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Environmentally Caring Characters in Students Through Animated Videos Assisted by the Canva Application

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Abstract

Although students' understanding of environmental protection still needs to improve, increasing their awareness of the environment is very important because environmental problems are becoming increasingly complex. Through a discussion of living things, this research aims to determine the differences in the environmentally caring character of students in the experimental class and control classes. The research used was an experiment with a quasi-experimental type (posttest-only control design). Questionnaires and observations were used as data instruments, using an experimental class of 27 students and 21 students for the control class. The Mann-Whitney test is the data analysis method used. The research results showed that the average value of experimental class data was 29.06 higher than that of control class data 18.64. In addition, the asymptotic sig value (2-tailed) of 0.010 < 0.05 was calculated based on the results of the Mann-Whitney test, indicating that the experimental class and the control class were different in their environmental care attitudes. Based on these findings, using animated videos with the help of Canva can attract attention and spark children's imagination. After watching animated videos, children can act according to what they learn and digest information easily on what they observe in animated video shows.

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INTRODUCTION

An environmentally conscious personality is crucial for teaching students to care about their environment. Caring for the environment is an effort to instill character values in students so that they have daily attitudes and behaviors that support environmental sustainability (Jayawardana, 2016). Awareness of the importance of environmental attitudes emphasizes that as the earth ages and humans' needs for nature increase, environmental problems become increasingly important (Azzet, 2016). It is hoped that through environmental character education, students will understand the importance of protecting the environment to become individuals with good physical and spiritual health (Marjohan & Afniyanti, 2018). Therefore, cultivating an environmentally caring character is not just about awareness of the environment but also actual actions to protect and preserve the environment. Low awareness of the environment will undoubtedly have a negative impact in the long term. Apart from that, low awareness of the environment can also hinder efforts to form a generation that cares about the environment.

Events that do not align with an environmentally conscious mindset also frequently transpire in educational institutions. This can be seen in students who still throw rubbish carelessly, classroom conditions that are left dirty, graffiti on tables and walls, toilets that are not kept clean, picking blooming flowers, and uprooting trees in the school environment (Jumirah et al., 2021). Due to their disregard for maintaining the cleanliness of the area surrounding the school, a large number of pupils continue to dump trash irresponsibly (Irfan et al., 2019). An indifferent attitude towards the environment in children can arise due to a lack of developing a strong environmentally caring character in them; this may not be paid enough attention by educators so learning about environmental care is only carried out briefly or casually (Masykuroh & Khairunnisa, 2022). Until now, problems related to waste have not been appropriately resolved; there is still a lot of waste that is thrown away carelessly, piled up, thrown into rivers, and dumped on the side of the road, which ultimately pollutes the surrounding environment (Widdy et al., 2023). Because many attitudes still cause pollution to the environment, a good environmental care character is needed through education in schools. Apart from these factors, there are also other factors, such as a need for more education about the environment or a lack of opportunities for students to learn about the importance of environmental protection. As proven by observation, there is still visible trash scattered around the school, and students are not aware to throw trash in the right place.

Waste is one of the big challenges facing Indonesian society today because of its significant negative impact on the environment and public health (Apriyani et al., 2020). The amount of national waste generation reached around 21.1 million tons in 2022, based on information from 202 Indonesian districts and cities collected in 2022 for the Ministry of Environment and Forestry's (KLHK) National Waste Management Information System (SIPSN). 65.71%, or 13.9 million tons, of the total garbage produced in the country can be managed effectively, while the remaining 34.29%, or 7.2 million tons, needs to be managed more efficiently (Kemenko PMK, 2023). Public awareness of the conditions of the surrounding environment still needs to be improved because many people throw rubbish carelessly, causing a lot of household waste to pollute the environment (Islamiah et al., 2022). There are various ways that individuals can increase their understanding of the environment, such as through counseling, guidance, and education, both formal and informal, from the elementary to the tertiary level (Ismail, 2021). Of course, among students, the character of caring for the environment is a crucial need because environmental challenges are increasingly complex.

One way that teachers can improve students' environmentally caring character is by using learning media. By utilizing technology to improve students' environmentally conscious character, teachers can create a more interesting learning experience, helping students understand the environmental challenges faced today and in the future, one of which is using the Canva application to create animated videos based on environmental care.

