



Use of Diorama Media: As an Innovation in Science Learning in Elementary Schools

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ABSTRACT

IPAs is a subject that has many theories that students must memorize. The teacher must find a way to help students memorize the material. One of the media that is used to help students memorize the material in science subjects is to use dioramas. The diorama made is adapted to the material in the Sciences subject. Dioramas make students feel like they can see the real situation or picture. Diorama is a miniature three-dimensional view that aims to depict the actual scene. This diorama is one of the learning innovations that teachers can do to optimize science learning outcomes. In addition, the activity of making dioramas can train motor skills and fun activities for students because in making dioramas there are activities of coloring, cutting, pasting, and various other activities. The use of diorama media as an innovative tool in the learning process in elementary schools is getting more and more attention because of its potential to increase student engagement and understanding. This article analyzes how the use of diorama media can provide immersive learning experiences through visual and practical approaches. This article describes the various benefits of using dioramas, such as increasing student creativity, strengthening understanding of abstract concepts, and collaborative learning.

Keywords: dioramas, science and technology, innovation learning

1. INTRODUCTION

Education is always closely related to learning. According to [4], learning is the process of a person's efforts to achieve or obtain changes in behavior within themselves. In learning, a teacher must be able to realize that this learning is not just a collection of concepts or facts, but is also based on a collection of processes and values that can be developed in real life among students. Therefore, learning in schools can never be separated from learning innovation, including using learning media prepared by teachers in the learning process at school.

Elementary school is a period of character formation and absorption of knowledge which is very important for children. To achieve effective educational goals, the use of appropriate and interesting media in the learning process becomes very relevant. One of the media that can be used is a diorama. A diorama is a three-dimensional model used to visually depict a scene or concept.

Natural and Social Sciences or commonly abbreviated as IPAS in the current independent curriculum is one of the subjects that must be in class IV of Elementary School. IPAs is a material that has many theories that must be memorized by students. Teachers must think about innovations in learning with the aim of learning that is carried out in class to run smoothly.

Learning that goes according to plan will make students get optimal results in that learning. Innovation in learning can be in the form of learning methods and learning media.

According to [12] one of the efforts that teachers can make to improve the quality of science learning is through the learning process in the classroom, both at the Primary and Secondary Education levels. Science learning implemented in schools has fulfilled the expectations of the independent curriculum, namely that learning in elementary schools should be educational, intelligent, increase children's activity and creativity, learning is effective, challenging and fun. Such learning is carried out with the aim of making the subject matter easy for students to understand.

Current developments are very rapid and require increased quality and innovation in education, especially in elementary schools. According to [11] education is a very important part of determining the sustainability of a nation's next generation. A nation will have a good future if educators succeed in educating students as the nation's next generation, the nation's future will be bleak if education fails to educate the nation's next generation. Education is an activity that prevents bad things. It is

hoped that education will be able to build a better generation of the nation. The existing education system in Indonesia is expected to be able to make changes towards improving and increasing the quality of education. The education system must be able to maximize the role of various educational components. Components in educational success include the leadership of the principal, school activity programs, learning activity programs, teachers and education staff, students, school facilities and infrastructure, funds or costs, the role of the community environment and community leaders, etc. The most important component in learning is the teacher. Teaching is a job that requires special skills or what is usually called teacher professionalism. Professional means a profession that cannot be done by just anyone. Teachers have an important role in supporting, facilitating and motivating students, especially when they are at school. The main goal of education is to prepare students to become the next generation of a successful and progressive nation [11] said that learning is defined as a comprehensive system. The success of learning in education can be seen from two main aspects. The two main aspects are the product aspect and the process aspect. Successful learning can be seen from student success in terms of the learning outcomes obtained by students without ignoring the learning process. Learning is an effort made by a person so that other people can understand the material presented. Learning innovation is one of the efforts made by teachers in the learning process that uses strategies, ideas, including using learning media, so that it is hoped that progress will be achieved in the learning outcomes that are desired. A teacher's learning innovation needs to have the desire to continually change, develop and improve the quality of educating students in the classroom, with the aim of producing a learning model that suits the demands of the class. Teachers must act as reformers who can reduce the difference between the implementation of education and the progress of society. Teachers must continuously learn and improve their knowledge and skills in order to create attitudes that can improve the quality of education so that students can keep up with developments in society.

