Utilization of Learning Media in Science Lessons in Elementary Schools

Desi Pristiwanti*, Widia Indah Rahayu†, Anengsih¹, Lukman Nulhakim¹, Suroso Mukti Leksono¹

¹Elementary School Magister Program, Faculty of Teacher and Education, Sultan Ageng Tirtayasa University, Banten, Indonesia.

Received: March 28, 2023
Revised: April 03, 2023
Accepted: June 25, 2023
Published: June 30, 2023

Corresponding Author:
Widia Indah Rahayu
Widiaindahrahayu.28@gmail.com

Abstract: The purpose of this research is to know the benefits of the use of the media learned in elementary school science. The method used in this study is library research. The data-collecting techniques for the research began by looking up relevant topics to help writers in collecting data. That data is obtained by searching relevant journals, books, and resources. Research reveals that one of the key elements of the learning process is the use of the learning materials, or learning resources. Using the media is one method for improving the educational process. The teaching process in the class can be facilitated for teachers by using a media learning tool to facilitate an exchange of knowledge for students. Thus, students can learn to achieve the learning goal for this by using learning resources.

Keywords: Benefits of learning media; Media characteristics; Natural sciences

Introduction

The teacher plays a key part in the learning process, which is at the education center in its entirety. As the learning manager, the teacher plays part of the main actor in his learning process. Act no. 20 th 2003, section 39, chapters 1 and 2, associated with the national school system reads: To support the process on education units, educational personnel are assigned to manage, develop, monitor, and provide technical services. It is the duty of educators to organize learning processes, evaluate learning, provide instruction and training, conduct experiments, and provide service to students (Kurnia et al., 2022). Thus, teachers need to realize that responsibility by having the skills to support the teaching and learning process in the classroom.

The 2005 no 14 law on teacher and teacher competence refers to teacher and teacher competence, based on the 2005 law on teachers and teachers, according to article 10 verse 1, chapter 8 discussion of teacher competence includes "pedagogical competence, interpersonal competence, social competence, and professional competence is obtained through professional education" (Darmadi, 2015). According to some definitions, pedagogical competence includes the capacity to understand the disciple, the ability to plan and carry out the learning activities, the ability to assess learning and the ability to help disciples realize their varying potential. This learning was created by sub skills. Skills open and end the lesson also use teaching tools.

It is important to make careful learning planning remember the various components of the lesson materials' the various purposes and functions for learning to happen effectively, efficiently, and enjoyable. However, there is often an attitude or behavior of the student in the class that can interfere with the learning activities. To prevent student behavior from disorder in instructional activities, teachers should work to create room for class potential, pay attention to students, know them as individuals, and offer customized services that are forms of support from fellow students.

Teachers should be able to cultivate a pleasant environment in which students can learn effectively. A
teacher must understand that he is a field worker who performs directly and serves as a spearhead of the success of education because of his great responsibility (Wahid, 2018).

But in reality, many teachers do not carry out their responsibilities correctly. The teacher's own ability to support the existing work is one of those obstacles. These skills relate to skill and skill by studying media technology, as one of their USES. One factor of adjustments to teach is the need for teachers to master the learning media to effectively, efficiently, and successfully deliver learning materials to students (Wulandari et al., 2023).

One of the essential elements for the learning process when using learning materials is the source of learning. To ensure that learning materials are properly understood by students, teachers pass them through a learning medium (Wahyuningtyas et al., 2020).

Other functions of the learning media are to encourage learners' motivations, strengthen with learning materials, provide learning stimuli, allow learners' responses, instant feedback, and encourage appropriate exercise. Thus, to conclude that teachers can use media learning to pass information on to students in a way that will allow them to understand it easily.

Method

The strategy in this method USES library research (library research) as a form of a library study by understanding and examining the theories found in different research works. There are 4 guidelines in library research: first, gather the necessary tools, second look for relevant references, three set aside time for study, and note research materials. Finally, it involves locating data and compiling information from published material, including books, journals, and research. Descriptive and contextual analysis is used in analysis techniques. To support the meaning and ideas, the library information collected from various sources was critically and thoroughly examined (Fadli, 2021). Research design and method should be clearly defined.

Result and Discussion

Definition of Media

The Latin word "media, "which is a form "medium," literally means an introduction or mediator. Many groups now limit the understanding of what the media means. There is a widespread definition of media according to experts: One of the tools a teacher can use to give lessons so that students are interested in the lessons presented is the learning media (Wulandari et al., 2023). In general, the medium of education is a tool for teaching. The thoughts, emotions, attention, abilities, and skills of the students can all be stimulated beyond those tools to promote learning (Luh et al., 2021).

It may be deduced from a few points previously stated that tools as learning media will function as tools for teachers, which facilitate the exchange of knowledge to students during the teaching process. In communication and in education, we can also use the media to spread knowledge. Because of a short, limited study time, educators can use the time to give lesson materials as a media tool in the teaching process in class. Thus, enabling educators to be able to convey the material effectively, quickly, and with much knowledge to students (Wulandari et al., 2023).

