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The Available Energy Utilization on Earth as an Electrical Resource through Digital Learning Media

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ABSTRACT

The study aims to expand students' knowledge of using SDA (Natural Resources) as an electrical resource and to preserve it with digital literacy. Learning is using powerpoint and simulations using zoom to 24 elementary school students in Perawang, Indonesia, by giving pre-test and post-test. Learning methods are done with online answer question and face-to-face approach limited by pre-test and post-test. Students are working on each of the 10 issues given when pre-test and post-tests are done using Google form. Research indicates from the question given that there is an increase in the value of post-test students after learning. The study provides information that the use of videos and powerpoints can be used as learning media. But the most important thing is how to get students' attention so they can focus on learning. Students are particularly interested in the powerpoint given for using themes and pictures drawn from the game and presence of gifts to students make students focus and enthusiasm about learning increase.

1. Introduction

The use of natural wealth for the necessities of life must be used wisely to preserve their wildlife to the next generation. Natural wealth is exploited largely as an energy source. Examples are the hydroelectric plants that drive generators (Putri & Maulida, 2021), and the sea-wave power plants (Satriawan, *et al.*, 2021). Because utilizing existing natural resources would save for the importation of hydro-producing minerals (Kareem, *et al.*, 2022).

Digital learning is a method employed to increase student knowledge in understanding the lesson's information and materials more interestingly. Where traditional school studies are conducted directly, which is why students are bored easily and uninterested. Using digital media, a teacher can innovate and create more to deliver lesson materials to her students (Kamila, *et al.*, 2022).

There was in previous studies about how to improve literacy from students which is badly lacking in implementation. In research on student literacy using the Internet as a source of its learning became increasingly informed as to paper. In subsequent research it was found that the use of online media in video form would encourage students to study, for example, using youtube on paper (Winarni & Rasiban, 2021). Results from other studies demonstrate the effectiveness of learning using digital media, the results show that learning to use videos is helpful and conveys material as well as described on paper (Maulid, 2021). Much more research is done at the time of the covid 19 pandemic that is so desperately needed that a powerful, innovative, and creative online media study, like the research paper (Huwaidi *et al.*, 2021).

Therefore, by doing this research that aims to expand students' knowledge of using SDA as an electrical resource and way of preserving it with digital literacy. Learning is done with an online and face-to-face discussion approach using powerpoint and simulation videos using zoom to 24 elementary school students in Perawang, Indonesia, by giving pretest and posttest. After pretesting there is done teaching materials to students to increase knowledge about the subject being lifted.

The novelty of the study is (I) that I use digital media as a delivery of materials such as powerpoint and videos; (ii) make learning interesting by giving gifts to students; (iii) know the level of students' interest in learning using digital media.

Research shows from the question given there is an increase in the student posttest scores after learning has been given. Interactions with discussion, video conferencing and asking questions to students that make students interested in rewarding the participating students answering the questions given. Students are particularly interested in the powerpoint given for using themes and pictures drawn from the game and presence of gifts to students make students focus and enthusiasm about learning increase. The study provides information that the use of videos and powerpoints can be used as learning media. But the most important thing is how to get students' attention so they can focus on learning.

2. Methods

Learning methods are done with both online and face-to-face discussions and interviews limited using powerpoint and simulation videos using zoom to 24 elementary school students in nursing, Indonesia, by giving pretest and posttest. Students cover each of the 10 issues given when prefactes and posts are done using Google form. Here's **table 1** explaining about pre-test and post-test:

Table 1. Question Pre-test and Post-test.

NO	QUESTION
1	Does that stand for SDA?

2	One example of direct SDA use is?
3	To turn the light on we need energy?
4	Use of natural resources?
5	Which does not include alternative energy is
6	One way to preserve the SDA is?
7	What makes water turn into electricity?
8	The electricity generated from the power plant is channeled in?
9	What is Indonesia's largest source of electricity?
10	What's the name of a company in Indonesia that's electrifying?

3. Results and dicussion

Based on **table 1** of the pre-test and post-test question that students have been given to test the student's understanding of 24 people of the given material, this method use digital media in its study after pre-test, and there is a percentage of results such as on **table 2**:

Table 2. Result Post-test dan Pre-test.

NO	QUESTION	Pre-test	Post-test	Gain
1	Does that stand for SDA?	91.6%	100%	8.4%
2	One example of direct SDA use is?	95.8%	100%	4.2%
3	To turn the light on we need energy?	87.5%	100%	12.5%
4	Use of natural resources?	91.6%	100%	8.4%
5	Which does not include alternative energy is	83.3%	100%	16.7%
6	One way to preserve the SDA is?	91.6%	100%	8.4%
7	What makes water turn into electricity?	83.3%	100%	16.7%
8	The electricity generated from the power plant is channeled in?	100%	100%	0%
9	What is Indonesia's largest source of electricity?	58.3%	62.5%	4.2%
10	What's the name of a company in Indonesia that's electrifying?	95.8%	100%	4.2%

