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Digital Environmental Conservation Literacy for Youth in Bojongsari Village, Indramayu Regency

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ABSTRACT

This study aims to provide literacy and also build awareness of youth in the Bojongsari village, Indramayu Regency regarding how to maintain and preserve the surrounding environment through digital media. The material was delivered online (in the network) through WhatsApp groups to 20 young men and women aged 14 to 25 years. The learning media used are short videos, educational posters and powerpoints, with pretest and posttest as a benchmark for understanding the material presented. During the lecture, the researchers also implemented a movement to reduce plastic waste for 7 consecutive days called the #TumblerChallenge and #ByeByePlastik movements. The results of this study indicate that there is an increase between the pretest and posttest scores. This can be proven from the 20 pretest and posttest questions given, there is an increase in the average score from 80.75 to 88.13. With literacy through digital media with interesting content on how to protect and preserve the environment, it can provide knowledge and raise awareness to always protect and preserve the environment.

1. Introduction

Humans and the environment are a unit that cannot be separated from one another, humans need the environment as a place to live, as well as the environment needs humans so that environmental sustainability can be perfectly maintained. The harmony of life between humans and their environment can be well maintained if there is awareness from humans themselves as leaders on the surface of the earth to maintain and care for the environment where humans are located (Effendi et al., 2018).

Individuals who understand the importance of the environment, be it the living environment or the non-living environment for human survival itself will consciously and sincerely care for and protect the environment so that their lives will be well preserved and maintained. Preserving the environment is a human effort that must be done so that survival can be well maintained. No matter how small the effort we do, the benefits for the environment are huge (Taufiq, 2014). For this reason, it is necessary to make efforts to preserve the environment so that sustainable environmental management will be realized. One way that can be done is to build awareness through digital literacy to the nation's next generation regarding protecting and preserving the environment. Literacy is a person's ability to use the potential and skills in processing and understanding information when doing reading and writing activities. Through literacy, a person not only gains knowledge, but also can use his knowledge and experience to be used as a reference in the future (Oktariani & Ekadiansyah, 2020).

Plastic waste production in Indonesia reaches 200 thousand tons/day. But, plastic waste production in Indramayu reaches more than 700 tons/day. Furthermore, the volume of waste heap per capita in Indramayu City reaches 7000.13 ml/person/day. This means that the level of waste production in Indramayu City is still high, especially in rural areas (Firmansyah et al., 2016). Indramayu is one of the districts in West Java Province. This regency is located bordering Cirebon Regency in the Southeast, then Majalengka Regency, Sumedang Regency and Subang Regency in the west.

The research conducted by (Lailia, 2014) regarding the application of a green life style or changes in environmentally friendly lifestyles such as utilizing recycled goods, saving on electricity, water, and fuel use, as well as planting and caring for trees around the living environment to preserve the environment. Then, research conducted by (Taufiq, 2014) regarding the efforts made by the community towards environmental preservation in Sukadaya Village. The results showed that the values of local wisdom that developed in the lives of the people of Kampung Sukadaya could make the natural environment of Sukadaya sustainable. The values of local wisdom in protecting the environment in Sukadaya Village are the value of environmental adaptation, the value of responsibility, the value of environmental awareness, and the value of cooperation.

Therefore, the aim of this research are raising awareness in protecting and preserving the environment through the movement to reduce plastic waste with the names #TumblerChallenge and #ByeByePlastik and also providing digital literacy regarding environmental conservation for young people in Indramayu Regency, West Java. The novelties in this research are (i) The delivery of literacy is done digitally; (ii) There is group coaching and there is a movement to reduce plastic waste that is carried out by researchers. This research is expected to have a positive impact on the environment in the future.

2. Methods

The material was delivered online (on the network) through a WhatsApp group to 20 young men and women aged 14 to 25 years in Bojongsari Village, Indramayu Regency. The learning media used were using short videos, educational posters and powerpoints that were made as attractive as possible by researchers with pretest and posttest as a benchmark for understanding the material presented.

During the lecture, the researchers also implemented a movement to reduce plastic waste for 7 consecutive days called the #TumblerChallenge and #ByeByePlastik movements. In this movement to

reduce plastic waste, all young people who are members of the WhatsApp group that have been created previously are committed to both reducing the use of plastic for what we buy and use.

There are pretest and posttest questions through google form as many as 20 questions to youth in Bojongsari Village, Indramayu as a benchmark for community understanding regarding environmental conservation. The pretest and posttest questions are shown in Table 1.