Professional teachers always present lesson materials in new ways, including new methods for using the learning media. The media also signs that student learning is improved because teachers use more media. The development of high-quality learning media will occur through selection, design, manufacturing, and use of its critical components of the education system. As a result, using the media can help students accomplish their learning purposes (Wiyatmo et al., 2017). Using the media is one method for improving the educational process. Even in elections, the media must reflect characteristics in order for students to be fully involved in the learning process (Khoiriyah et al., 2018).

Media Characteristic

Teachers must be aware of the characteristics of the material used before using it. The characteristics used are media should conform to the purpose of learning in order to match the manufacture and hungering of the media in use. It is also important to consider media benefits and losses. Before using it, it is necessary to be able to compare with the construction of different teaching tools (Rahma, 2019).

As for the characteristics of the learning media as follows: Imaginative. Instructional media needs to be permanent in the sense that it can record, store, and display events or objects from time to time. As a result, we can sketch, photograph, record, or movie items, store them, and examine them. Manipulative. The operation of the learning media must be so that it can display prefabricated objects or events and modify or alter them as needed to assist in the teaching and learning process. Distributive. Distribution of the media must be so that they can overcome considerable learners in a presentation. Accessibility. Teachers and students who act as targets should have access to the educational materials used in the learning process. Accessibility of media is affected by the technology used and the purpose of the learning process itself. Interactive. Students' ability to respond, or respond in various ways,
to the learning materials provided by the teacher, is referred to as interactive in the learning process. As a result, the teaching media used in the class should allow for two-way interaction and dialogue between teachers and students. Consistent with teaching function and purpose. The media educational tools that teachers use to help in the teaching and learning process must be adapted for teaching purposes. The learning media can be used to explain duties and teaching materials and the purpose of learning. Support the learning materials. The learning resources a teacher gives students must match the lesson materials in the learning class. To illustrate, an engravings of human anatomy can be used as a learning tool to support a presentation of information on the subject. Easy to use. For teachers who act as communicators, a media educational tool should be simple to use. To successfully communicate learning materials to students, teachers need to be proficient with the learning media in addition to their communication skills. Students will find it difficult to understand the lesson materials presented if teachers cannot effectively use the learning medium to communicate lesson materials. Consistent with the characteristics of learners. The use of the teaching process to learn media must be adapted to the characteristics of learners, especially in regard to their cognitive abilities, developmental stages, and learning experiences. Successful implementation of the teaching and learning process can be influenced by the proper media selection of the learning grouping, which is the application of a communal technique. Effective and efficient. The use of media on education must be consistent with the purpose of learning. Preparation of designated instructional materials and corresponding timetables. Expressive. Oral presentations of the learning materials made by teachers should be articulated in the learning media. When learning materials are presented through the medium of learning, class communication barriers such as verbalization, misunderstandings, inattention, and poor student understanding can be avoided. Beyond time, space, and perception. Limitations in space, time, and sensory perception must be overcome with the instructional tools used. Where they can take on a reality role, study the media. For example, a 2d or 3d simulation can take pictures of vegetation. Willingness to learn. In the teaching process, teachers can get the media to be able to appeal to learners' curiosity about what they learn so they are inspired to work diligently and independently on relevant materials and subjects (Nurrahman et al., 2022).

**Media Function**

The most important role of the medium of science is to explain and force concepts on students they do not understand. Sudjana (2002) there are six basic learning tools in the educational process: Tools to create an effective educational environment. Vital to the overall environment of education. Are important to students and subject lessons. It's not just a show or some accessory. To promote learning and help students remember what the teacher said. The focus is on developing knowledge of teaching and the quality of learning (Laelimubarok, 2020).

**Various media**

Depending on the purpose of the learning process, different learning tools can be used during the teaching process. Similar media educational resources that can be used in learning assignments can be grouped into the following categories: Publications: books, journals, and newspapers. Visual AIDS: such as photos, paintings, maps, posters, charts, and diagrams exhibits include notice boards, flannel board, binder notice boards, and display notice boards. Items produced: film, slide, transparency, and projector. Audio recordings: cassete tape, phonograph and videotape. Products: cameras, tape recorders and thermofek (for making transparency). Broadcasting tools: radio and television programs. A picture and sound peripheral view: TV, sound film. Artificial tools: the toolbar model of the slice, the human torso model. There are also other media we know, including the following: diorama, puppet and puppet shows (Fadjarajani et al., 2020).

**Media Types**


**An Understanding of Learning Science**

Recognizing that education is the key to making informed students and that teaching takes place as part of the educational process. Interactions between learners and teachers are a teaching and learning process. Furthermore, learning is a procedure as a condition of learning to teach both sides (Herawati, 2018). In a broad sense, learning is a enabling or changing new behaviors that are not of maturation and are temporary as a result of significant responses.

