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Kota Jakarta Selatan, Daerah Khusus Ibukota Jakarta**ABSTRAK**

Literasi lingkungan perlu ditumbuhkan sejak dini untuk menumbuhkan kesadaran dan perilaku bertanggung jawab terhadap alam. Penelitian ini bertujuan untuk menganalisis kebutuhan siswa terhadap pengembangan media buku cerita berbasis ekopedagogi. Penelitian menggunakan survei dengan pendekatan fenomenologi untuk mengetahui realitas di lapangan terkait kondisi lingkungan sekolah dasar. Responden penelitian ini adalah 20 orang guru sekolah dasar dari tiga sekolah berbeda di Kecamatan Setiabudi, Jakarta Selatan. Selain itu, 100 orang siswa juga dilibatkan untuk diukur literasi lingkungannya. Setiap sekolah memiliki karakteristik yang berbeda-beda sesuai dengan fasilitas dan kondisi sekolah. Temuan menunjukkan bahwa literasi lingkungan yang dimiliki siswa cenderung hanya bersifat kognitif dimana skor pengetahuan sebesar 75,5, skor keterampilan kognitif sebesar 63,78, skor sikap terhadap lingkungan sebesar 60,08, sedangkan skor perilaku terhadap lingkungan hanya sebesar 54,76. Hasil membuktikan bahwa skor pengetahuan siswa lebih tinggi dibandingkan dengan sikap dan perilaku siswa terhadap lingkungan. Di samping itu, berdasarkan observasi dan wawancara menunjukkan 80% siswa dan guru sangat setuju dengan dikembangkannya buku cerita berbasis ekopedagogi. Media ini menjadi solusi untuk menstimulus literasi lingkungan siswa sehingga akan tumbuh kesadaran hidup bersih dan sehat. Dengan demikian, produk buku cerita berbasis ekopedagogi butuh dikembangkan untuk meningkatkan literasi lingkungan siswa.

KATAKUNCI : *buku cerita; ekopedagogi; literasi lingkungan; siswa sekolah dasar***ABSTRACT**

Environmental literacy needs to be developed from an early age because early it can foster awareness and responsible behavior towards nature. Based on observation, public concern for the environment is currently a concern for many parties. This is evidenced by the large amount of garbage scattered in the surrounding environment, one of which is in the school environment. This causes learning to become uncomfortable because of polluted air and dirty environmental conditions. This study aims to analyze students' needs for the development of ecopedagogy-based storybook media. The study used a survey with a phenomenological approach to find out the reality in the field related to the condition of the elementary school

environment. The respondents of this study were 20 elementary school teachers from three different schools in Setiabudi District, South Jakarta to provide information about the potential for student environmental literacy issues and the use and acceptance of current media in supporting students' environmental concerns. In addition, 100 students were also involved to measure their environmental literacy. Each school has different characteristics according to the facilities and conditions of the school. The findings show that environmental literacy possessed by students tends to be only cognitive in nature where the knowledge score is 75.5, the cognitive skills score is 63.78, the attitude score towards the environment is 60.08, while the behavior score towards the environment is only 54.76. The results prove that the students' knowledge score is higher than the students' attitudes and behavior towards the environment. On the other hand, based on observations and interviews, 80% of students and teachers strongly agree with the development of ecopedagogy-based story books. This media is a solution to stimulate students' environmental literacy. Therefore, ecopedagogy-based story book products need to be developed to improve students' environmental literacy.

KEYWORDS: *ecopedagogy; elementary school; environmental literacy; story books*

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INTRODUCTION

Environmental literacy is a person's ability to understand, analyze, and take action to address environmental problems. Environmental literacy can be measured through four indicators, namely Knowledge, Cognitive skills, Attitude, and Behavior. This literacy needs to be developed early on because early education in environmental literacy fosters awareness and responsible behavior toward nature (Chalhoub, 2024). Integration of environmental literacy and care from an early age is essential to foster a generation that is aware and proactive about ecological issues. Several studies have shown that instilling these values through engaging educational methods can significantly improve children's understanding and behavior towards the environment (Pauuvale, 2022; Tan, 2021).

