

IMPROVING ELEMENTARY SCHOOL STUDENTS' ENVIRONMENTAL CARE SKILLS IN UTILIZING PLASTIC BOTTLES AS SOCIAL SCIENCE LEARNING MEDIA

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Abstract

Garbage is a social problem that until now has become a problem that is difficult to overcome. The problem of waste is very disturbing human activities everyday. Garbage can cause the environment to become dirty, damage the beauty of the surrounding environment, cause bad odors, and become a source of various diseases that can interfere with public health. Therefore, awareness of the environment needs to be cultivated as early as possible, including at the elementary school level. This study aims to improve students' environmental care skills in terms of utilizing plastic bottle waste as social studies learning media in elementary schools. Environmental care skills are part of the character that needs to be developed because love for the environment is a manifestation of love for the motherland, and shows pride as a dignified Indonesian society. This study uses a quasi-experimental method. The population of this study were 5th grade students with a sample of 70 students consisting of 35 control class students and 35 experimental class students. The instruments used are test questions and observation guidelines. The data were processed and analyzed using the SPSS 22 application. The results showed that the comparison between the control class and the experimental class obtained that the average N-Gain value for the experimental class was greater than that of the control class. Thus, the application of learning by utilizing plastic bottles as a learning medium in social studies learning in elementary schools can improve environmental care skills.

Keywords: Environmental care; Plastic bottles; Social Studies Learning

Abstrak

Sampah merupakan permasalahan sosial yang hingga saat ini menjadi persoalan yang sulit diatasi. Permasalahan sampah sangat mengganggu aktifitas manusia sehari-hari. Sampah dapat menyebabkan lingkungan menjadi kotor, merusak keindahan lingkungan sekitar, menimbulkan bau tidak sedap, hingga menjadi sumber dari berbagai penyakit yang dapat mengganggu kesehatan masyarakat. Oleh karena itu kesadaran akan lingkungan perlu di pupuk sedini mungkin tidak terkecuali di jenjang sekolah dasar. Penelitian ini bertujuan untuk meningkatkan keterampilan peduli lingkungan siswa dalam hal memanfaatkan sampah botol plastik sebagai media pembelajaran IPS di sekolah dasar. Keterampilan peduli lingkungan merupakan bagian dari karakter yang perlu dikembangkan karena kecintaan terhadap lingkungan merupakan perwujudan cinta tanah air, dan menunjukkan kebanggaan sebagai masyarakat Indonesia yang bermartabat. Penelitian ini menggunakan metode Quasi Eksperimen. Populasi dari penelitian ini adalah siswa kelas 5 dengan sampel sebanyak 70 siswa yang terdiri dari 35 siswa kelas kontrol dan 35 siswa kelas eksperimen. Adapun instrument yang digunakan adalah soal tes dan pedoman observasi. Data diolah dan dianalisis menggunakan bantuan aplikasi SPSS 22. Hasil penelitian menunjukkan bahwa perbandingan antara kelas kontrol dan kelas eksperimen diperoleh nilai rata-rata N-Gain kelas eksperimen lebih besar dari kelas kontrol. Dengan demikian, penerapan pembelajaran dengan memanfaatkan botol plastik sebagai media pembelajaran pada pembelajaran IPS di sekolah dasar dapat meningkatkan keterampilan peduli lingkungan.

Kata Kunci: Peduli Lingkungan; Botol Plastik; Pembelajaran IPS

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Introduction

IPS learning is an integrative study that discusses human life with all its activities related to the social life of the community to form social (Hilmi, 2017; Nurfurqon, 2020; Sapriya, 2013; Wijayanti, 2015). IPS also discusses the relationship between humans and their environment. The environment in question is the surrounding environment and the community so that students know themselves as part of society (Nurfurqon et al., 2021; Utomo, 2018). Waste is one of the materials related to the relationship between humans and their environment.

