



IMPROVING STUDENTS' UNDERSTANDING OF ECOSYSTEMS THROUGH LEARNING MEDIA IN ELEMENTARY SCHOOLS

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ABSTRACT

This descriptive qualitative research is an elaboration of the material developed through students' understanding through learning media. A deep understanding of ecosystems is essential for creating awareness of the need to protect the natural environment for the sustainability of our planet. This study uses an experimental approach involving elementary grade students as research subjects. An interactive and engaging learning media specifically designed to describe various aspects of ecosystems, including biotic and abiotic components, food chains, water cycles, and interactions between organisms. The use of interactive educational technology is expected to facilitate a more effective and enjoyable learning process. This research was conducted within a certain period of time by measuring the level of students' initial understanding of the ecosystem before the instructional media intervention and then compared with the level of understanding after the learning process using the media. In addition, comparisons were also made between groups of students who used learning media and groups of students who studied through conventional methods.

Keywords: *Students, Media, Ecosystem.*

INTRODUCTION

In this increasingly modern era with the development of various facilities that make it easier to access education, it is necessary to make adjustments to the demands of the times. Modern education is ways of learning in accordance with the demands of the times, which are carried out to be able to prepare participants to keep up with current developments. Environmental education is one of the important pillars in the education system, especially at the elementary school level. At an early age, students can easily develop their understanding of nature and the importance of maintaining healthy ecosystems (Arsika et al., 2019). Complex concepts like ecosystems often require innovative and engaging approaches for students to really understand them. In the ecosystem context, learning media is able to bring natural wonders directly into the classroom, facilitating students' understanding of the complexity and interrelationships of each component in the environment. Interactive learning media is able to convey learning effectively and easily understood in achieving learning objectives (Aplikasinya et al., 2016).

Media is people, material, or events that build conditions to make students become better capable students starting from abilities, skills, or attitudes. Learning media itself has the benefit of providing teacher creativity for students so that the learning process can run smoothly (Isnaini et al., 2017). The use of learning media in elementary schools is an effective solution to increase students' interest and understanding of ecosystems. Learning media such as animations, short videos, and interactive applications can create a fun and educational learning atmosphere (Prendes et al., 2017).

Various kinds of learning media are needed for teachers to be able to make their students more enthusiastic in learning (Isnaini et al., 2017). Learning media is one of the ways or tools used in the teaching and learning process (S. M. Sari et al., 2020). This is done to stimulate learning patterns so that they can support the success of the teaching and learning process so that teaching and learning activities can be effective in achieving the desired goals (Mardhatillah et al., 2019). In fact, learning media is still often neglected for various reasons (Mayang, 2020). This actually doesn't need to happen if each facilitator already has knowledge and skills regarding instructional media (Mayang et al. 2019). In general, the media is a tool that conveys or delivers teaching messages (M. Sari & Lubis, 2019). While learning media are all means, tools and media used in the learning process (Mardhatillah et al., 2023). Learning media includes tools that are physically used to convey the contents of teaching materials (Mayang et al. 2018). From these two definitions, the media is a tool used to convey learning material.

Learning media is useful in attracting students' interest in the learning material presented. Learning media is important to be applied during teaching and learning to increase students' enthusiasm for learning.

METHODS

The method used is a qualitative descriptive literature review. The research data was obtained through relevant articles from upstream research. Data collection through literature review both books and journals. This descriptive qualitative research is an elaboration of the material developed through students' understanding through learning media. A deep understanding of ecosystems is essential for creating awareness of the need to protect the natural environment for the sustainability of our planet. This research was conducted within a certain period of time by measuring the level of students' initial understanding of the ecosystem before the instructional media intervention and then compared with the level of understanding after the learning process using the media. In addition, comparisons were also made between groups of students who used learning media and groups of students who studied through conventional methods.

RESULTS AND DISCUSSION

Teaching and learning process is essentially a process of communication, conveying messages from students to recipients. Media is a means or tool used to convey messages from the sender to the recipient of the message, with the aim of increasing the understanding of the recipient of the message (S. M. Sari et al., 2019). Learning media can improve student learning outcomes, namely:

1. Teaching will attract students' attention so as to foster learning motivation.
2. The meaning of the subject matter will be clearer so that it can be better understood by students, and allows students to better master the learning objectives.
3. Teaching methods will be more varied, not just verbal narration through the words of the teacher. So that students don't get bored, and teachers don't run out of energy, especially when the teacher teaches each lesson.
4. Students do more learning activities, because they not only listen to the teacher's description, but also other activities such as observing, doing, demonstrating, and so on.