Environmental literacy is an important element in forming students' ability to solve environmental problems (Meng, 2022;

Williams, 2023). Environmental literacy skills can develop students' understanding of key concepts related to the environment and can apply the knowledge they have to contribute to solving existing environmental problems (Kigawa, 2024). Based on interviews and observations in the field, it was found that there were quite a lot of problems with environmental literacy, such as the discovery of environmentally unfriendly student behavior such as throwing leftover food into drains and not turning off the toilet or classroom lights during the day. Students should be able to hone their ability to solve environmental problems through adequate environmental literacy. This problem is caused by a lack of knowledge and awareness in the school community about environmental issues. Lack of environmental literacy can cause people to care less about the environment, so they do not contribute to nature conservation. Several factors that

cause environmental literacy problems include: Climate change, Extinction of natural resources, and Environmental damage due to human activities (Aningsih et al., 2022; Huffman & Demant-Poort, 2024; Roach & Whitney, 2022). This appearance shows that elementary school residents' awareness of the environment is still very minimal. When associated with the Sustainable Development Goals, especially in goal 11 related to Sustainable Cities and Settlements through target 11.6 in 2030 is targeted to reduce the detrimental impact of urban environments per capita, special attention is paid to the quality of urban waste management. The relationship between waste problems and city governments gets attention from Goal 11 of the SDGs which aims to create inclusive, safe, resilient, and sustainable cities. One of the concrete targets is to try to minimize the effects of environmental pollution per capita by improving water quality and waste management by 2030 (Sachs et al., 2022).

To overcome the problem of environmental literacy, efforts are needed to increase public knowledge and awareness. One way is to develop eco-pedagogy-based stories to stimulate students' environmental literacy. Several studies have shown that utilizing children's stories can make environmental concepts relatable and interesting, promoting the internalization of ecological values (Çolak, 2025; Klemen, 2025). The presence of infographics serves as a powerful tool to simplify complex environmental issues, making them accessible to young learners (Ailizire, 2024; Hasanah et al., 2020; Kigawa, 2024). Environmental literacy and awareness are essential from an early age to

improve knowledge and behavior in preserving nature. Children's stories serve as an effective tool to instill these values, making environmental awareness accessible and interesting to young readers (Edwita, Hasanah, 2020; Fahrurrozi et al., 2020; Origenes & Alejandro, 2023). The differences between previous research and the research being developed by the researchers include the product itself. The product being developed is tailored to environmental literacy indicators and packaged in a story with ecopedagogical nuances. This is assumed to effectively improve students' environmental literacy. Promoting environmental literacy at an early stage is essential to fostering informed citizens who can adopt environmentally beneficial behaviors. This basic knowledge enables individuals to understand and address environmental issues effectively, ultimately leading to a more conscious society (Edwita et al., 2023; Hasanah & Edwita, 2019). Instilling environmental literacy from an early age is essential as it fosters awareness and character values in children, enabling them to care for the environment. This basic knowledge helps address environmental issues and promote sustainable practices for future generations. Children's stories serve as a powerful medium to enhance understanding of environmental concepts by fostering a connection between young readers and nature (He, 2021; Kopnina, 2024; Priya, 2023). Through targeted environmental fiction and narratives, these stories can instill environmental awareness and promote sustainable practices among children. The following section outlines how children's

literature can effectively contribute to environmental education.

The novelty in this study is in the form of a story developed by researchers in the form of a life story packaged in eco-fiction. This story is integrated with an eco-pedagogical approach, namely involving children in nature-oriented narratives, facilitating a deeper understanding of environmental issues (Gallagher, 2022; Stanley, 2022). It encourages interactive learning experiences, allowing children to explore their relationship with nature through storytelling and dynamic activities. Children's stories, especially eco-fiction, can enhance understanding of environmental concepts by engaging preschoolers in nature-pedagogical interactions, fostering value inclusion through activities before, during, and after reading, and promoting a dynamic and positive environment that supports children's vitality and learning (Aung, 2022; Klemen, 2025; Lafave, 2024; Mishra, 2022). Children's stories, especially eco-writing, enhance understanding of environmental concepts by illustrating the interconnectedness of life, nature, and society (Edwita, Hasanah, 2020; Misiaszek, 2023; Mulyanie, 2024). Through stories and picture books, children gain insight into their relationship with the environment, fostering environmental awareness from an early age.

Thus, the research questions raised are (1) what is the condition of environmental literacy possessed by elementary school students in the Setiabudi sub-district, South Jakarta?; (2) to what extent is the description of the use of media to stimulate students' environmental literacy?; and (3) how is the formulation of the need for eco pedagogy-

based story media in supporting environmental literacy of elementary school students in the Setiabudi sub-district, South Jakarta?