Garbage is a social problem that until now has become a problem that is difficult to overcome. The problem of canoes is very disturbing human daily activities (Zorpas et al., 2017);(Chen et al., 2020). Garbage can cause the environment to become dirty, damage the beauty of the surrounding environment, cause bad odors, and become a source of various diseases that can interfere with public health (Anggalih et al., 2022; Sari et al., 2017). The amount of waste will continue to increase along with the growth of the human population. The more people, the more waste will be disposed of trash.

The existence of trash in the school environment is a necessity. Every day students use objects for various activities, resulting in the production of waste in various shapes, types, and volumes. The learning process also produces waste (Marniati et al., 2021). The teacher in the class gives assignments to students on a small sheet of paper and another wider size; when finished, the paper becomes trash (Rehmani et al., 2022). Another activity that has the potential to generate waste is snacks at school or commonly called snacks. The fact is that almost the snacks consumed by students have colorful wrappers or packages so that when the snacks are finished being enjoyed, the wrappers are trash (Jansson et al., 2020). In certain schools, the type of snack is determined by the type, ingredients, and presentation, but not all of them do, so the school environment becomes a victim (Baroah & Qonita, 2020). Therefore, it is necessary to develop a skill that can provide awareness for students in processing this waste properly. One way is by developing environmental care skills.

Environmental care skills are part of the character that needs to be developed because love for the environment manifests love for the motherland and shows pride as a dignified Indonesian society (Sulistiyani, 2022). Learning scenarios for introducing waste processing can be done inside or outside the classroom (Purwanti, 2017). The waste management introduction class is carried out through normal learning with reference to learning recommendations according to the applicable curriculum (Rarasandy et al., 2013). If seen in real terms, the teacher is the main factor in learning and determines success. Therefore the teacher must become a facilitator and partner for students instead of providing information to students. Thus the main task of a teacher is not only to provide information to students but must be trained to become a facilitator for students (Sanjaya, 2010).

The teacher's inability to develop innovative and creative learning is still evident in the learning process (Taniredja et al., 2011). Teachers do not realize that used materials such as plastic bottles, drink wrappers, cardboard boxes, and others can be used as learning media. Making teaching aids from used materials, apart from not requiring high costs, can also be adapted to the learning material to be implemented. Another obstacle is that teachers think that good and quality teaching aids are only available in stores, and if schools cannot provide teaching aids as expected, they will make teachers disappointed and lazy to make tools (Saputra & Ekawati, 2017). However, on the other hand, if a school can provide good and expensive equipment, in the eyes of the community, it will appear as if the school is one of a kind.

Many studies have discussed using waste as an alternative in the learning process. Research conducted by Arisona (2018) shows that waste management through 3R (reduce, reuse, recycle) can foster environmental care. Then, Wahyu (2022) researched cultivating a caring character for the environment through waste management in integrated social studies learning material on the potential of Indonesian natural resources for class VII students at SMPN 1 Sawoo. The result is that waste management can instill a positive character of caring for the environment. Based on previous research there is a gap in previous research, namely the limited use of waste as a learning medium, especially at the elementary school level. The purpose of this study was to reveal the increase in students' environmental care skills in terms of utilizing plastic bottle waste as social studies learning media in elementary schools.

Research Methods

The research methodology used in this research is quasi-experimental. According to (Sugiyono, 2013), the Quasi-experimental research method is "Research used to determine whether there is an effect of "something" imposed on the subject under study by looking for the effect of certain treatments on others under controlled conditions." The research design used was a non-randomized pretest-posttest control group design. The research subjects were divided into two groups consisting of the experimental group and the control group. The following is a quasi-experimental research design (Sugiyono, 2012).

