skills consisting of accuracy, agility, and speed in cycle 1 of the numeracy literacy level are known as follows:

Figure 1. Cycle 1 Completion Percentage

The percentage of completion of manipulative skills can be seen that there are 6 students who fall into the Incomplete criteria with a percentage of 37.5% and there are 10 students who fall into the Completed criteria with a percentage of 62.5%. Meanwhile, from the results of the assessment of the test questions according to the numeracy literacy level indicators, the results are as follows:

Table 1. Average Score of Knowledge Test Assessment According to Cycle 1 Indicators

Indicator	Average	Percentage
Writing the process in reaching a solution	6.5	65.0
Summarizing mathematical results	6.8	68.1
Uses understanding of context to solve problems	6.3	63.1
Problem Connecting different representations when solving problems	6.4	64.4
Able to reason and argue	6.6	66.3
Using various numbers and symbols related to basic mathematics	7.6	74.6
Using mathematical tools	6.8	67.0

Based on Table 1 above, it is known that the indicator of the writing process in achieving a solution has an average score of 6.5 with a percentage of 65% entering the Good criteria. The indicator of concluding mathematical results has an average score of 6.8 with a percentage of 68.1% entering the Good criteria. The indicator of using contextual understanding to solve problems has an average score of 6.3 with a percentage of 63.1% entering the Good criteria. For the indicator of connecting various representations when solving problems, it obtained an average score of 6.4 with a percentage of 64.4% entering the Good criteria. Being able to reason and argue obtained an average score of 6.6 with a percentage of 66.3%. Using various numbers and symbols related to basic mathematics obtained an average score of 7.6 with a percentage of 74.6%

entering the Good criteria. Finally, related to the indicator of using mathematical tools, it obtained an average score of 6.8 with a percentage of 67.0% entering the Good criteria. The average overall numeracy literacy in cycle 1 was in the Good category with a percentage of 67.1%.

To achieve maximum results in improving manipulative skills and numeracy literacy in cycle 1, improvement efforts are needed in cycle 2. These improvements are focused on learning design, game models, and the way teachers deliver learning material. Based on data analysis in cycle 2, it appears that the completeness of learning manipulative movements using modifications can be seen in the following picture. :

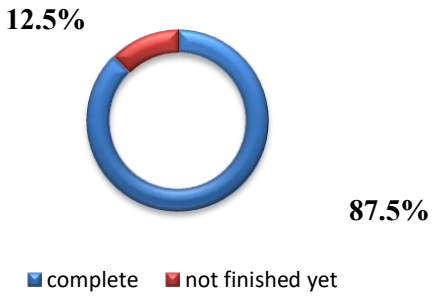

Figure 2. Cycle 2 Completion Percentage

The percentage of completion of cycle 2 of manipulative skills can be seen that there are 2 students who fall into the incomplete criteria with a percentage of 12.5% and there are 14 students who fall into the Completed criteria with a percentage of 87.5%. Meanwhile, from the results of the assessment of the test questions according to the numeracy literacy level indicators in cycle 2, the results are as follows:

Table 2. Average Score of Knowledge Test Assessment According to Cycle 2 Indicators

Indicator	Average	Percentage
Writing the process in reaching a solution	7.8	77.50
Summarizing mathematical results	7.6	76.25
Uses understanding of context to solve problems	7.3	73.13
Problem Connecting different representations when solving problems	7.6	76.25
Able to reason and argue	7.6	76.25
Using various numbers and symbols related to basic mathematics	8.4	83.75
Using mathematical tools	7.4	74.38

Based on Table 2, it is known that the indicator of the writing process in achieving solutions obtained an average score of 7.8 with a percentage of 77.50% entering the Very Good criteria. The indicator of concluding mathematical results obtained an average score of 7.6 with a percentage of 76.25% entering the Very Good criteria. The indicator of using contextual understanding to solve problems had an average score of 7.3 with a percentage of 73.13% entering the Very Good criteria. For the indicator of connecting various representations when solving problems, it obtained an average score of 7.6 with a percentage of 76.25% entering the Very Good criteria. Being able to reason and argue obtained an average score of 7.6 with a percentage of 76.25%. Using various numbers and symbols related to basic mathematics obtained an average score of 8.4 with a percentage of 83.75% entering the Very Good criteria. Finally, related to the indicator of using mathematical tools, it obtained an average score of 7.4 with a percentage of 74.38% entering the Very Good criteria. The average overall numeracy literacy in cycle 2 was in the Very Good category with a percentage of 76.8%.

Based on the results of cycle 1 and cycle 2, it is known that the use of learning modifications can improve student learning outcomes in manipulative motor skills. The percentage of learning completion increased from 62.5 % in cycle 1 to 87.5% in cycle 2. In addition, there was an increase in numeracy literacy from the Good category to Very Good between cycle 1 and cycle 2. Based on these results, it can be concluded that these factors contribute to improving the completion of learning outcomes and numeracy literacy of grade 5 students at SDN Padomasan 03, Padomasan District, Jember Regency.

The increase was due to improvements in lesson planning, game modifications, and the way teachers deliver material to students. This can be considered the main factor contributing to the increase, although other factors such as student motivation, facilities and infrastructure, and so on also play an important role. This finding is supported by research conducted by (Rahma and Kastrena 2020) , which states that teachers' ability to plan learning and manage classes well can improve student learning outcomes. The increase in the level of numeracy literacy which is included in the Very Good category is due to the implementation of various numeracy literacy-based activities in schools, including the preparation of supporting facilities and infrastructure. Students are given the freedom to carry out activities outside the classroom, such as playing, doing activities in the library, drawing, and other activities.

CONCLUSION

The conclusion of the action research conducted at SDN Padomasan 03, Padomasan District, Jember Regency showed that the use of game modifications effectively improved students' learning outcomes in manipulative motor skills. The percentage of learning completion increased from 62.5% in cycle 1 to 87.5% in cycle 2. In addition, there was an increase in numeracy literacy from the Good category to the Very Good category between cycle 1 and cycle 2. This increase indicates that factors such as learning modifications and well-planned numeracy literacy activities played an important role in this success.

The recommendation that can be given based on the results of this study is the importance of compiling learning tools based on increasing numeracy literacy so that curriculum objectives can be achieved optimally. In addition, the development of more structured activities outside of class hours and the improvement of facilities or means to support numeracy literacy are highly recommended in order to boost the achievement of numeracy literacy of students in Elementary Schools .

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