According to bloom, learning is basically a change in learners' ability to improve their lives as individuals, members of society, and powerful beings created by the Lord (hanafy, 2014). Learning is the process of acquiring information and experience in adapting behaviors and reactions that are widely stable or developed as a result.
of personal interactions with their environment (the festival, 2020). In fact, teaching is a term for the purpose of learning and learning is a conscious or unconscious teaching method in the existence of learning. The process of teaching and learning must be carefully planned, carefully planned, and well-regulated in order to obtain learning activities and satisfying results.

Research on the universe and its components are known as IPA at science lessons. As a result, science and science can be considered an objective knowledge because of the study of everything in nature, including natural events and symptoms (Gunawan, 2017). One of the necessary subjects in basic education is natural science. Natural science is a systematic study of nature, which includes both the process of discovering and existing knowledge about facts, ideas, and principles (Ariyanto, 2018). Natural science is also a subject that deals directly with everyday life. Associated with human activities and the surroundings early into the night. Thus, science is one of the most important subjects discussed in basic education (Oktavera, 2015). By giving students to the teaching of science has made it a point to develop their problem-solving skills so they can use what they learn in the real world (Yanayanti et al., 2020).

According to the 2013 curriculum, science lessons combined with other subjects in thematic study in elementary school. The natural science curriculum is given by students in 4th, 5th, and 6th graders. The basic school science study material has six elements: first of all, living things and living systems that talk about people, animals and plants that go around. Second about energy and change. The three transformations of matter. Fourth to the world and its creatures. Fifth concerning the region and the past and progress of the population in vicinity (Winangun, 2020).

A teacher who teaches elementary school science should be able to explore and use a variety of resources and media with a view to improving learning. A teacher's extensive use of learning is to use the talk method. The use of methods by lecturing teachers on learning activities will be less attractive in the learning process because there will not be enough information given without the media about the knowledge, skills, or attitudes learned during learning. But when these subjects are covered in the media on learning, surely the lessons on elementary school science must be more interesting. The use of the learning media provided by schools must be used by teachers, and every opportunity must be used to meet the needs and demands of students' development over the changing times. Teachers can at least use low-cost and effective sources that are simple but important in striving to meet effective teaching objectives and thus achieve the purpose of learning.

Teachers can use the media used in science lessons to help students understand an idea while studying science. As a material editor, teachers can use the learning medium to present materials and give information so that in the classroom study the learners become more effective and interesting. In addition, educators can use the media to help students so that they understand the concept of the lesson when teaching science in elementary school. With the use of learning media, teachers can become class communicators and give material instead of learning media.

The use of the media of learning in basic science materials in schools is a simple, purposeful way to achieve effective teaching processes, creating abstract ideas that can make students think critically in teaching materials, reduce student misunderstandings, and increase students' motivation in learning and teaching situations (Arief, 2021).

Should teachers create lessons that inspire students to desire to continue learning and thus make the lesson activities challenging and fun. Teachers may also encourage exploration to provide critical student experience and development. Thus, a science lesson on basic education must always include the active participation of the students. Not only do they listen to talks but are done to give students more knowledge so they can identify the natural science concept from their own experience as students (Ariyanto, 2018).

Conclusion

With teacher learning activities play specific sections during the learning activity to help students learn to accomplish the intended purpose of the learning. Teaching activities in the classroom should enable a student's curiosity to think critically and produce genuine ideas and transform those ideas into more valuable ones, leading to the creation of authentic and useful learning, referred to as creative, innovative, and productive learning. People are learning by nature. A student can improve the quality of life with knowledge. Science is a direct study of everyday life, related to activities that take place morning through night. So one of the most important lessons covered in basic education is the natural science subjects. At science study, teachers should provide a design for learning that can encourage students to have challenging and fun knowledge in order to excite students' curiosity to continue learning. For this the learning media has an important role to clarify something in an abstract, ambiguous, or complex lesson plan in order to benefit
from a functioning media to effectively communicate the material.

Acknowledgments
During the process of completing this research, the researcher received a lot of support, both moral and material from various parties. Therefore, on this occasion the author would like to thank Mr. Lukman Nulhakim a supervisor for the motivation, guidance, direction, and instructions given during the process of completing this article.

Author Contributions
The main author, Desi Pristiwanti, contributed to designing research, and. The second author, Widia Indah Rahayu, writing research articles. The third author, Anengsih, assisted in the data collection process. The fourth author, Lukman Nulhakim contributed to guiding the writing of the article. The fifth author, Suroso Mukti Leksono a role in guiding the research to writing research articles. All authors have read and agree to the published version of the manuscript.

Funding
This research received no external funding.

Conflicts of Interest
The authors declare no conflict of interest.

References