Advances in information technology and digital media are currently increasingly sophisticated, but the lack of use of interesting media

such as animated videos or other interactive applications can make learning feel monotonous and less interesting for students. This is the case with conventional learning methods. The conventional method is a teacher-centered learning method, or the teacher dominates learning activities, called the lecture method (Latief, 2016). Using learning media in the teaching and learning process is an important step to improve learning efficiency and standards. The use of interesting and creative media in learning is the reason why conventional learning is not effective or interesting for students, so as to improve student learning outcomes (Winda & Dafit, 2021). It is hoped that using learning media will have a positive impact, such as creating a more supportive learning environment, reciprocal interaction in the teaching and learning process, and achieving maximum results (Husna & Supriyadi, 2023). Most knowledge in primary school is acquired via observation and hearing (Hikmah & Purnamasari, 2017). The learning process with animated videos can help because it expands students' knowledge and understanding. Animated videos also open new insights for students, providing a deeper learning experience where students do not just see or hear (Andrasari, 2022). Therefore, it is very important to implement learning methods that are more interesting to students' current interests. This can help increase student engagement as well as improve overall learning effectiveness. The Canva application is an application that can help in creating animated video media. Using Canva is one of the teacher's strategies for increasing students' interest in learning media, which includes concern for the environment.

In today's digital era, technology can be a very useful tool in assisting learning. An example is Canva, an application that provides various features. Canva provides various features and benefits for educational purposes, including a creative, innovative, interactive, and collaborative learning tool that can improve the learning experience and make learning more fun and effective (Garris Pelangi, 2020). The benefit of Canva for teachers and students is, of course, that it is a technology-based application that provides a learning environment where teachers can use Canva features as learning tools, which of course support the teaching and learning process (Garris Pelangi, 2020). Canva is an alternative for teachers to create interesting animated video content for learning, such as animated videos based on environmental care. Therefore, it is very important to implement learning methods that are more interesting to students' current interests. This can help increase student engagement as well as improve overall learning effectiveness.

The Canva application can be used to create various visual content designs, including animated videos. Canva offers various features, such as editing images and setting layouts, templates for banners or book covers, and a multitude of stock photos and animated images. Furthermore, Canva also has a friendly user interface so that users can learn quickly, so using the Canva application can make it easier for teachers to design learning media. This application also facilitates teachers and students in carrying out technology, skills, and creativity-based learning processes. By presenting interesting materials and teaching materials, designs created with Canva can increase students' interest in lessons and motivation (Rahmawati & Atmojo, 2021). Canva is one of the applications of choice for creating animated videos of environmentally caring characters. Therefore, it is very important to create useful strategies to increase environmental awareness, as can be done by using innovative and technology-based educational approaches, such as using animated videos created with the help of the Canva application. So, this research aims to determine the significant differences between the environmentally caring character of students in the experimental class with learning using animated video media compared to the control class with conventional learning.

METHODS

Quantitative methods were used in this research. A quasi-experimental methodology was applied. Experimental research tests one treatment's effect on another in a controllable environment (Sugiyono, 2021). Posttest only control design is the research design used, namely the experimental group and control group are only given a posttest and the experimental group is given special treatment. This research involved all grade IV students at SDN 2 Mangkalaya, Sukabumi Regency,

in the 2023–2024 academic year. The sample consisted of 48 students from classes IVA and IVB, with 27 students from the experimental class IVA and 21 students from the control class IVB. The sampling technique used is saturated sampling, which is included in non-probability sampling. Saturated sampling was determined because all population members were used as samples, and the number of respondents was less than 100.

The experimental class and the control class made up the research sample. In the experimental class, treatment was given through animated videos of environmentally caring characters, while in the control class, treatment was given through books, a method usually used by teachers to develop environmentally caring characters. These studies' phases are as follows: 1) learning in the experimental class is carried out through animated videos, and in the control class through books; 2) given a posttest at the end of the lesson using a questionnaire instrument; 3) using non-parametric statistical tests to process research data.