According to [11] the learning process is a new paradigm in learning as an innovation product that prioritizes the process of restoring the essence of students as humans who have all the potential to experience the process of developing themselves. A good learning process can be realized if teachers and students do not limit themselves in communicating. The close relationship between teachers and students means that students are not afraid or

hesitant in conveying the learning problems experienced by these students. Whatever the method is to facilitate students and whoever is the facilitator who will accompany students to study, it is best to prioritize what the learning objectives are. Learning innovation needs to be carried out, especially in the era of increasingly advanced digital developments. The implication is that learning innovation is a way to show teacher professionalism. The teacher is the first person in the class who is close to students' needs and has an important role in managing learning

Learning in elementary schools is the initial stage in the formal education process, where the foundation of basic knowledge and skills is instilled in students. For teachers, the main challenge is to make learning more interesting and memorable so students can learn better. One way to achieve this is through the use of innovative learning media such as dioramas.

From the opinion above, it can be concluded that a teacher really needs to continue to make innovations in classroom learning. A creative and fun learning process in the classroom will ensure that learning is carried out well in accordance with the determined learning objectives. Optimal learning will create optimal student learning outcomes.

2. METHOD

This study used a qualitative approach with data collection techniques in the form of class observations, interviews with teachers, and interviews with students. The collected data was then analyzed using content analysis and triangulation techniques to ensure the validity of the findings. This research was conducted at Parangtritis 1 Elementary School in class IV.

3. RESULTS AND DISCUSSION

Education is the process of educating and conveying material carried out by a teacher to students. Teachers as adults are expected to provide examples, learning, direction, and improvement of ethics and morals, as well as exploring the knowledge and potential of each individual in students. The teaching given to students is not only from formal education carried out by those in power, but in this case it is the function of family and society that is very important and becomes a forum for development that can generate and develop knowledge and understanding.

Science learning is more effective and can achieve results that should pay attention to (1) thinking processes; (2) creativity, every student must have the opportunity to carry out various types of creativity; (3)

student experience; (4) Concept formation, essentially the concepts that students have are the result of their own formation; (5) concept application, learning materials which are intended as concept applications [14]. From this opinion, it can be concluded that science and science learning will be more effective if it provides opportunities for students to process thinking and carry out various student creativity, such as by using learning innovations using diorama media.

Learning media is an intermediary for conveying information that can stimulate thoughts, feelings, attention and will in the learning process from teachers to students with the aim of conveying the material. According to H. Malik [15] explains that learning media is everything that is used to channel messages from teachers to students. Media can stimulate or grow students' attention and interest in learning. Learning media is useful for learning activities, learning media can overcome the limitations of learning space and time. This means that learning media can facilitate learning material with the aim that students can increase their learning motivation even though they do not see objects directly because objects or objects that are too large to be displayed directly in the classroom can be replaced with learning media.

According to Gagne and Briggs in [1] said that learning media are all components of learning resources that have meaning in the student learning environment which can help students to learn, especially at school. According to Rossi and Breidle in Sanjaya (2014: 58), learning media are all tools and materials that can be used to achieve predetermined educational goals. According to Anitah (2010: 5) explains that media are all people or materials or tools, or objects, or events that can create conducive learning conditions for students at school.

Learning media is a tool that has the function of making it easier to achieve learning goals. This is based on the theory that learning activities with the help of learning media can improve the quality of student learning activities over a long period of time. Student learning activities with the help of learning media will produce or improve student learning processes and outcomes that are better and more optimal than without the help of media [10]

Teachers in an effort to apply constructivist learning theory, Tytler (1996: 20) provide several inputs that can be applied in learning related to learning design in the classroom as follows:

1. The teacher provides opportunities to express opinions
2. Teachers provide opportunities to think during the learning experience process so that they can increase creativity and have high imagination
3. Teachers provide opportunities to try new things or experiences in the learning process at school
4. The teacher provides experiences related to the ideas they already have

5. The teacher encourages thinking about ways to change ideas
6. Teachers create a conducive learning environment for students

[13] says Diorama is a miniature three-dimensional view that aims to depict the actual scene. Dioramas usually consist of figures or objects placed on a stage with a background in a painting to suit the presentation.