METHODS

This study aims to analyze the need for eco-pedagogy-based story media in supporting the environmental literacy of elementary school students. This study uses a survey with a phenomenological approach to find out the reality in the field related to the environmental conditions of elementary schools. The respondents of this study were 20 elementary school teachers from three different schools in Setiabudi District, South Jakarta to provide information about the potential problems of students' environmental literacy as well as the use and acceptance of current media in supporting students' environmental concerns. The characteristics of teachers who will be respondents include:

Table 1. Participant's Characteristic (n=156)

	Frequency	%
Gender		
Female	14	70
Male	6	30
Working years as a teacher		
1-5 years	9	45
5-10 years	7	35
10-15 years	4	20
Educational		
Primary Teacher	20	100
Education Others	0	
Level of education		
Bachelor's	17	85
Master's	3	15
Others	0	

In addition, 100 students were also involved to measure their environmental literacy. Each school has different characteristics according to the facilities and conditions of the school.

Data collection techniques in this study were in the form of questionnaires and tests. The questionnaire was used as an instrument for analyzing teacher needs and the test was used to measure students' environmental literacy. The test was made based on environmental literacy indicators, namely (1) aspects of knowledge related to ecological knowledge, (2) cognitive skills that include identifying and analyzing environmental problems and planning environmental actions, (3) attitudes towards the environment consisting of verbal commitment, sensitivity, and feelings towards the environment, and (4) behavior towards the environment that includes actual commitment (Tharasook et al., 2020).

The reliability of the items of both questionnaires is estimated at $\alpha=0.94$. The survey was conducted from January to March in the semester of 2024/2025. The completed response sheets were collected, arranged, and analyzed statistically to calculate the results

using Microsoft Excel. Data from the questionnaires filled out by respondents will be analyzed descriptively and qualitatively. The percentage method is used to present the results of data reduction. The questionnaire results data are explained by calculating the percentage and explained descriptively, while the test results data are explained by the average and classified and then explained descriptively.

RESULTS AND DISCUSSION

What is the condition of environmental literacy possessed by students in elementary schools in the Setiabudi sub-district, South Jakarta?

Based on findings in the field, shows that students' environmental literacy is still quite low. Observation results show that the school environment is still dirty, especially after recess. Students still throw used garbage and leftover food carelessly, some students eat in the park by stepping on the grass, the toilets are not clean, and there is still garbage in the corners of the room. The test results show that students' environmental literacy scores still need to be improved. In general, the results can be visualized as follows:

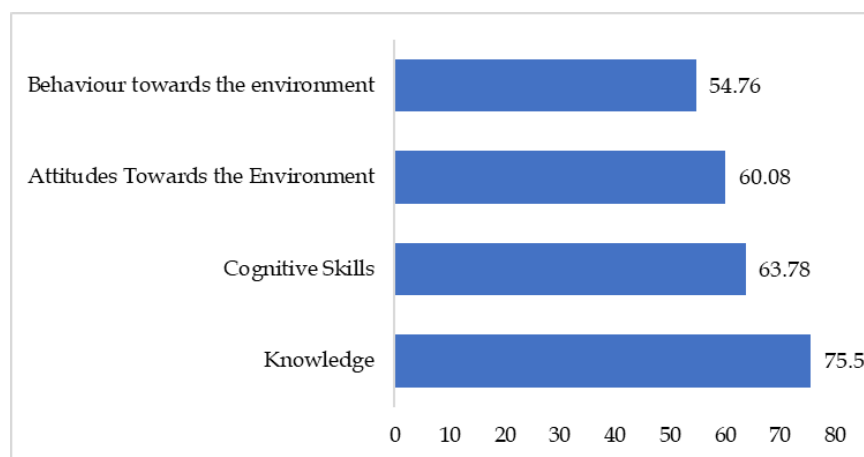


Figure 1. Student Environmental Literacy Scores

Based on the scores above **Figure 1**, it was found that the knowledge dimension has the highest score compared to other scores. The knowledge score is 75.5, the cognitive skills score is 63.78, the attitude score is 60.08, and the behavior score towards the environment is 54.76. This knowledge aspect includes students' understanding of environmental concerns, and the ability to analyze information related to environmental concerns. It turns out that students who have high knowledge do not necessarily have an awareness of implementing their knowledge.

