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Implementation of POP-UP Book in Supporting Literacy at SD Negeri 1 Tataaran

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Abstract:
This research is motivated by the importance of improving literacy culture among elementary school students through innovative and engaging learning media. Learning media is a tool that helps teachers convey learning materials in such a way that they make students interested and interested in the learning materials presented. Using learning media dramatically improves the learning process's efficiency and the delivery of messages and the content of learning materials. Media reinforces learning process activities with different characteristics and must be carefully selected to be used effectively. The right learning media is critical in supporting learning for students. This study uses a qualitative research method with a case study approach. This research focuses on SDN 1 Tataaran, one of the schools where PPL Pre-service PPG students are located. At the school, the class that is the place of observation has implemented pop-up book media. A four-week observation showed that pop-up books were a supporting medium in group and individual reading sessions. Interviews with students revealed they were more interested in reading when using pop-up books than regular textbooks. Most students admitted to feeling happy with the visual appearance and interactivity offered by the pop-up book. The study's conclusion shows that pop-up books are an effective and innovative learning medium. This research has made a significant contribution to the field of education, showing that interactive media such as pop-up books can improve various aspects of children's intelligence in an interesting and fun way. For further research, it is recommended that more careful planning is needed in the development of pop-up book media, which should be developed according to the needs and characteristics of students.

Keywords: Pop-up, Literacy, Elementary School

Introduction

Literacy is one of the fundamental skills that students must master in today's digital era. Literacy skills include the ability to read and write and the ability to understand, analyze, and use information critically in various contexts. In basic education, literacy development is the foundation for lifelong learning and students' academic success at the next level of education.

Literacy is an essential ability that children must possess from an early age, starting from the elementary school level. Various kinds of literacy must be mastered by students, one of which is reading literacy (Faziah, 2016; Oktaviani et al., 2022). Reading literacy is an essential skill that is very important for student's academic and social development in school (Handaka & Maulana, 2017; Nurul et al., 2021). Reading skills are a tool for obtaining information and a foundation for developing critical thinking, analytical, and practical communication skills (Puspari & Dafit, 2021; Halim, 2022). According to many

studies, students with good literacy skills are more academically successful, have a broader understanding of the world, and are better prepared to face life's challenges (Khasanah & Herina, 2019; Putri, 2022). Therefore, literacy learning in schools is the focus for educators and policymakers in various countries, including Indonesia.

The reality on the ground shows that the literacy level of elementary school students in Indonesia still needs serious attention. The results of the Programme for International Student Assessment (PISA) survey show that the literacy ability of Indonesian students is still below the international average. This condition encourages the need for innovation in learning methods and media that can effectively increase students' interest and literacy skills.

Indonesia is currently facing a pretty serious literacy crisis, as recently, it went viral on social media TikTok. Many videos show students having difficulty answering basic questions that should be quickly answered by children their age (Anugrahana, 2020; Rachman et al., 2021). A prominent example is that students cannot answer simple questions about reading, even in basic test situations (Anggraeni & Wasitohadi, 2014; Rahayu, 2017). This phenomenon has become a hot topic of discussion in the community, indicating problems in the learning system, especially in developing literacy skills (Santoso, 2019; Asegap et al., 2024).

This viral phenomenon reflects how important it is to improve teaching methods in schools. The low literacy ability among students is caused by the lack of time allocated to reading and the lack of innovation in delivering literacy materials (Sari & Nugroho, 2020; Sari et al., 2024). Teachers may focus on conventional methods that only emphasize letter and word recognition but provide less encouragement for students to understand the meaning and enjoy the reading process (Smith, 2016; Triwinarti et al., 2024). This creates a gap between reading technical skills and a deeper understanding of reading (Patiung, 2016; Teguh, 2020).

To overcome this problem, reading literacy learning needs to be designed in elementary schools to suit the developmental stage of children still in the exploration and play phase. A creative and innovative approach is required to attract students' interest and make them feel comfortable and interested in the reading process (Mahmudah & Wathon, 2019; Nayren & Hidayat, 2021). One learning media that is starting to be widely used in supporting literacy is the pop-up book (Munfarikhatin & Rachmat, 2021). Pop-up books present two-dimensional text and images and three-dimensional images that can appear, move, or change when the page is opened (Oktaviarini, 2017). This book is often considered an effective medium for increasing student interest because of its visual elements and interactivity (Marlina et al., 2022).

The beauty of pop-up books lies in their ability to provide a more lively and engaging reading experience. When students open page after page, they are treated to images that move or appear suddenly, creating a high level of surprise and curiosity (Silvana & Setiani, 2016). This interactive visualization can motivate students to continue reading and give them a deeper understanding of the content of the reading (Janah et al., 2022). In addition, pop-up books also have the potential to increase students' imagination because they not only read texts but also interact directly with the story through these three-dimensional images (Fitriani et al., 2019). This aligns with the learning principle, which states that learning experiences that involve more senses tend to be more effective and memorable (Setiawan, 2014; Yahya, 2017).