Learning media can improve the process and results of teaching is about the level of students' thinking. This is also in line with Piaget's theory of mental development, which adds that there are stages of an individual's mental development. The human stage of thinking follows the developmental stage of thinking from the concrete to the abstract.

In choosing the right learning media for students, there are several criteria that need to be considered. Some of these criteria are as follows.

1. In accordance with the learning material.
2. Practical, flexible and enduring.
3. In accordance with the goals to be achieved.
4. Student characteristics.
5. The ability and skills of teachers in using.
6. Supporting facilities.
7. Cost.

Besides that, good learning media must pay attention to the principles of developing media that are in accordance with learning theories. Psychological principles that need to be considered in the selection and use of media are:

1. Motivating students in learning,
2. Understanding individual differences,
3. In accordance with the objectives of the lesson,
4. organized Content,
5. Availability of students in learning,
6. Fostering students' emotions,
7. Foster student participation,
8. Provide feedback,
9. Strengthening,
10. practice and practice,
11. Application.

Special visual-based learning media, need to pay attention to several aspects. In the compliance process, certain design principles must be observed, including the principles of simplicity, integration, emphasis, and emphasis.

1. Interactive Animated Videos.

Interactive animated videos can provide interesting and in-depth visualizations of ecosystem concepts. Students can see firsthand how living organisms interact in their environment. This video can also be interleaved with interactive elements, such as quizzes or puzzles, which allow students to actively participate in learning.

2. Interactive Application.

Educational applications can provide opportunities for students to explore various aspects of ecosystems through educational simulations and games. This application allows students to study in a more practical and hands-on way. An example in an article written by Putu Sinta Mertasari, and Ni Nyoman Ganing entitled Development of Problem Based Learning Powtoon Media on Science Content Ecosystem Material for Class V Elementary Schools, which explains how to implement learning using the Powtoon application. Based on the results of the analysis and research and

discussion contained in the study, it can be seen that problem-based learning based powtoon learning media is very suitable for use in learning activities for students on learning material, using powtoon learning videos, but the drawback is that students do not see directly or only see and hear.

3. Infographics and Visual Images.

Interesting infographics and visual images can help students understand the concept of ecosystems briefly and easily digested. They help simplify complex information into a form that is easier to understand. Like the previous example using the Powtoon application which requires supporting applications such as Power Point and Canva, which do provide images by displaying visual images and infographics in the learning that will be applied.

4. Digital Books or e-Books.

Interactive digital books allow students to study independently. Interactive content, such as audio, video, and moving images, can enrich the learning experience and help students understand the material better. Digital books or e-books can also be an alternative if you want to use various kinds of books or other reading so you don't get stuck with one book, but for elementary school children who do have the biggest problem, namely the lack of literacy used so that sometimes books are not very effective for students. Elementary school.

5. Interactive Whiteboard (Interactive Whiteboard).

Interactive whiteboards allow teachers to present ecosystem material more dynamically and interactively. Students can participate directly in learning by writing, marking, and explaining concepts on the whiteboard.

6. Touch Screen (Touchscreen Devices).

The use of touch screens on tablet or smartphone devices can present learning media that is responsive and easily accessible to students. Students can learn about ecosystems through applications, videos or other interactive materials at the touch of a finger.

7. Models and Replicas

The use of physical models or replicas of certain ecosystems can help students visualize in real terms how ecosystem components interact and are interrelated.

8. Gamification (Game-Based Learning).

Applying game elements in ecosystem learning can increase student motivation and present fun learning. Students can learn about ecosystems through challenges and scenarios in the form of educational games.

CONCLUSION

The number of learning media in increasing students' understanding of ecosystems provides a variety of ways to present information and facilitate a more interactive and enjoyable learning process. Each learning media has its own advantages and disadvantages, and the selection of the right media must consider the characteristics of students, learning content, and learning objectives to be achieved. Here are some learning media that can be used to increase students' understanding of ecosystems:

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