In addition, to measure students' environmental literacy, researchers also conducted observations. Collaborate with teachers on students' environmental literacy activities. The results include:

Table 2. Results of Observations on Students' Environmental Activities

Observed activities	Yes	Not enough
Throw rubbish in its place	38%	62%
Doing class duty	68%	32%
Classify waste according to the type of trash can	20%	80%
Flushing after finishing defecating or urinating in the bathroom	62%	38%
Caring for plants in the school environment	25%	75%
Maintain cleanliness of things at school	49%	51%

Based on the observation results **Table 2** above, only 38% of students throw their trash in the trash can, and the rest still litter. In

addition, the smallest score is classifying trash according to the type of trash can and caring for plants in the school environment. This is evidenced by the trash cans in the school that are not categorized so that students still throw trash in the trash can randomly. In addition, the activity of caring for plants is only the responsibility of the school guard. Only 25% of the number of students care for plants either by watering them, not picking them, or cleaning the school garden environment. The largest score is in the class picket activity. From the results of interviews with class teachers, it turns out that this class picket activity is mandatory and if you do not do it, you will be sanctioned. This is what stimulates students to do class pickets so that in the morning the class looks clean and tidy.

To what extent is the description of the use of media to stimulate students' environmental literacy

In essence, environmental literacy can be integrated into learning. Teachers have implemented discipline in maintaining the classroom and school environment during learning. Teachers also always show examples of a clean environment with a comfortable community. However, based on the results of interviews with teachers are as follows:

I once presented a picture of a healthy environment to stimulate them to maintain environmental cleanliness (Teacher 2)

In science learning, there is a topic about a healthy environment. I always relate stories to stimulate them to care about the environment. (Teacher 5)

I once gave songs about environmental

awareness to make it easier to remember the obligation to maintain environmental awareness. **(Teacher 14)**

There is a poster media that I always use as a learning media to improve students' environmental literacy knowledge. **(Teacher 20)**

From the interview above **Figure 2**, it can be classified that some of the media used by teachers to stimulate students' environmental awareness are:

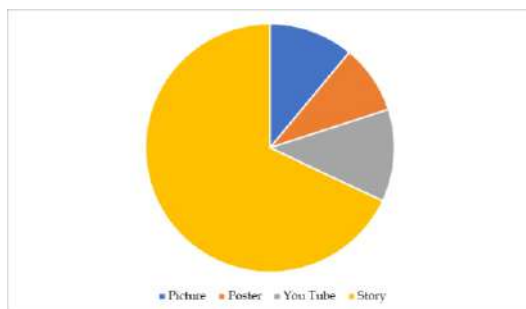


Figure 2. Types of Media Used by Teachers

In addition to interviews on the types of media frequently used by teachers, researchers also analyzed the percentage of student acceptance of the development of eco-pedagogy-based story media. Based on the results of the questionnaire, it was found that:

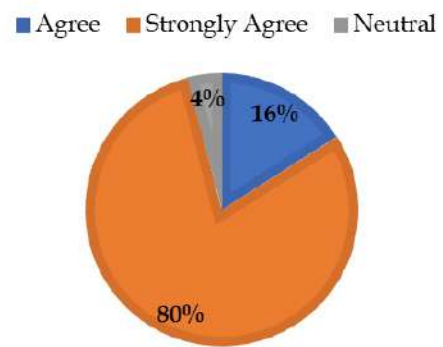


Figure 3. Percentage of Students in Agreement

Based on the picture above **Figure 3**, it can be found that as many as 80% of students strongly agree and 16% of students agree with the development of eco-pedagogy-based story media, while the other 4% of students choose neutral. This neutral attitude is because they have never read an eco-pedagogy-based story. Thus, most of them agree with the development of this media.

How is the formulation of the need for eco pedagogy-based story media to support environmental literacy of elementary school students in the Setiabudi sub-district, South Jakarta?