However, although pop-up books offer many potential benefits, their use in literacy learning in primary schools is still not so widespread. Many teachers may not be familiar with using pop-up books to teach literacy (Nisa et al., 2023), or they may feel that pop-up books are only suitable for entertainment purposes, not as a serious learning medium (Agustina, 2014). Therefore, more in-depth research is needed to explore

how pop-up books can be effectively implemented in literacy learning and measure their impact on student's interest and reading comprehension.

This study aims to answer two main questions: "How can the implementation of pop-up books support reading literacy in elementary schools?" and "What is the impact of the use of pop-up books on students' interest and understanding in reading?" This research is expected to contribute to developing more creative and innovative literacy learning strategies and provide insight to teachers on how to utilize pop-up book media in the classroom. By understanding the impact of using pop-up books in the context of reading literacy, learning in elementary schools can be more effective and engaging so that students can read well and enjoy the reading process.

In general, reading literacy is not only about students' ability to recognize letters and words but also about their understanding of the text being read and their ability to analyze and reflect on the meaning of the reading. Thus, media such as pop-up books can support reading literacy development through fun and interactive ways. Through this research, a clearer picture can also be obtained about how the interaction between students and pop-up book media occurs and how this media can be further used to improve reading literacy in elementary schools.

Literature Studies

The Concept of Literacy and the Role of Learning Media

Literacy is a basic skill that must be mastered by students from an early age, including reading, writing, and understanding information. In Indonesia, the National Literacy Movement (GLN) emphasizes the importance of creating a literacy culture in elementary schools through various innovations, including the use of interactive learning media such as the POP-UP book (Hanum, 2021). This media is conceptualized as a three-dimensional book with interesting visual elements, such as animated images and interactive effects, which can increase student engagement in the learning process (Rosyadi et al., 2024).

Recent research shows that POP-UP books are effective in increasing students' motivation to learn, especially in understanding abstract concepts such as science, mathematics, and language (Rosyadi et al., 2024). For example, a study at SDN Kalirejo found that grade V students who used POP-UP books on social studies materials experienced an increase in reading interest by 67% compared to conventional methods (Kamila, 2023).

Benefits of POP-UP Books in Literacy

Some of the advantages of POP-UP books as literacy media include:

1. Increase Student Engagement: Interactive elements such as pop-up effects and animations make it easier for students to understand the material directly (Resta & Kodri, 2023).
2. Sharpening Creativity: Through three-dimensional visual displays, students stimulate imagination and critical thinking skills (Restra & Kodri, 2023).
3. Encouraging Information Retention: The combination of visual, sound, and movement elements increases students' memory of learning materials (Rosyadi et al., 2024).
4. Developing Digital Literacy: The digital version of the POP-UP book (smart POP-UP) can be integrated with technology, such as animation and audio, to improve literacy skills in the 21st century (Rosyadi et al., 2024).

The results of a study at Pertiwi Wonorejo Kindergarten show that POP-UP media can increase early childhood linguistic intelligence by 48% in six months (Sitorus et al., 2024). Meanwhile, a study at MI

Assunniyyah 45 found that the use of smart POP-UP books improved the writing skills of students in grades I-II by 32% (Laela & Sholihah, 2024).

Challenges of POP-UP Book Implementation

Despite having significant benefits, the implementation of POP-UP books in primary schools also faces several obstacles:

1. High Production Costs: The process of making POP-UP books requires thick paper, special tools, and intricate graphic design, resulting in high production costs (Wulan & Astutik, 2023).
2. Durability limitations: Interactive elements such as the POP-UP mechanism are vulnerable to damage if not handled carefully, requiring extra care (Wulan & Astutik, 2023).
3. Dependence on Teachers: The effectiveness of this media is highly dependent on teachers' ability to integrate POP-UP books into their curriculum and learning strategies (Wulan & Astutik, 2023).
4. Material Limitations: POP-UP books usually focus on one specific topic, making them difficult to apply to a wide range of materials (Wulan & Astutik, 2023).

Research at SDN 2 Kalirejo found that 40% of teachers found it difficult to use POP-UP books due to time and resource limitations (Wulan & Astutik, 2023). Meanwhile, a study at Habibilla Kindergarten showed that 35% of students considered this medium "boring" after several uses (Wulan & Astutik, 2023).