Diorama is a three-dimensional scene made in small size to demonstrate or explain an event or phenomenon that shows an activity (Munadi, 2008: 109). In dioramas there are three-dimensional objects in small sizes as well. These small objects are in the form of people, trees, houses, etc. so that they look like the real world in miniature.

Diorama is a miniature three-dimensional view that aims to depict the actual scene (Sudjana and Rivai, 2013: 170).

According to Nana Sudjana (1990: 170) a diorama is a mini three-dimensional view aimed at depicting the actual scene. So, through diorama media, we can provide actual objects and images for students to observe so that students can describe or describe what they observe clearly and in detail.

Diorama media consists of objects placed on stage with a painting background, adjusted to the presentation [8]. The benefits of learning media in general, diorama media can clarify the presentation of messages and information so that it can make it easier for students to learn subject matter and improve the learning process and learning outcomes.

Dioramas usually consist of figures or objects placed on a stage with a background in a painting adapted to the presentation. Diorama as a teaching medium is especially useful for subjects in geography, life sciences, history and can even be cultivated for various subjects. Sudjana and Rivai (2013: 206), state that a diorama is a special model that can be used to create a certain environmental atmosphere, one example of which is a doll, which is a variation of the model form intended for dramatization plays. The use of real life materials in the teaching and learning process primarily aims to introduce a particular unit of study, the work process of a particular object of study, or other necessary parts and aspects. The shape of the diorama consists of a front that contains a scene with reality and a model, and a background that is made to give a real-like effect.

According to Munandi in [7] diorama media is a view (*scene*) three dimensions that are made in small sizes to demonstrate or explain an event or phenomenon that shows an activity. In dioramas there are three-dimensional objects in small sizes as well. These small objects are in the form of people, trees, houses so that

they look like the real world in miniature rather than the actual size.

From the opinions above, it can be concluded that diorama media are three-dimensional scenes made in small sizes to demonstrate or explain an event or phenomenon that shows an activity. The shape of the diorama consists of a front that contains a scene with reality and a model, and a background that is made to give a real-like effect. Diorama is a three-dimensional representation of a scene or concept. This media has long been used in various contexts, including in learning. In this article, we will explore the use of diorama media in learning innovation in elementary schools.

According to Subana (2009: 330), the advantages of diorama media used by teachers in the teaching and learning process are that they can be made from cheap and easy-to-obtain materials, can be used repeatedly, can depict the shape of the actual situation, can show the inside of something deep the real situation is hard to see. Another advantage of diorama media is that it can add beauty, attractiveness, and can motivate users to get learning experiences

According to Angger Yogyantoro (2016) by using diorama media, learning takes place more interesting and meaningful for students. In an interesting and meaningful learning process, students are required to be active and creative. For this reason, diorama media can make it easier for students to make observations so that students can make descriptive essays according to the results of observations.

The diorama media used in learning has benefits for teachers and students in learning, this was conveyed by Iswandari, revealing that dioramas are useful as learning media that can provide abstract concepts to concrete concepts (Iswandari, 2017). According to Dara and Dea (2022), diorama media has advantages in being used as a learning medium, namely that the media can be made from cheap and easily available materials, provide direct experience to students, the media can be presented concretely and avoid verbalism, can display objects in their entirety, displays the structure and process flow clearly. From this opinion, it can be concluded that diorama media has many benefits for teachers and students. The benefits for students are mainly in providing real or concrete direct learning experiences. to students so that it is easier for them to understand the lesson material.

Diorama media also makes students active in learning. This is in accordance with Miftah et al (2017) who state that another advantage of diorama media is that it can foster students' interest in learning, students practice increasing creativity, independence in learning and fostering an active class atmosphere. From this opinion, it is known that diorama media, apart from making learning active, has other benefits such as fostering students' interest in learning, increasing

creativity and independence in learning. This diorama media provides various positive impacts from learning innovations using dioramas.

