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Improving Numeracy Literacy through Study of Healthy Consumption Patterns of Students

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ABSTRACT
ABSTRACT Literacy and numeracy skills are important foundations for students in understanding learning and facing the challenges of 21st century life. However, various studies show that these skills are still low, partly due to a learning approach that is less contextual and does not actively involve students. This study aims to explore the development of numeracy literacy through project-based mathematics learning in the context of students' healthy consumption patterns. The study was conducted using a qualitative descriptive approach on students of MTs Muhammadiyah Datarang. Learning activities include collecting daily food and beverage consumption data for seven days, processing data using frequencies, percentages, and averages, and representing data in the form of diagrams. Reflection is carried out by comparing the results with national nutritional guidelines. Assessment instruments include observations, student worksheets, and reflective journals. The results show that students are able to connect mathematical concepts with real life, improve data interpretation skills, and realize the importance of a healthy lifestyle. These findings indicate that the integration of numeracy in a relevant context not only improves mathematical skills, but also supports strengthening students' health awareness, in line with the Merdeka Curriculum and Sustainable Development Goals (SDG) point 3.

Keywords: Numeracy literacy, healthy consumption, contextual mathematics, Independent Curriculum

78 Introduction

Literacy and numeracy skills are important foundations in mastering various learning fields [1]. Mastery of these two basic competencies is an essential provision for students in facing various challenges and dynamics of life in the future [2][3][4]. Numeracy literacy not only includes basic arithmetic skills, but also includes the ability to reason logically, interpret data, and apply mathematical concepts in the context of everyday life [5].

However, efforts to build literacy and numeracy still face various challenges. In the context of education, teachers are required to change their learning approaches to better support the development of these skills in a meaningful way [6].

Responding to these challenges, the Merdeka Curriculum offers a new learning approach that allows for the integration of literacy and numeracy across subjects, especially mathematics. One of the main innovations of this curriculum is the emphasis on project-based and real-context-based learning, which aims to increase student engagement and make learning more relevant to their daily lives. This curriculum also encourages the use of interactive and collaborative learning methods, thus encouraging students to think critically and work together in solving problems [7].

Based on this background, this article is written with the aim of exploring the development of students' literacy and numeracy skills through project-based mathematics learning in the

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context of a healthy lifestyle study. In addition to strengthening numeracy competencies, this approach is also expected to foster students' awareness of the importance of health. This initiative is in line with the Sustainable Development Goals (SDG) point 3, namely "Healthy and Prosperous Life".

79 Research Methods

This study uses a qualitative descriptive approach with a project-based learning model integrated into a real-life context, namely students' daily food and beverage consumption patterns. The subjects of the study were students of MTs Muhammadiyah Datarang who took mathematics learning in the data presentation material. The stages of learning implementation include five main stages:

1. Data Collection: Students are asked to record their food and beverage consumption for seven days, including the number of portions, consumption time, and healthy/unhealthy classification based on guidelines from the Ministry of Health of the Republic of Indonesia.
2. Data Processing: The collected data is then arranged in a table and analyzed using basic mathematical concepts, such as frequency, percentage, and average.
3. Data Representation: Students present data in the form of bar charts and pie charts to visualize their consumption patterns.
4. Reflection and Discussion: Students compare the results of their analysis with the national balanced nutrition guidelines, then discuss the implications of a healthy or unhealthy lifestyle based on personal data.
5. Assessment Instrument: Evaluation is carried out through observation of student activities, analysis of worksheets, and reflective journals written by students after the activity.

80 Result and Discussion

The results of the learning implementation showed that student engagement increased significantly when they linked mathematical concepts to real and relevant daily activities. In the data collection process, most students showed accuracy in recording their consumption patterns. The data collected was quite diverse and provided a real picture of students' eating and drinking habits.

At the data processing stage, students were able to calculate the frequency of consumption of healthy and unhealthy foods/drinks, and convert the data into percentages. The average consumption of healthy foods in a week was recorded at 57%, while consumption of unhealthy foods reached 43%. Students also succeeded in presenting data in the form of bar and pie charts with good visual accuracy.

Discussions and reflections showed that students realized the importance of choosing healthy foods and began to think about changing their eating patterns. This activity significantly improved data interpretation skills and critical thinking skills, which are the core of numeracy literacy. From a teacher's perspective, this approach also provides an opportunity to assess understanding of mathematical concepts in a more authentic context, while facilitating students' emotional and social engagement in learning.

81 Conclusion

Project-based mathematics learning in the context of healthy consumption patterns has proven effective in improving the numeracy literacy skills of MTs Muhammadiyah Datarang

students. Through the activities of collecting, processing, and representing food and beverage consumption data, students not only develop mathematical skills such as calculating percentages and making diagrams, but also raise awareness of the importance of a healthy lifestyle. The integration of numeracy concepts and health issues provides meaningful and contextual learning. Thus, this approach is in line with the direction of the Merdeka Curriculum and supports the achievement of Sustainable Development Goals (SDG) point 3: Healthy and Prosperous Life.

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