The results of the discussion on the chart indicate some points:

i. To no question. 1, results show an 8.4% increase as learning videos are played and explained
ii. To no question. 2, results showed an improvement after a 4.2% posttest when the learning video was played and explained
iii. To no question. 3, results show an increase after a posttest of 12.5% when the learning videos are played and explained
iv. To no question. 4, results show an increase after an 8.4% posttest when the learning video is played and explained
v. To no question. 5, results show improvement after a posttest of 16.7% when the learning videos are played and explained
vi. To no question. 6, results show an increase after an 8.4% posttest when the learning video is played and explained
vii. To no question. 7, results show improvement after a posttest of 16.7% when the learning videos are played and explained
viii. To no question. 8, results show 0% where all the students found out on the problem
ix. To no question. 9, results showed an increase after a 4.2% posttest when the learning video was played and explained. But it is a matter that has the most to be wrong

x.To no question. 10, results showed an increase after a 4.2% posttest as the learning video was played and explained.

Table 2 shows that students in understanding learning materials are easier when using the learning videos. When the students before being given the materials used the video as a digital literacy, the student's knowledge is still vast. But after students get materials using videos and powerpoints as digital literacy, students' knowledge and understanding of the material increases. The increase coincided with the results seen on **table 2.** The resulting use of digital media in learning students can increase students' understanding of the material they will receive.

Based on another research using digital media, a teacher can innovate and create more to deliver lesson materials to her students (Kamila, *et al.*, 2022). In **figure 1**, students are listening to a online sonogram using a zoom app that displays learning materials as a digital literary form

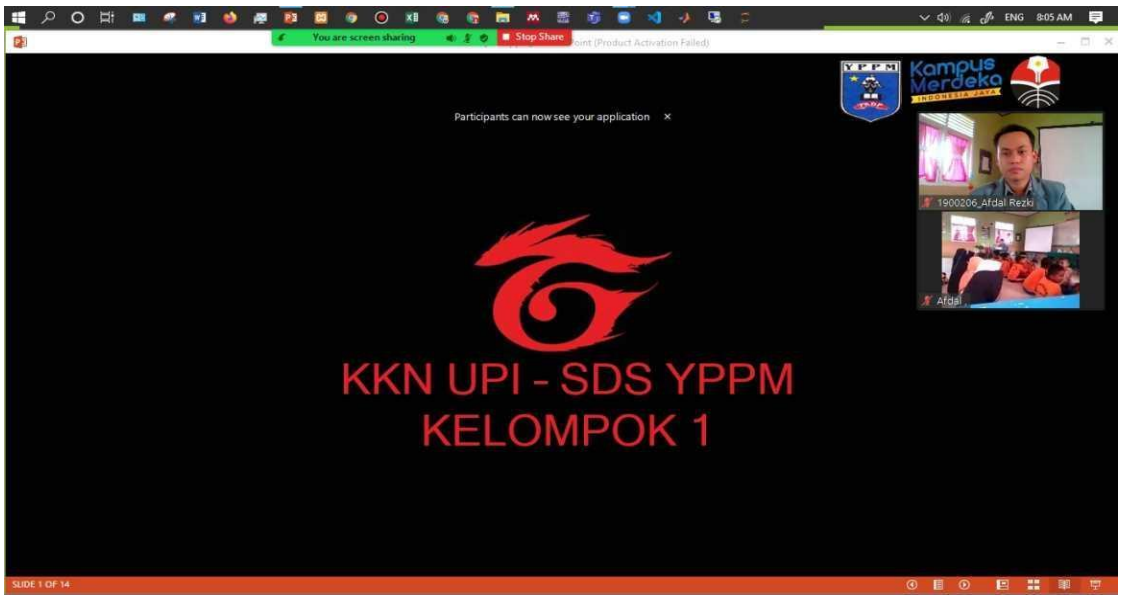

Figure 1. Digital literacy to students with using zoom.

In **figure 2**, students are watching the screen of the laptop displaying learning materials as a digital form of literacy in a limited group.

Figure 2. Digital literacy to limited group students.

4. Conclusions

The use of natural wealth for the necessities of life must be used wisely to preserve their wildlife to the next generation. Natural wealth is exploited largely as an energy source. Energy is an essential ingredient in life that is closely connected to our daily lives. Energy comes from various sources, such as electrical energy to power the appliances in our home. Power comes from a plant that taps into natural resources. In Indonesia, coal-fired power plants are still widely used as power sources. Even so, much research and development has now been done to produce electricity from more environmentally sound natural resources such as water, wind, solar heat, earth heat, and other alternative natural resources.

By performing learning using digital media can expand students' knowledge of using SDA as an electrical resource and way of preserving it with digital literacy. Learning is done with an online and face-to-face discussion approach using powerpoint and simulation videos using zoom to 24 elementary school students in Perawang, Indonesia, by giving pretest and posttest. Research shows from the question given there is an increase in the student posttest scores after learning has been given. Interactions with discussion, video conferencing and asking questions to students that make students interested in rewarding the participating students answering the questions given. Students are particularly interested in the powerpoint given for using themes and pictures drawn from the game and presence of gifts to students make students focus and enthusiasm about learning increase. The study provides information that the use of videos and powerpoints can be used as learning media. But the most important thing is how to get students' attention so they can focus on learning.

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6. Authors Note

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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