

Development of Diorama Learning Media for Fourth Grade Elementary School

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Abstract

Learning media is a tool or intermediary that facilitates teaching and learning process and communication between teachers and students. This research is development research that aims to produce a diorama learning media about the rice field ecosystem food chain that is effective, practical and fun. The subjects of this study were 47 fourth graders from a public elementary school in Donowarih, East Java. This study concludes that the use of media in the learning process have impacts on teachers, students and the learning process in the classroom. In designing learning media, several steps must be considered, namely; media must be designed as simple as possible so that students are clear and easy to understand, media must be designed according to the subjects taught, media design is not too complicated and confuse children, the design of the media should use simple and easily available materials, but should not reduce the meaning and function of the media itself, and media can be designed in the form of models, pictures, structured charts, etc, but the materials are cheap and easy to get, so the teacher will have no trouble designing problematic media. Further researchers can use and develop this research and examine more sources and references.

Keywords: *diorama; food chain; learning media*

1. INTRODUCTION

Education plays an important role in the development of human life. Through education, quality human resources are printed to become the driving force of the nation's progress and prosperity. The educational process is directed at increasing the mastery of knowledge, skill abilities, development of attitudes and values in the context of the formation and self-development of students (Sukmadinata, 2003). According to RI Law Number 20 of 2003 concerning

the National Education System, Education is a conscious and planned effort to create a learning atmosphere and learning process to actively develop their potential to have religious-spiritual strength, self-control, personality. Intelligence, noble character, and skills needed by himself, society, nation and state. Therefore, the progress of a nation cannot be separated from the education factor because education plays an important role in the development of a nation.

Schools are formal educational institutions that have an important role in realizing educational goals. Education is all planned and carried out activities regularly and directed at school educational institutions (Suhartono, 2008:46). One way to achieve these goals is through interaction during the learning process at school. According to Djamarah (1994), the learning process is the core of educational activities. As the core of educational activities, the learning process is an effort to achieve the goals of education itself. This means that educational goals will never be achieved if teaching and learning interactions never occur in education.

As one of the main components in learning activities, the teacher plays an important role in determining the level of student success in learning because the main function is to design, manage, implement, and evaluate learning (Putra, 2019; Sari & Isjoni, 2021). Teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education through formal education, basic education, and secondary education (RI Law Number 14 of 2005 concerning Teachers and Lecturers).

In addition, the position of a teacher in learning activities is also very strategic and decisive. It is said to be strategic because the teacher will determine the depth and breadth of the subject matter. In contrast, it is said to be decisive because the teacher will sort and select the materials, methods, and learning

media used for students during the learning process.

Learning media is a tool in the learning process that can stimulate students' thoughts, feelings, attention, and abilities or skills so that they can help or encourage an effective, practical, and fun learning process. Because the learning process is a communication process in one system, the learning media occupies an important position as one of the components in learning activities.

In the learning process, the selection of media must generate motivation, attract attention, and provide experience to students so that unwanted things do not happen during the learning process, such as experiencing boredom, not focusing during learning, etc. In line with this, the Ministry of Education and Culture (1992) states that using media in the learning process can generate interest and motivation in student learning, reduce or avoid verbalism, generate regular, systematic reasoning, and foster understanding and develop values in students. However, from observations made by researchers at Donowarih State 1 Elementary School that the use of teacher learning media is only limited to using practical media such as pictures and media found in schools.

Develop learning media to help teachers and students learn based on these problems. The media designed by the researcher is diorama media in learning the Rice Ecosystem Food Chain sub-theme.

The diorama is one type of three-dimensional media. Sudjana (2013) states that a diorama is a mini three-dimensional scene aimed at depicting the actual scene. The advantages of diorama media are that they are made of cheap and easy-to-obtain materials, can imitate actual objects, and motivate users to get a learning experience.

2. METHODS

The method used in this research is Design-Based Research (DDR) Reeves model. Design Research is a systematic study of designing, developing, and evaluating educational interventions (such as programs, strategies, and learning materials, products, and systems) as solutions to solving complex problems in educational practice, aiming to advance our knowledge of the characteristics of and interventions as well as the design and development process (Lidinillah et al., 2015). In DBR, the Reeves model consists of 4 stages (figure 1).

a. Identification and analysis of problems by researchers and practitioners collaboratively

In this stage, the researchers made observations at Donowarih State 1 Elementary School. Data collection techniques used are interview techniques to obtain information related to learning media in fourth grade.

b. Develop a solution prototype based on the existing design principle benchmarks and technological innovation

Researchers chose the media in the form of dioramas in learning the Rice Ecosystem Food Chain sub-theme for fourth-grade students.

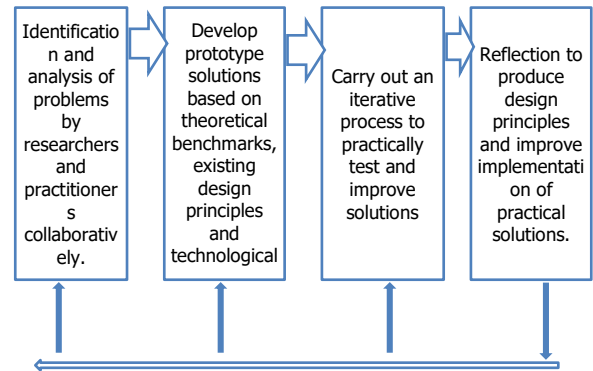


Figure 1. Design-Based Research Model

c. Carry out an iterative process to practically test and improve solutions

In this third stage, the researcher carried out an iterative process to test the diorama media, the Food Chain Ecosystem sub-theme, and improve practical solutions. Testing is carried out internally and externally. Internally by expert lecturers and externally by fourth grade teachers and students. The research was conducted on June 12, 2021 with forty-seven students as the subject.

d. Reflection to produce design principles and improve implementation of practical solutions

Then, in the last stage, the researcher reflected on the diorama media developed and tested by fourth-grade lecturers and teachers. Researchers choose lecturers and teachers because they are considered experts in the field to provide advice and input on the media

that has been developed. The deficiencies obtained during the trial process will be used for further improvement solutions until the product is truly suitable for use.