The results of the study show that the needs of students and teachers for this media are quite high. The visualization is as follows:

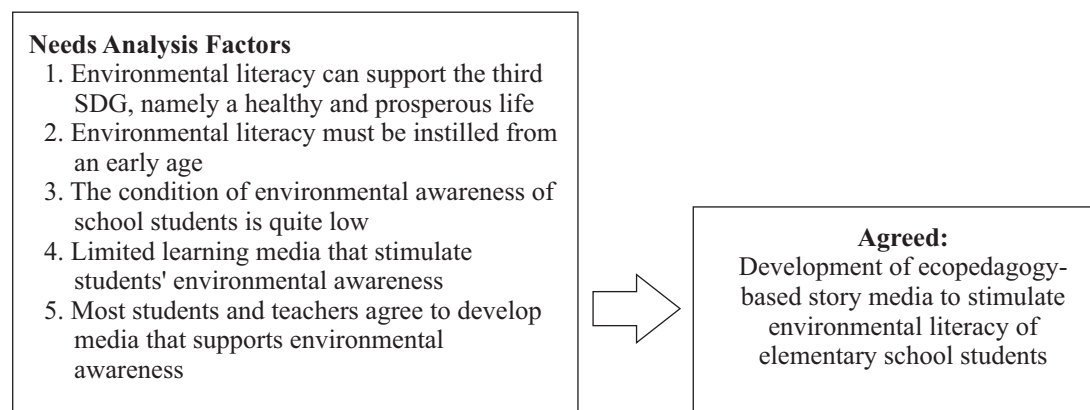


Figure 4. Need Analysis Factors

From the chart above **Figure 4**, it can be shown that ecopedagogy-based story media is very much needed and agreed to be developed immediately so that it can be an alternative solution in increasing literacy and environmental awareness of elementary school students.

Based on the research findings above, it can be shown that eco-pedagogy-based story media needs to be developed optimally. This is based on several considerations that are the need for the urgency of this media. Based on findings in the field, shows that students' environmental literacy is still not balanced between knowledge and others. The results of the study showed that the knowledge dimension scored 75.5 and this is the highest score compared to other scores. This knowledge aspect, includes students' understanding of environmental concerns, the ability to analyze information related to environmental concerns. It turns out that students who have high knowledge do not necessarily have the awareness to implement their knowledge. Based on the scores above, it was found that the knowledge dimension has the highest score compared to other scores. This knowledge aspect, includes students' understanding of environmental concerns, and the ability to analyze information related to environmental concerns. It turns out that students who have high knowledge do not necessarily have the awareness to implement their knowledge. The results of observations show that the school environment is still dirty, especially after recess. Students who still throw away used garbage and leftover food carelessly, some students eat in the park by stepping on grass, toilets that are not clean, and there is

still garbage in the corners of the room.

In addition, the results of interviews with teachers also show that students' environmental literacy still needs to be built and supported in various directions such as through media, programs, and even rules made by schools. Teachers always integrate environmental literacy attitudes into relevant learning materials. This means that there is still no awareness among students to live clean and healthy and care about the environment. Protecting the environment and fostering a love for nature is our shared responsibility as humans who are given reason and mind by God in managing this earth.

Thus, this eco pedagogy-based story media is urgent to be developed to stimulate students' concern for the environment. Children's stories about the environment are a form of literary work that can convey important messages about protecting nature (Misiaszek, 2021). In this story, we can see the impact of human behavior on the environment and get inspired to act in protecting and preserving nature. Through interesting pictures, children can more easily understand and identify good and bad actions towards our environment. Let's protect our environment and play an active role in protecting nature for a better future.

CONCLUSION

Based on findings in the field, shows that students' environmental literacy is still quite low. Observation results show that the school environment is still dirty, especially after recess. Students still throw used garbage and leftover food carelessly, some students eat in the park by stepping on the grass, the

toilets are not clean, and there is still garbage in the corners of the room. The test results show that students' environmental literacy scores still need to be improved. In Addition, based on the research findings, it shows that environmental literacy possessed by students tends to be only cognitive where the knowledge score is 75.5, the cognitive skills score is 63.78, the attitude score towards the environment is 60.08, while the behavior score towards the environment is only 54.76. These results indicate that students' behavior towards environmental awareness is still relatively low. Therefore, a media is needed that is able to stimulate their awareness of the surrounding environment. In addition, as many as 80% of students strongly agree and 16% of students agree with the development of eco pedagogy-based story media, while the other 4% of students choose neutral. Through ecopedagogy-based story media, students will be trained in a clean lifestyle so that they can create a healthy lifestyle. This eco-pedagogy-based story media needs to be developed optimally. This is based on several considerations that are the need for the urgency of this media. Finally, the research shows that students' environmental literacy is still not balanced between knowledge and others.. Thus, this media is urgent to be developed to overcome the problem of students' environmental awareness.

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