Research Gap

Based on a literature review, some of the problems that have not been answered in the implementation of POP-UP books in elementary schools are:

1. Lack of Local Research: Most of the research on POP-UP books is conducted in urban or regional schools with adequate resources, while the condition of rural schools such as SD Negeri 1 Tataaran has not been covered.
2. Lack of Focus on Teachers: Most studies only analyze the impact of this media on students, without paying attention to the readiness and capacity of teachers in operating the media.
3. Lack of Integration with the Curriculum: POP-UP books are often used as an additional medium, rather than as an integral part of the national curriculum.
4. Limited Data on Long-Term Impact: Most studies only measure the effectiveness of this medium in the short term (1-3 months), without knowing the long-term impact on student literacy.

Thus, this research not only fills the knowledge gap but also provides practical solutions to improve the quality of education in remote areas such as Minahasa Regency.

Research Methods

This study uses a qualitative research method with a case study approach. This design was chosen to gain an in-depth understanding of the implementation of pop-up books in Indonesian learning in elementary schools, the impact of the implementation of pop-up books in Indonesian learning, and the factors that are the challenges in implementing these pop-up books in classroom learning. This research focuses on SDN 1 Tataaran, one of the schools where PPL Pre-service PPG students are located. In the school, the class that is the place of observation has applied pop-up book media.

This study's data sources are classroom teachers who learn Indonesian using pop-up books and several students participating in the learning process.

Data was collected through three main methods: observation, interviews, and documentation. These three methods provide comprehensive information about implementing pop-up books in Indonesian learning and their influence on students' reading literacy skills. The data obtained from observations, interviews, and documentation were analyzed descriptively. Descriptive analysis aims to describe the research findings clearly and in detail.

Observation is carried out by observing the learning process in the classroom, which the teacher carries out by applying pop-up book media. Observation of teachers and students is carried out simultaneously during the learning process, and peers also assist the researcher in observing the learning process by filling out an observation sheet.

Interviews were conducted by asking questions and answers to teachers who carried out the learning process and to students by distributing reflection sheets to be filled out by students who experienced actions/treatments.

Documentation is done by looking at pop-up books designed by teachers and taking pictures and videos during the learning process.

To improve the validity and reliability of the data, the researcher applied triangulation of methods and sources. Method triangulation combines observation, interviews, and documentation, while source triangulation compares information from teachers and students. In addition, data checking is carried out by confirming the results of interviews with respondents to ensure the accuracy of data interpretation. Data obtained from observations, interviews, and documentation will be analyzed descriptively. Steps in data analysis include:

Data Reduction: Data collected through observations, interviews, and documents are selected and simplified. Data relevant to the research question were retained, while irrelevant data were eliminated.

Categorization: After data reduction, researchers group the data into categories based on themes from observations, interviews, and document analysis. For example, students' responses to pop-up books, the effectiveness of media in improving reading skills, and challenges teachers face.

Interpretation: The grouped data is then interpreted to answer the research question. Researchers are trying to understand how pop-up books contribute to reading literacy by increasing students' interest in and understanding texts.

Data Triangulation: The researcher triangulates data to ensure the validity of the research results. The results of the observations are compared with interview data and documents to ensure consistency between data sources.

Result

Implementation of Pop-up Books in Learning

The results of four weeks of observation showed that pop-up books were used as a supporting medium in group and individual reading sessions. Teachers use pop-up books to introduce stories, explain certain concepts, and attract students' interest in reading. Using pop-up books makes it easier for students to understand the story and characters because they read the text and interact with the visual elements that appear directly from the book.

In addition to increasing students' interest in the material, pop-up books help teachers create an interactive learning atmosphere. When the three-dimensional images in the book appear, students show higher

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enthusiasm in following the learning course. They are more focused and active in responding to stories read by the teacher and more easily involved in class discussions.

This opinion aligns with the views of Waldo Hunt, often called the "father of modern pop-up books." According to Hunt, pop-up books serve as a means of entertainment and a powerful educational medium. This book can harmonize text and visuals, thus creating a more immersive and enjoyable learning experience for students.

The Effect of Pop-up Books on Reading Interest and Comprehension

Interviews with students revealed they were more interested in reading when using pop-up books than regular textbooks. Most students admitted to feeling happy with the visual appearance and interactivity offered by the pop-up book. The three-dimensional images and interactive elements make them more curious and motivated to understand the story being read. Some students also feel they know the reading content better in the pop-up book.

Teachers also reported an increase in students' active participation during learning. After using the pop-up book, students can more easily understand the storyline, characters, and messages conveyed in the book. They are also more active in discussing the reading content and showing critical thinking skills in analyzing characters or events in the story. The results of document analysis, such as teacher notes and student works, showed an increase in reading comprehension scores after pop-up books were used regularly.

This improvement can be seen in students' ability to answer questions about the story's content and retell essential reading parts. This finding is reinforced by the research of Fleming and Levie (1993), who stated that combining text and interactive images can improve information retention and reader comprehension. They found that when students engage visually and cognitively with the material, they can better understand and remember the information presented.