3. RESULTS AND DISCUSSION

a. Identify the Use of Learning Media in Fourth Grade Elementary School

From the results of observations at Donowarih State 1 Elementary School, that the use of learning media, teachers are only limited to using practical media such as pictures and media found in schools, so the researchers concluded that the use of learning media in the teaching and learning process is still rarely done, even though the use of learning media in the learning process can increase the enthusiasm of students to learn and understand the material that has been taught concretely and not boring. The use of learning media in the teaching and learning process can generate new desires and interests, generate motivation and stimulation of learning activities, and even positively affect students (Arsyad, 2002).

b. Diorama Media Design

Researchers designed the development of diorama media in learning the sub-theme of the food chain of rice field ecosystems. The initial activity carried out in developing the diorama media was to determine the sub-themes to be studied. The theme chosen is the food chain. In this sub-theme, the researcher chooses the food

chain of the rice field ecosystem. After determining the sub-themes to be studied, the researchers then began to design the media by considering the principles of visuals. Nurseto (2011) means that the media designed must be easy to see, attractive, simple, useful or useful, correct (accountable), reasonable and well structured. Furthermore, the product design is validated by two experts in their fields and one teacher.

The diorama themed 'The Rice Field Ecosystem Food Chain' was made with an easy-to-find and easy-to-make base material, styrofoam. In making the miniatures in the diorama, pictures of animals and plants printed and pasted on styrofoam are also used. There are 13 miniatures in the diorama depicting the food chain of the rice field ecosystem. The rice field ecosystem theme was chosen because the example illustrates how the food chain works. The thirteen miniatures are represented in the form of 4 trees that describe the atmosphere of the rice fields, five actors in the food chain of the rice field ecosystem, and four arrows that show the food chain process. Each actor in the food chain consisting of mice, rats, snakes, eagles, and mushrooms is named as a role description, including producers, level 1 consumers, level 2 consumers, level 3 consumers, and decomposers.

Criticisms and suggestions from the validator will be used by researchers as revision material for further improvements so that the product reaches fairly good feasibility for use in the learning process.

c. Implementation of Diorama Media in Learning Sub-theme Food chain rice field ecosystem in the trial process in elementary school

The trial activity was carried out at Donowarih State 1 Elementary School. The use of diorama media in learning the food chain sub-theme of the rice field ecosystem was not optimal. There are still shortcomings from the media in using diorama media that are used only as learning materials. Therefore, further improvements were made to the diorama media, originally used only for material delivery. It was improved with diorama media that could be used as evaluation material and games for students, namely by using quiz cards containing questions and answers on different cards and by criticism and advice from the teacher. Although the use of media is not optimal, the teacher gives a good response to the development of diorama media in learning. The teacher is very grateful for having made diorama media which is very interesting, motivating and can help teachers in the learning process in the classroom.

d. Reflection to Generate Design Principles and Improve Practical Implementation of Solutions

Furthermore, after the product has finished conducting expert tests or expert validation and field trials on the development of the rice field ecosystem food chain of diorama media, then the researchers reflect and try to improve the media that still suffers from the

shortcomings, and they contained in the diorama media can be improved properly. So that researchers produce food chain of diorama media products well for the rice field ecosystem (Figure 2).



Figure 2. The Final Product Diorama Media of Rice Field Ecosystem Food Chain

The final result of this diorama media is that there are 13 miniatures in the diorama that describe the food chain of the rice field ecosystem. The thirteen miniatures are represented in the form of 4 trees that describe the atmosphere of the rice fields, five actors in the food chain of the rice field ecosystem, and four arrows that show the food chain process. Each actor in the food chain consisting of rice, rats, snakes, eagles, and mushrooms is named as a role description, including producers, level 1 consumers, level 2 consumers, level 3 consumers, and decomposers. Not only that, the researchers provided miniature sun and clouds to describe the atmosphere of the sky to complement the atmosphere of the rice field environment.

4. CONCLUSION

From the implementation of the work program for making food chain diorama learning media for fourth-grade of Donowarih State 1 Elementary School, which was carried out in Donowarih Village, Karangploso District, Malang Regency, it can be concluded that holding a learning media making program can help teachers explain learning materials and can help students in the learning process to make it easier to understand and increase enthusiasm in participating in learning and learning activities. The school is grateful to the UM KKN Team for helping and participating in improving the quality of education through the development of learning media.

From the findings of this study, we would like to suggest as follows: 1) For further research interested in researching diorama media are expected to be able to use and develop this research and examine more sources and references, 2) The school can maximize the use of learning media more effectively to achieve the objectives of learning and learning activities, and 3) Establish good relations with the Community Service Team to collaborate in improving the quality of learning and learning.

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