A questionnaire, which was equipped with observations, served as the primary tool for data gathering. Before compiling the instrument, the variables in the research were translated into indicator variables. Then, these indicators serve as the foundation for gathering instrument items, which may take the shape of questions or statements. The questionnaire instrument indicators used to measure environmentally caring character include: 1) maintaining the classroom environment; 2) maintaining the school environment; 3) maintaining plants and vegetation in the school environment; and 4) organic and inorganic waste bins are available. Researchers used character measurements with a Likert scale. Data collection and attitude evaluation employ the Likert scale as a measurement instrument (Sugiyono, 2021). This Likert scale uses 4 alternative answers, namely 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree). Then, the instrument is tested for suitability by experts, which is called content validity. The purpose of this validation was to make sure the questionnaire's contents were appropriate for the goals of the research.

Prior to conducting the hypothesis test, it is important to know the homogeneity and normality of the data according to the prerequisite criteria. The distribution is regarded as non-normal if the significant value of the normality test is less than 0.05; on the other hand, if the value is larger than 0.05, the distribution is regarded as normal. The normality test using Shapiro-Wilk showed that the data did not follow a normal distribution in both the experimental and control groups, as indicated by a significance value below 0.05. After carrying out the normality test, it is necessary to carry out a homogeneity test to find out whether two or more groups have the same variance or are called homogeneous. A homogeneity test must be conducted if the significance value of the variation between two or more data samples or populations is less than 0.05, which indicates heterogeneity. Conversely, a significance value larger than 0.05 denotes homogeneity of variation between two or more data sets or populations. Based on the mean, the homogeneity test findings showed that the significance value (Sig) was 0.662, greater than 0.05. This demonstrates that the experimental and control groups' variances are comparable or homogeneous. Based on these results, homogeneous but not normal data was obtained. Thus, data analysis in this study used the Mann-Whitney test. A non-parametric test called the Mann-Whitney test is used to find the difference between the medians of two samples. This test is used because the data does not meet the normality assumption and is an alternative test to the independent t-test in parametric tests.

RESULTS AND DISCUSSION

Content validity testing takes the form of questionnaires and observation sheets of students' environmentally caring character in consultation with expert validators. This environmental care character questionnaire contains 20 statements, and for observation, it contains 8 statements. This questionnaire and observation were tested for conformity between the statement items and the grid. The validity test findings indicate that the instrument is appropriate for use. After the validity test, the researcher carried out a reliability test to find out whether the instrument was consistent. The data is reliable, as demonstrated by the findings of the researchers' reliability test. In reliability testing, the basis for decision-making is that the instrument is considered reliable or consistent if the Cronbach

Alpha value is more than 0.60. Conversely, if the Cronbach Alpha value is less than 0.60, the instrument is considered unreliable or inconsistent. Reliability tests were conducted in both the experimental and control groups. The results showed that the instrument was consistent or dependable with a value greater than 0.60.

After completing the necessary tests for normality and homogeneity, researchers employed the Mann-Whitney test to ascertain whether or not the hypothesis was accepted. The Mann-Whitney test is a non-parametric statistic that does not require a normal distribution of data. Therefore, when the normality assumption is violated, and the normality assumption cannot be applied, the independent t-test can be used as a substitute for non-parametric statistics. The hypothesis is rejected in the Mann-Whitney test if the asymptotic sig (2-tailed) value is greater than 0.05, indicating that there is no influence or difference between the experimental and control groups. Conversely, the hypothesis is accepted, and a difference between the two groups is indicated if the asymptotic sig (2-tailed) value is smaller than 0.05.

Table 1. Mean Ranks

	Class	N	Mean Rank	Sum of Ranks
Environmental Care Character	Experiment (Animated video)	27	29.06	784.50
	Control (Conventional)	21	18.64	391.50
	Total	48		

The table shows the mean rank, namely the average ranking of each group. From the table, it can be seen that in the first group (the experimental class), the mean rank value was 29.06, which was higher than the mean value for the second group (the control class), which reached 18.64.

Table 2. Test Statistics

	Environmental Care Character
Mann-Whitney U	160.500
Wilcoxon W	391.500
Z	-2.564
Asymp. Sig. (2-tailed)	.010
a. Grouping Variable: Kelas	

The asymp sig (2-tailed) value, according to the Mann-Whitney test table, is 0.010, which is less than 0.05. Furthermore, the ranking table displays the average difference value—29.06 for the experimental class and 18.64 for the control class—between the experimental and control classes. This indicates that the hypothesis can be accepted and that the averages of the experimental and control classes differ from one another. Based on the findings of the questionnaire that was subjected to a Mann-Whitney test for hypothesis testing, it can be inferred that environmentally conscious characters have an impact on animated videos created with the help of the Canva software.

