SCHOOL STRATEGIES FOR IMPROVING STUDENT LITERACY AND NUMERACY

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Abstract:

This study examines different strategies schools employ to raise student literacy and numeracy. Basic abilities like literacy and numeracy are critical to kids' everyday lives and academic success. Several elementary and middle schools served as case studies for the qualitative methodology used in this study. Data was gathered through document analysis, interviews, and observations. The study's findings demonstrate the efficacy of data-based interventions in remedial programs, project-based learning, digital technology utilisation, and establishing a supportive literacy environment. Furthermore, it has been shown that teachers who use creative and cooperative teaching strategies can boost students' motivation and engagement in the classroom. The findings of this study indicate that collaboration among educational institutions, teachers, parents and the community is essential to ensure literacy and numeracy programs.

Keywords: *literacy, numeracy, school strategies, project-based learning, data-based interventions.*

INTRODUCTION

Schools are educational institutions designed to provide formal education to students. Schools play a vital role in the intellectual, social and emotional development of children and in preparing them to become productive and responsible members of society. In schools, students are taught basic skills such as reading, writing, arithmetic (numeracy), as well as other social and personality skills. (Ismunandar & Tengah, 2022) . Given that students and their peers can recognize ordinal rankings in their class (Chen et al., 2024) . The educational climate in Indonesia accepts that one of the teacher's duties is to prepare and organize learning administration in accordance with applicable regulations. The busyness of managing learning administration is part of the learning process (Daga, 2021) .

Based on the contents of Law No. 20 of 2003, Education is a conscious and planned effort in the process of mentoring and learning to ensure that each individual becomes an independent, responsible, creative, knowledgeable, healthy and noble human being (Shinta & Ain, 2021) . Education is an effort that is motivated by the reality of current problems, such as the lack of tolerance and minimal Pancasila values, changes in ethical values in national and state life, loss of awareness of national cultural values, weakening national independence. There are 18 versions of the Ministry of Education and Culture's character values that need to be instilled in individuals, including religious, fair, tolerant, hard work, creative, independent, democratic, curiosity, national or national spirit, love of the homeland, respect for achievement, communicative, love of peace, like to read, care about the environment, care about society, responsibility (Shinta & Ain, 2021) . One of the most important components or parts of a school institution is the students themselves. Disciplining students is not an easy job because it is related to

human dignity (Hamid, 2013) . In fact, the element of discipline is very important for better teaching and learning. Furthermore, schools have the authority to make rules about student discipline with a focus on the achievement and violation score system. It is clear that these rules will not conflict with the laws or standards in force in our country.

Changes in the sense of improvement at all levels need to be carried out continuously to anticipate various interests in the future. Education that is able to support future development is education that is able to develop the potential of students, so that they are able to face and solve the problems of life they face. Education must touch the potential of the conscience and the potential competence of students (Gede Kamardana et al., 2021) . When someone enters life in, understanding education becomes increasingly important. Society and the world of work, because the people involved must be able to apply the lessons taught in school to overcome the problems they face now and in the future. Good teachers, the right learning methods, and books as a gateway to knowledge are the keys to the success of education in schools (Ambarwati et al., 2021) . One of the main problems in Indonesia today is related to the low interest in reading among the community. Even in educational environments, students in Indonesia have a low level of interest in reading. In fact, reading culture is one of the characteristics of modern civilization.

Planning, efforts and strategies have been attempted by teachers, principals, students or even the government in achieving learning goals, one of which is implementing reading literacy activities in schools. Reading is one of four language skills, namely listening skills, speaking skills, reading skills and writing skills (Aziza & Muliansyah, 2020) . As quoted from kompasiana.com, reading and writing skills are very important to have because both of these abilities can open and provide insight into thinking, stimulate imagination and create creativity (Khoeriyah et al., 2021) . Today's literacy culture is the right effort to improve students' abilities and interests in learning, as well as train students' skills in reading, listening, writing and speaking. (DM Wulandari, 2021) .

Apart from increasing literacy, schools also need to improve student numeracy. In the world of education, one important subject is mathematics. so that students are able to understand, reason, and solve problems in mathematical concepts. They are also expected to be able to use symbols, tables, charts, or other information to communicate mathematical ideas through situations, problems, and relevant attitudes are the goals of learning mathematics based on the regulation of the Minister of National Education Regulation No. 22 of 2006 (Mu;arif et al., 2023) . Numeracy requires logical thinking so that it makes it easier for someone to understand mathematics, helping students to improve their understanding and skills in problem solving (Patriana et al., 2021) . Numeracy is the ability to understand, use, and apply mathematical concepts and skills in various contexts of everyday life.