Table.1

Research design

Non-randomized pretest-posttest control group design

Class	Pretest	Treatment	Posttest
Eksperimen	O	X ₁	O
Control	O	X ₂	O

Information:

O = *Pretest-posttest decision-making skills*

X₁ = learning by applying plastic bottled media

X₂ = Conventional learning

The population of this study was 5th-grade students, with a sample of 70 students consisting of 35 control class students and 35 experimental class students. The instruments used are test questions and observation guidelines. Instruments were compiled and validated by experts and the field. Then the instrument is used at the pretest and posttest stages which are then processed and analyzed using the SPSS 22 application, which refers to:

- A normality test: aims to find out whether everything investigated has a normal distribution or not. This normality test uses the Kolmogorov-Smirnov statistical technique
- Homogeneity test: aims to determine whether the samples taken from the population have the same variance or do not show significant differences. To examine the homogeneity of variance, a statistical test (test of variance) is necessary for the distribution of scores of the groups concerned.
- Hypothesis Testing: The data analysis technique used in this experimental research is t-test or t-test data analysis. The data analyzed through the t-test is realized in the form of numbers. This technique aims to determine differences in the actualization of the value of Caring for the environment between the experimental class that was given treatment and the control class that was not given treatment

Results and Discussion

As for the research results on improving students' environmental care skills in terms of utilizing plastic bottle waste as social studies learning media in elementary schools, this can be seen in the table below.

Table 2. The results of the posttest and pretest environmental care skills in the control class and experimental class

Experimental Class			Control Class		
Average	Value		Average	Value	
	Pretest	Postets		Pretest	Postets
	50.8	77.3		44.7	65.8

After the pretest and posttest data are obtained, proceed with the normality test. Based on the Kolmogorov-Smirnov normality test. The results of the pretest environmental care skills of experimental and control class students were normally distributed. Because the data is normally distributed, it is followed by a homogeneity test. The pretest and posttest of the experimental and control classes have homogeneous variance values.

To determine whether there is a significant difference between the experimental and control classes' initial abilities. The pretest results obtained a significance value of 0.062, meaning that there was no difference in the average initial ability score between students in the experimental and control classes. The posttest results obtained a significance value of 0.000, meaning that there were differences in environmental care skills between the experimental and control classes.

To see how far the students' environmental care skills in the control class and experimental class have increased is necessary to carry out further data processing using the N-gain statistical test.

Table 3. Descriptive Statistics of N-GAIN Values

Class	Sig.(2-tailed)	Significance
Experiment	0,037	0,05
Control		

Based on the table above, it can be seen that the N-gain value is 0.037. This means that there are differences in students' environmental care skills in terms of utilizing plastic bottle waste as social studies learning media in elementary schools.

After the application of learning given to the experimental and control classes, the increase in the experimental class was greater compared to the control class. This proves that utilizing plastic bottles as learning media can improve students' environmental care skills. In addition, based on the results of observations shows that students' creativity is trained in utilizing these plastic bottles. Agree with Wardhani et al. (2021), who say that using household trash/waste as a learning medium can increase children's creativity and concern for the environment. In addition, the development of environmental care skills is in line with social studies learning objectives, namely the formation of students who know, namely helping students to know themselves and their environment, skills, which include the ability to think, attitude, namely the creation of thinking behavior and social behavior, and values, namely

students. Able to apply the values contained in society, such as trust, economic value, and obedience to the government and law (Susanto et al., 2020; Utomo, 2018; Widayat et al., 2017).

It is very different if the learning process is carried out using conventional methods, where students are placed as objects that must be taught continuously, like empty glass. So far, the education system has alienated students' activities and uprooted them from their reality and the reality of the world around them. Learning is quite hard work; learning requires attitudes and intellectual abilities that can be obtained through direct practice (Sidik et al., 2020; Wulandari et al., 2022). Environmental Care Skills are a system of instilling character values, including knowledge, awareness or will, and actions to implement good values for God Almighty, oneself, others, the environment, and nationality (Timutiasari et al., 2016). This attitude of ability cannot be produced by conventional style education. This shows that the ability of students' environmental care skills must be meaningful.

Conclusion

This research shows that using plastic bottles as social studies learning media can improve students' environmental care skills. Through applying this media, students are allowed to be creative so that it can assist them in instilling character values, including components of knowledge, awareness or will, and actions to carry out the values of goodness towards God Almighty, themselves, others, the environment, and nationality.

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