Challenges and Limitations

Although many benefits were found in using pop-up books, some challenges were encountered based on the results identified by the researchers through interviews with classroom teachers. One of the main challenges is the limited availability of pop-up books in the curriculum and learning themes in elementary schools. Some teachers report difficulty finding books with relevant content, especially for more specific or science-based topics.

In addition, the cost of producing and maintaining pop-up books is an obstacle to its wider use. Because pop-up books are made with intricate three-dimensional designs, they are more expensive than regular textbooks. The book is also susceptible to damage if not used or cared for carefully, mainly due to its physical interactivity involving moving parts.

This obstacle reflects many teachers' challenges in finding creative, efficient, affordable learning media. In the opinion of Carter (2020), a contemporary researcher in the field of education, although pop-up books have challenges related to their cost and availability, this medium can be adapted to be simpler and cheaper. Carter suggests that educators and publishers work together to create more affordable versions of pop-up books while still maintaining their function as effective learning aids. A simpler version, for example, by reducing design complexity without eliminating interactive elements, is expected to reach more schools and students.

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Discussion

Implementing pop-up book media to support literacy in elementary schools is a promising learning innovation that can increase students' interest and literacy skills. Pop-up books as a learning medium have the advantage of visualizing material in three dimensions that can move when the page is opened, thus providing students with a more enjoyable and interactive reading experience (Siregar, 2016; Dini et al., 2023).

Pop-up books have proven effective in improving various aspects of student literacy. Research shows this media can improve students' initial reading skills, concept comprehension, and learning motivation. This aligns with the finding that pop-up books can develop creativity, stimulate imagination, and foster interest in reading from an early age. The implementation of pop-up books shows significant results in improving students' reading ability. The research data revealed an increase in the percentage of initial reading ability from 6.25% to 93.75% after using pop-up book media. This success is supported by the characteristics of pop-up books that present engaging and interactive visualizations, making it easier for students to understand the reading content.

Pop-up books also play an essential role in developing students' science literacy. Research shows that pop-up book media significantly increases science literacy (Dini et al., 2024). This media helps students understand scientific concepts through interesting three-dimensional visualizations. The motivational aspect of the pop-up book cannot be ignored in the context of literacy development. This media has proven effective in increasing students' enthusiasm and involvement in learning activities (Astuti, 2020). Psychologist Frank J. Sileo emphasized that pop-up books can make children reluctant to read more excited about turning the pages of books.

Implementing pop-up books requires a systematic approach involving three main stages: habituation, development, and learning. At the habituation stage, the focus is on the introduction and habituation of media use. The development stage involves improving literacy skills through activities responding to books, while the learning stage integrates pop-up books into various subjects. In its implementation, pop-up books must be designed by paying attention to visual aspects and content that are by the level of student development. This media must be equipped with attractive, colorful, and three-dimensional features that can increase student enthusiasm.

Some challenges in implementing pop-up books include limited resources, relatively long manufacturing times, and the need for specialized skills in creating them. In addition, a deep understanding of integrating this media into learning is required.

A collaborative approach is needed between teachers, schools, and other stakeholders to overcome these obstacles. Training on making pop-up books for teachers can be a solution to improve technical skills. System and school policy support is also needed to ensure the program's sustainability. The evaluation of the implementation of the pop-up book shows a positive impact on various aspects of learning. Research revealed significant improvements in students' reading ability, concept comprehension, and learning motivation. This media has also proven effective in developing students' language skills and digital literacy.

Using pop-up books as literacy media has long-term implications for student literacy development. This medium improves reading skills and develops the critical thinking and creativity skills necessary for lifelong learning. To increase the effectiveness of pop-up books, continuous development that pays attention to content, design, and interactivity is needed. Integrating digital technology and local content can enrich students' learning experience. Increasing teacher competence in using and developing pop-up books

is a crucial aspect. Continuous professional training and development is required to ensure effective implementation.

Implementing pop-up books to support literacy in elementary schools has shown promising results. This media has proven effective in improving student literacy, including reading ability, concept comprehension, and learning motivation. Successful implementation requires a systematic approach, system support, and continuous development to ensure the sustainability and effectiveness of the program.

Conclusion

Based on the above research results, it can be concluded that teachers use pop-up books to introduce stories, explain certain concepts, and attract students to read more. Using pop-up books makes it easier for students to understand the story and characters because they read the text and interact with the visual elements that appear directly from the book.

After using the pop-up book, students can more easily understand the storyline, characters, and messages conveyed in the book. They are also more active in discussing the reading content and show critical thinking skills in analyzing characters or events in the story. Despite the challenges related to its cost and availability, the benefits of this medium in learning are much more significant, especially in creating a more engaging and practical learning experience for students.

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