Several previous studies have shown that literacy and numeracy are very important skills in the student learning process and have a long-term impact on their academic abilities and life in general (Litnum et al., 2024) . According to research conducted by Hafsah Adha Diana & Veni Saputri (2021) , the increase in critical thinking skills of students with high initial mathematical abilities who received PjBL - STEAM model treatment was higher than students who received direct learning model treatment. Literacy and numeracy are two basic skills that are important indicators of educational success (Ardellea & Hamdu, 2022) . Good achievement in these two aspects not only affects students' academic achievement but also their readiness to face life in the future. Improving literacy and numeracy in schools requires various strategic approaches based on the needs and conditions of students (Purwanto et al., 2023) . Therefore, it is important for schools to design and implement the right strategies so that students' literacy and numeracy increase significantly.

Governments around the world are working to improve the quality and effectiveness of their education systems and schools (Quiroz-Martinez & Rushton, 2024) . Governments are paying attention to students' numeracy skills (CHEUNG et al., 2023) . A new government program called the Minimum Competency Assessment (AKM) aims to evaluate students' literacy and numeracy skills. Math skills are essential for living in our digital world. In addition, early mathematics skills and attitudes related to

mathematics exert a large influence on children's later mathematics performance (Cheung et al., 2025) . Schools must teach students numeracy. Numeracy learning should be fun so that students are interested. This is because learning is an activity that focuses on achieving certain goals, one of which is improving students' numeracy skills. Numeracy literacy learning must be taught as early as possible because it is the main capital for an intelligent and cultured future generation (N. Wulandari et al., 2023) .

RESEARCH METHOD

The method of writing this article uses a literature review, which is an approach to analyzing and integrating various literatures relevant to the topic of discussion (Abdul Muizz et al., 2023) . A literature review is a project-oriented activity that focuses on critical analysis of the contents of the written text being studied. The library research method used to collect data is the document analysis method and various documents related to the research (Hakim et al., 2024) . This research is research and development (Research and Development). The development model used as the basis for this research is the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation) (Ayu Utami Tarigan & Halomoan Siregar, 2024) . The literature sources used in this article come from leading databases such as Scopus, Neliti, ERIC, Elsevier, IEEE Xplore and Google Scholar, which provide access to previous research. By analyzing and synthesizing information from various sources, this article aims to identify improvements in literacy and numeracy culture within an institution.

From the results of the literature review, the study shows that a school environment rich in learning resources, such as an adequate library, diverse reading materials, and visual aids for numeracy, can increase students' interest and abilities. Activities such as literacy corners, reading competitions, and math information boards in the classroom are also effective in improving these basic skills. Teacher competence in teaching literacy and numeracy is a key factor. Continuous training and workshops for teachers can improve their ability to design effective and innovative learning (Journal et al., 2024) .

RESULT AND DISCUSSION
Strategies for improving student literacy and numeracy:

Children who participated in Rich Reading and Reminiscing as preschoolers received higher ratings of participation and contribution in class from their elementary school teachers compared to children who participated in other conditions (Clifford et al., 2024) . It is essential for developing strong literacy skills, which are the foundation for students' academic and life success. Here are some effective strategies to strengthen students' reading and numeracy learning:

Choosing the Right Book

Choosing books that suit students' interests and needs will increase their motivation to read. For example, fiction or non-fiction books that are appropriate to their age and preferences. Starting with books that are appropriate to students' reading ability level and gradually increasing the difficulty of the books as their abilities develop. Books should be adjusted to the age and reading ability of students. In children aged 6-8 years, children are allowed to read stories; either from traditional books, or from e-books (Tingari et al., 2010) . Books that are too difficult can frustrate students, while books that are too easy may not be challenging enough. It is important to choose books that are in the student's "zone of proximal development," which is a level of difficulty that is slightly above their ability but still understandable with a little help. For younger students or those just beginning to learn to read, choose books with short sentences and clear structure, and use illustrations to aid comprehension. Choosing books that suit students' personal interests, such as books about sports, animals, adventure, or technology, can increase their motivation and curiosity. The more interested they are in a particular topic, the more likely they are to engage in reading. Books that feature themes that are relevant to students' everyday lives or experiences (such as stories about friendship, school, family, or adventure) will be easier for them to understand and more interesting.

Project-Based Learning

In project-based learning, students work in groups to complete a project that involves reading or research, improving text comprehension, and critical thinking skills. Students are encouraged to apply literacy skills in writing reports, presentations, or other products that combine reading with in-depth analysis. Throughout the PBL process, students are given the opportunity to reflect on their progress, the challenges they face, and the learning they gain. Teachers provide constructive feedback throughout the process to help students refine and improve their projects. Students learn to work in teams, communicate effectively, and value the ideas of others. Project-Based Learning (PBL) is a highly effective method for increasing student engagement in learning by getting them actively involved in real-world projects. This approach helps students develop deeper skills, such as critical thinking, teamwork, and problem solving, that are very useful in their lives outside of school. Learning Communities (LC) are based on dialogic learning and the application of a series of Successful Educational Actions (SEAs) that seek to build equitable responses, so that all students develop their abilities to the fullest in a stimulating learning environment (Palma Salinas, 2024).