The benefits of diorama media are as follows:

1. Can make duplication of the actual object
2. Can turn abstract concepts into concrete concepts
3. Can provide a common perception
4. Can provide a fun learning atmosphere
5. Can give a deep impression and experience to the material created

The benefits of using diorama media are as follows:

1. Better Visualization: Dioramas allow students to see a learning concept or topic in three dimensions. This helps them to better understand the content being taught.
2. Tactile Experience: In making a diorama, students must create the elements of the scene they are studying. This involves their hands in the learning process, which can improve their comprehension and memory.
3. Creativity and Art Skills: Making dioramas allows students to express their creativity. They can design, sculpt and color elements of their diorama, which can develop their artistic skills.
4. Collaboration: Diorama creation projects often involve teamwork, which can teach students about collaboration, sharing ideas, and solving problems together.
5. Linking Theory with Practice: Dioramas can be used to link abstract concepts with real-world applications. Students can see how these concepts operate in a concrete context.

How to use dioramas in learning in elementary schools:

1. Relevant Topic Selection: Choose an appropriate learning topic for the diorama. For example, in science lessons, students can make dioramas about forest ecosystems or the solar system.
2. Guides and Support Materials: Provide clear guides and support materials for students. This can be in the form of pictures, videos, or reference books that help them understand the topic for which they will make their diorama.
3. Group Work: Students can be grouped to work together on a diorama making project. This will encourage collaboration and the development of their social skills.
4. Evaluation: Use the diorama project as a means of evaluating student understanding. Ask questions about their diorama and ask them to explain related concepts.
5. Diorama Exhibition: After finishing making a diorama, teachers can hold a diorama exhibition in class or at

school. This diorama exhibition activity will provide students with the opportunity to share their work with others, thereby increasing student motivation.

From the opinion above, it can be concluded that the benefits of diorama media are: learning takes place more interesting and meaningful for students. In an interesting and meaningful learning process, students are required to be active and creative. Another benefit is that it can make duplication of real objects impossible to represent in a class. This diorama media makes real and actual concepts, presenting concrete or real things for students in class.

Learning innovation as a ideas, ideas or certain actions in the field of curriculum and learning that are considered new to solve educational problems. The material in this study is the science of science subject metamorphosis material and water cycle material. This is in accordance with the opinion of Bhaswika (2019) who states that effective and efficient learning is needed in every learning, including science learning in elementary schools in order to achieve maximum learning goals.

Data collection techniques used in this study were observation and tests, interviews and documentation to strengthen the research results.

The following is the documentation for making a diorama:



Figure 1: Children creating and coloring pictures



Figure 2: Children cut out the pictures that have been made



Figure 3: Children stick pictures together to make a diorama



Figure 4: Children present the results of the diorama group work that has been made

The teacher's response regarding diorama media was that the diorama media used was very interesting, so that learning became active, interactive and fun, diorama media made it easier for students to find out about rare animals in Indonesia. Besides that the teacher will also feel relaxed in learning, because students can learn independently, the teacher only supervises. This is in accordance with [1] saying that learning media is a component of learning resources or physical vehicles that contain instructional material in the student environment that can stimulate students to learn. Diorama media can be used in integrated thematic learning so that it can assist teachers in conveying material and can foster an active and interesting learning atmosphere. Students also get a lot of insight. This is in accordance with Kurniawan (2014: 95).

CONCLUSION

This diorama media can be one of the innovations in learning, especially in science subjects. Diorama media helps students to be able to see objects or objects that are studied and cannot be brought to class to become real and can facilitate students' understanding so as to create optimal learning. Optimal learning will help improve student learning outcomes. The use of diorama media in learning innovation in elementary schools can increase students' understanding, develop their creativity, and teach them collaboration skills. Teachers can take advantage of the potential of dioramas to make learning more interesting and meaningful for students. With the

right guidance, dioramas can be powerful tools in explaining complex concepts to children in elementary school.

AUTHORS' CONTRIBUTIONS

The division of tasks in writing this article is the first author to make articles for all sections. Then the second author checked the results of the article. The two authors together ensure the preparation of the article to the last stage.

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