Table 1. Pretest and Posttest Questions

No.	Questions
1.	One of the reasons for protecting and preserving the surrounding environment is...
2.	Forests are habitats for a wide variety of species
3.	Humans have a moral obligation to care for the environment
4.	Health base hygiene
5.	Taking care of the surrounding environment is very detrimental to yourself
6.	Included in the measures to protect the environment are:
7.	True or false if reforestation aims to destroy forests?
8.	The way to maintain and preserve the surrounding environment is to do 3R (Reduce, Reuse, Recycle). Reusing waste that can still be used is called..
9.	Reprocessing (recycling) waste into new products is called..
10.	Reducing everything that can cause waste is...
11.	Reducing the use of crackers when shopping is included in the activity
12.	Processing of organic waste into compost is included in the activities..
13.	Using used glasses of mineral water to plant sprouts is included in the activity..
14.	The benefits of maintaining cleanliness at home are:
15.	The benefits of sweeping at home are
16.	Plastic bag waste can pollute the soil, water, and the environment
17.	The danger of plastic waste to the environment is the risk of killing animals
18.	Bringing your own water bottle from home is a way to reduce plastic waste
19.	I always bring my own water bottle when I travel
20.	I always keep the environment clean at home

Source: processed data

3. Results and Discussion

3.1 Pretest Results

Figure 1. shows the average pretest scores of 20 young men and women in the village of Bojongsari, Indramayu. The results of the pretest illustrate that the average pretest score of youth in the village of Bojongsari, Indramayu is in the pretty good category with a score of 80.75. The highest score was at number 100 which amounted to 4 people, then the lowest score was at number 35 which amounted to 1 person.

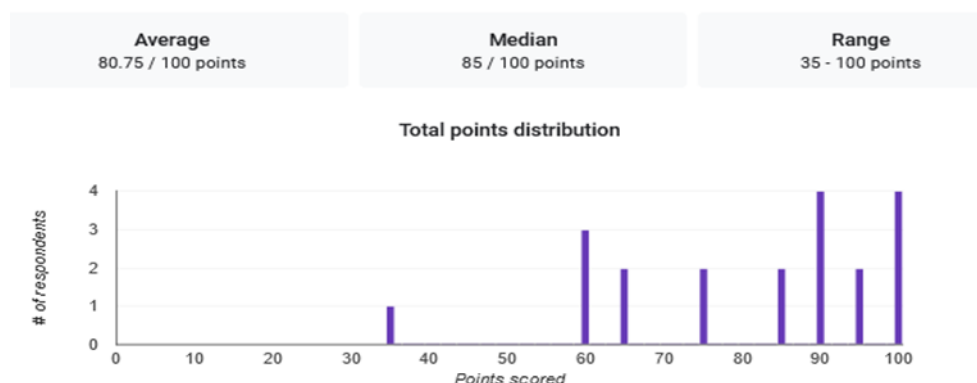


Figure 1. Pretest Results of Youth in Bojongsari Village, Indramayu
Source: (Google Forms)

3.2 Posttest Results

Figure 2. shows the average posttest scores of 20 young men and women in Bojongsari village. From the posttest results, it can be seen that there is an increase from the previous pretest results, from the average initial value of 80.75 to 88.13. The highest score was at number 100 which amounted to 6 people, then the lowest score was at number 65 which amounted to 1 person.

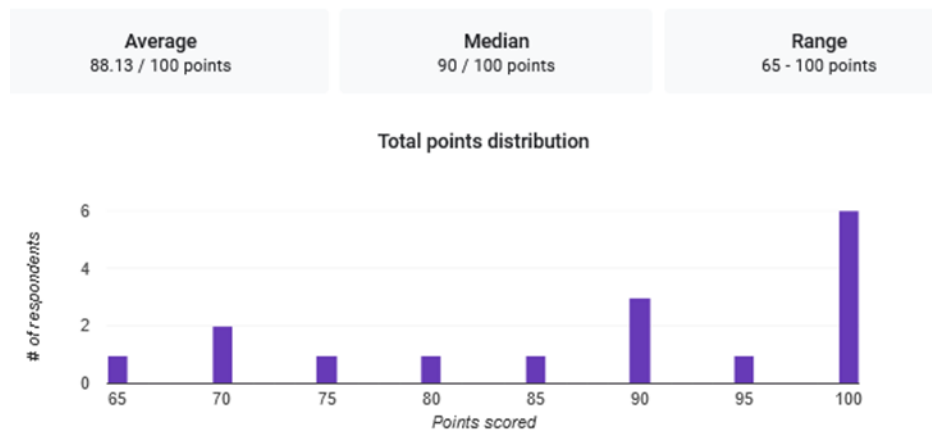


Figure 2. Posttest Results of Youth in Bojongsari Village, Indramayu
Source: (Google Forms)

3.3 Discussion

Table 2. describes the pretest and posttest questions, as well as the number of correct questions answered by young men and women in the village of Bojongsari, Indramayu