Discussion Based Learning Model

Class discussion is an effective method to train students to understand texts more deeply. Students are invited to discuss the contents of the reading, analyze the characters, themes, or messages contained in the text. Debate and argumentation activities can train students' ability to articulate opinions, understand various points of view, and construct arguments based on the text read. All students are expected to be involved in the discussion, either by asking questions, giving opinions, or conveying arguments. Discussions take place openly, where every student has the opportunity to speak. In discussion-based learning, students learn to listen to other people's opinions, provide constructive feedback, and appreciate different views in order to enrich their understanding.

Scientific literature shows that student participation is mainly directed and instrumentalized by adults in schools, which implies a passive role for students. However, research shows that there is an educational process that encourages student participation through dialogue in Learning Communities (Palma Salinas, 2024) . Discussions encourage students to think critically about the topic being discussed, develop logical arguments, and evaluate different views. The Discussion-Based Learning Model is an effective approach to increasing student engagement in learning, as it allows them to think critically, develop communication skills, and deepen their understanding of the topic being studied (Sukmayadi et al., 2024) . By actively discussing problems or ideas, students not only gain information, but also hone social and problem-solving skills that are important in their lives.

Building a Reading Culture in Schools

Reading is a core part of the education system (Jahan et al., 2021) . Providing an interesting and enjoyable reading corner, as well as bringing students closer to the library which has a diverse and relevant book collection. Holding events such as reading competitions, book exhibitions, or inviting authors to speak at school, to increase students' interest in reading. The way to build a reading culture in schools is to provide a complete, comfortable, and interesting library. The books available must be diverse, from fiction to non-fiction, with various levels of difficulty that are appropriate for the age of the students. Set a special time for reading activities, such as a "reading hour" every day or week, where students are asked to read books of their choice. Building a reading culture in schools is an important effort to improve students' literacy skills and develop positive habits in learning. By providing access to interesting books, creating an environment that supports reading activities, and involving parents and teachers, a strong reading culture is created. Students who have more cultural capital (cultural ownership and cultural communication) have higher reading interest, extrinsic motivation, effort and persistence, and reading achievement than other students (Chiu & Chow, 2010).

Collaboration with Parents and Community

For parents with preschool children, parenting education is usually aimed at supporting the child's transition to school (Clifford et al., 2024) . When entering the institution, teachers invite parents to engage in literacy activities, such as reading with children at home or participating in literacy events at school. Collaborate with librarians, authors, or local organizations to provide students with broader literacy experiences (Rahardja et al., 2022) . Goals of Parent-Teacher Collaboration: Improving the Quality of Student Learning, Supporting Student Social and Emotional Development, Providing More Effective Academic Support, Building Positive Relationships, Improving Communication and Problem Solving. Collaboration between parents and teachers is essential to creating a supportive and effective learning environment for students. By working together, parents and teachers can strengthen students' educational experiences, provide consistent support, and ensure that students receive the attention and guidance they need to thrive academically and emotionally. This collaboration builds positive relationships and strengthens shared efforts to support student success.

Visual Based Mathematics Approach

Using aids such as graphs, charts, Venn diagrams, or math manipulatives to help students understand abstract concepts such as mathematical operations, functions, and number relationships. Encouraging students to solve problems using a variety of representations, such as numbers, symbols, pictures, and tables, thereby strengthening their understanding of math concepts.

School Literacy can be seen from student discipline with three stages, namely the first stage of habituation, the second stage of development and the last stage of learning (Khoeriyah et al., 2021) . Literacy Culture as stated above, seems to be in line with Permendiknas No. 23 of 2015 concerning the Development of Character, which states that mandatory activities use 15 minutes before learning to read books other than subject books (every day). This shows that every school is required to implement a literacy culture in which each student is required to read a book 15 minutes before the lesson starts with the guidance of their respective homeroom teachers. The level of effectiveness can also be seen by comparing the predetermined plan with the results. However, if the efforts or results of the work and actions taken are not appropriate so that the goals are not achieved or the expected targets, then it is said to be ineffective (Rejeki & Desriyeni, 2022).

CONCLUSION

Real-life and project-based learning helps students understand the importance of literacy and numeracy in practical contexts, and motivates them to be more active in learning. Schools need to create an environment that is conducive to literacy and numeracy learning, such as providing a variety of reading materials, developing school libraries, and organizing activities that motivate students to read and count. High teacher competence and teaching skills, including designing problem-solving-based learning, differentiated teaching, and the use of active learning methods, play a very important role in achieving better literacy and numeracy goals. Overall, strategies involving collaboration, technology and contextual learning can help improve students' literacy and numeracy skills significantly. For long-term success, it is important for schools to integrate these approaches simultaneously and continuously into their curriculum.

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