The role of animated video media in improving environmentally caring characters shows that animated video media has the potential or influence to become an effective learning medium for building environmentally caring characters. Based on the results of research that has been carried out regarding students' environmentally caring characters through animated video media, the results show that there is an agreement with previous expert research that animated video media can influence students' environmentally caring characters. This is because when watching animated videos, students understand the message conveyed, and indirectly, students actively participate in the learning process. Thus, animated videos function as a medium for building student character (Widdy et al., 2023). There are opinions of experts who say the same thing: animated video media influences on improving the character of caring for the environment. This is because animated video media has strong intuitive characteristics and can increase children's attention and concentration easily in processing the information they see in animated videos, and they are able to behave according to what they see after watching animated videos (Sari & Hartati, 2023). Because animated videos have an interesting combination of visuals and narrative, they can increase students' sympathy for and attention to very important environmental issues. Unlike other media, animated videos have the advantage of presenting illustrations of the real impacts of environmental changes.

Animated video media is able to provide an easier understanding of environmental problems in a creative and fun way. Animated videos can illustrate abstract concepts, such as the impact of environmental problems, more concretely and

easily. This is in accordance with the opinion of experts that this animated video medium has the advantage of being able to make an abstract object or material concrete (Munir, 2015). This encourages students to understand better and feel the importance of protecting and cleaning the environment, enabling students to understand environmental problems well and motivating them to act positively. Animation media also has the potential to influence daily behavior and habits towards the environment. Through messages supported by inspirational characters and stories, animated videos can form a mindset and attitude that cares about the environment. For example, animated videos teach the importance of throwing rubbish in its place, cleaning the classroom environment, maintaining the school environment, sorting rubbish according to type, and taking good care of plants, so that it can encourage students to do it in everyday life and have a wider positive impact on the environment. Animated videos are able to help teachers convey learning objectives easily, such as improving students' environmentally caring character. Taking care of the environment involves preventing harm to the ecosystem and trying to remediate any environmental damage that has already occurred. This is in accordance with the opinion of experts that caring for the environment is a person's effort to care for and manage the environment around them, to preserve it so that it can continue to be enjoyed without destroying it and preserving natural resources for long-term benefits (Purwanti, 2017).

Learning can be made more engaging and comprehensible by utilizing animated video content. Animated videos can help increase students' awareness and involvement in environmental issues, as well as encourage students to take real action to protect their environment. Learning video media is very suitable for science learning because delivering material through video allows students to see a more realistic picture of the environment described than just reading and seeing it in student books (Jundu et al., 2020). This is consistent with the views of specialists on environmental education videos, who say that learning video media based on the environment around the home can increase students' learning motivation and their awareness of the environment. This happens because video media can increase students' motivation and learning character to be higher than before (Widiyasanti & Ayriza, 2018). The more available videos about the environment, the more effective the tool is in increasing students' learning motivation and fostering students' caring attitude towards the environment (Shofiyyah & Qohar, 2022). The role of learning videos is to complement the learning process (Valentina & Sujana, 2021).

Animated videos can explain the background of problems and characters in an interesting and interconnected way (Jeong, 2012). Anderson and Krathwol state that character values are irrelevant if they just give orders to children, but they must know why they are given orders (Sari & Hartati, 2023). So, this knowledge becomes the basis for children to build their character (Sulasmiwati Indah, 2022). Using animated videos to develop environmentally caring characters allows children to touch three aspects, namely the cognitive, affective, and psychomotor domains. Animated videos present various information about causes, knowledge about consequences, and knowledge about strategies (actions) for change when facing environmental problems so that children know what behavior can cause damage to the environment. Children understand nature and knowledge about strategies (actions) for change when facing environmental problems based on the animated videos they saw and hoped for themselves. Lickona's theory about character education involves knowledge about morals, moral feelings, and moral actions.

CONCLUSION

The research results and data analysis show a significant difference between the control group, which used book media, and the experimental group, which used animated video media. This is proven through the use of the Mann-Whitney test as a hypothesis test for the student environmental care character questionnaire. This is because animated videos provide a more in-depth learning experience where students do not just see or hear them; they can also understand the messages conveyed through the characters and inspirational storylines, so that they can form a mindset and attitude that cares about their environment.

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