Table 2. Pretest and Posttest Questions

No	Question	Pretest (%)	Posttest (%)	Difference (%)
1	One of the reasons for protecting and preserving the surrounding environment is...	85	95	10
2	Forests are habitats for a wide variety of species	80	90	10
3	Humans have a moral obligation to care for the environment	100	95	-5
4	Health base hygiene	100	100	0
5	Taking care of the surrounding environment is very detrimental to yourself	95	95	0
6	Included in the measures to protect the environment are:	90	100	10
7	True or false if reforestation aims to destroy forests?	70	85	15

8	The way to maintain and preserve the surrounding environment is to do 3R (Reduce, Reuse, Recycle). Reusing waste that can still be used is called..	65	85	20
9	Reprocessing (recycling) waste into new products is called..	70	65	-5
10	Reducing everything that can cause waste is...	70	85	15
11	Reducing the use of crackers when shopping is included in the activity	70	80	10
12	Processing of organic waste into compost is included in the activities..	60	80	20
13	Using used glasses of mineral water to plant sprouts is included in the activity..	45	90	45
14	The benefits of maintaining cleanliness at home are:	95	100	5
15	The benefits of sweeping at home are	100	100	0
16	Plastic bag waste can pollute the soil, water, and the environment	95	100	5
17	The danger of plastic waste to the environment is the risk of killing animals	70	90	20
18	Bringing your own water bottle from home is a way to reduce plastic waste	100	100	0
19	I always bring my own water bottle when I travel	55	75	20
20	I always keep the environment clean at home	100	100	0

Source: processed data

The results of the study as seen in table 2 have increased. As for the discussion, in questions number 1 to 7 discuss the topic of "Why should we protect the environment and how to protect the environment" the results show that there is an increase in the pretest and posttest scores in numbers 1,2,4,5,6,7. This is because the material is delivered using short videos with interesting content. Video is an interesting way to distribute information to users. Video is a reference source that stores meaningful information. The results of this study are in accordance with research conducted by [Munir \(2012\)](#) that people will be more interested in presentations or applications that display videos in the form of videos.

However, in the case of question number 3 with true and false statements that "Humans have a moral obligation to care for the environment" there is a decrease between the pretest and posttest scores. In this case, the researcher assumes that the mistakes made by the respondents were due to not being careful in reading the questions.

In questions number 8 to 15 discussing the topic of "3R Methods: Reduce, Reuse and Recycle and how to maintain cleanliness at home" the results show that there is an increase in pretest and posttest scores at numbers 8,10,11,12,13,14,15. This is because the delivery of material is carried out using educational posters that are relevant to the material to be delivered, the posters are made directly by the researcher. Posters function as a means of distributing information that has the nature of inviting, giving suggestions, or introducing something to other people who see it. With attractive shapes, colors and a combination of clear shapes, images, and writings, posters can attract readers to observe and understand the messages contained therein. Thus, this study is in accordance with the results of research conducted by [Aspahani et al. \(2020\)](#) that there is an increase in the value of learning in Natural Science subjects delivered through poster media.

However, in the case of question number 9 with the question that "Reprocessing (recycling) waste into new products is called.." there is a decrease between the pretest and posttest scores. In this case, the

researcher assumes that the mistakes made by the respondents were due to not being careful in reading the questions.

In questions number 16 to 20 discussing the topic of "Plastic Hazards for the Environment" the results show that there is an increase in the number of respondents who answered correctly between the pretest and posttest in each question. This is because the delivery of material is done using powerpoint with the delivery of material done directly to respondents through the Zoom Meeting application. Powerpoint is a software specially designed to be able to display multimedia programs in an attractive manner, easy to manufacture, easy to use and relatively inexpensive. The advantages of powerpoint include being able to present text, images, films, sound effects, songs, graphics, and animations so as to give rise to strong understanding and memory, easy to revise, easy to store and efficient. The results of this study are in accordance with the results of research conducted by [Rahmawati \(2020\)](#) that the use of interactive power point media is effective on student history learning outcomes at MAN 1 Lombok Timur.

4. Conclusions

The harmony of life between humans and their environment can be well maintained if there is awareness from humans themselves as leaders on the surface of the earth to maintain and care for the environment where humans are located. To build an awareness of protecting the environment, researchers carry out activities literacy in digital environmental preservation as well as the movement to reduce the use of plastic for youth in the Bojongsari Village, Indramayu Regency. Submission of material is done online using learning media such as short videos, posters, and powerpoints that are made as attractive as possible by researchers. Based on the pretest and posttest that have been tested, this activity is said to be successful, as seen from the increase in the average pretest and posttest scores given by the researcher.

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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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