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The Effect of Student Responses on Environmental Care Characters and Student Learning Outcomes

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ABSTRACT

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Keywords

environmental care character, student response, learning outcomes

Purpose: The purpose of this study was to find out how the results of student descriptive statistics on student response variables, environmental care character, and student learning outcomes in elementary schools on thematic subjects. The study also tried to find out the difference and influence between student responses, environmental care character, and student learning outcomes in elementary schools on thematic subjects. **Method:** This study used mixed research methods along with an explanatory research design.

Findings: From the results obtained, it is clear that students' understanding and responses affect the students' environmental care character. This has been explained in the results obtained from hypothesis testing where the resulting significance value is < 0.05 . This is also significantly related to the interests and skills of students and to the tradition of the game. **Implications to Research and Practice:** The existence of this research can be a reference for elementary school educators to improve the character of the environment and student learning outcomes through student responses to thematic subjects.

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Introduction

4
A planned effort to create a meaningful learning process for students in developing self-potential, attitudes, and cognitive skills, through a continuous learning process, is called education (Khalaf et al., 2022; Reflianto et al., 2022; Suyudi et al., 2022). In essence, integrated learning provides opportunities for students to actively explore, find concepts and principles, intact and authentic, so that students get direct experience in learning and develop the capacity of increasing the power to receive, store, and produce the knowledge they learn (Chusni et al., 2022; Ouahi et al., 2022; Santos, 2022). The current study presents how curricula have prioritized character building in students (Hidayat et al., 2022; Nor et al., 2022; Rofiah et al., 2022).

Character building at the education level in Indonesia starts from elementary school in accordance with the 2013 curriculum, through a process called thematic learning. Thematic learning is so called because learning uses themes to associate several subjects to provide meaningful, active and creative experiences for students (Pujiastuti et al., 2021; Sulistyowati & Putri, 2018; Syamsuddin et al., 2021). Such themes can be integrated with character education, for instance, concern for the environment care character education is an effort to inculcate character values in students. Students with environmental insight develop as good, honest, loving characters with a sustainable mindset, attitude, and behavior of caring for the environment (Asrial et al., 2021; Holy-Luczaj & Luczaj, 2021; Nada et al., 2021).

The lack of students' environmental awareness occurs because of their lack of active involvement in program goals to improve environmental conservation. Many scientists agree that the involvement of students or each individual is the key to successful management in environmental conservation (Efendi, 2017; Manase, 2016; Risnani et al., 2017). This kind of thematic education on conservation aims to increase students' environmental understanding and awareness, develop a positive attitude towards conservation. Conservation becomes an ideal concept that must be carried out because it helps reduce climate change that is detrimental to society (Clifford-Clarke et al., 2021; Kodama, 2017; Manaka & Maile, 2022). Conservation also has a relationship with environmental sanitation. Environmental sanitation is an effort to keep the environment healthy and clean. Sanitation is very important to improve the quality of life and the environment where sanitation is the way and effort of individuals or communities to unite and control the environment that is harmful to health and that can endanger human life (Olowoporoku, 2017; Teixeira et al., 2020; Yanti et al., 2020).

Previous research has examined the environmental care character of students and found that environmental care could involve various subjects and school members such as school principals, vice principals, subject teachers, and intra-school organizations. All these individuals can develop environmental care character in schools and integrate it with the character of younger generation (Halek et al., 2021; Pane & Patriana, 2016). Student creativity and innovation are also beneficial in maintaining the school environment, supported by intra-curricular, co-curricular and extra-curricular activities. However, previous studies have not analyzed the basic students' environmental care character which is influenced by understanding the thematic learning concepts.

The current study is therefore an update of previous research as it analyzes the influence of student responses and students' understanding of the character of students' environmental care. This research is in line with previous research where the process of student character development is very diverse. Strengthening the character of caring for the environment is achieved very effectively through positive character building activities in students. Results of previous research also show the application of ecotourism-based character education to elementary school students and is implemented in several aspects such as environment, development, and experience (Arent et al., 2020; Wiradika & Jaedun, 2019). The current research is an update from previous research, namely by measuring the effect of elementary school students' responses on the character of caring for the environment in the tribe and understanding of students' concepts in thematic learning of environmental material on the character of caring for the environment. student.

20
The purpose of this study was to determine the effect of student responses on the environmental care character of the inner tribe and students' understanding of concepts in thematic subjects on the environmental care character of elementary school students. The formulation of the research problem is:

1. How do students respond to the character of caring for the environment of the inner tribe, understanding of students' concepts in thematic learning and the character of caring for the environment of students in elementary schools?
2. Is there a difference in student responses to the environmental care character of the inner tribe, students' understanding of concepts in thematic learning and the environmental care character of students in each elementary school in elementary school?
3. Is there an influence between students' responses to the environmental care character of the inner tribe and students' understanding of concepts in thematic learning on the environmental character of students in elementary schools?

Literature Review

Elementary school students have concrete, interactive, and hierarchical learning characteristics, therefore it is more appropriate to use integrated learning (Hartono, 2017; Hasibuan et al., 2021; Winarni et al., 2018), where learning in the 2013 curriculum applies a thematic approach that demands teacher creativity to develop learning themes that include the cognitive, affective, and psychomotor and social domains of students (Fatonah & Yunianto, 2021; Rahayu et al., 2021; Simamora & Manurung, 2021). Moreover, in elementary school, thematic learning can add and improve the character of students' environmental care.

28
Basic education includes environmental content, namely the relationship between humans and their environment to protect the environment with waste management activities, saving air, keeping the area (Díaz Grijalva et al., 2021; Ilma & Wijarini, 2017; Shoaib et al., 2020). Therefore, learning about the environment needs to be taught and studied (Arik, 2021; Marpa, 2020; Merrick & Braus, 2013). Environmental learning that includes conservation and sanitation. Environmental conservation is an effort to preserve the environment and protect it. Likewise in Indonesia, in Brazil conservation is the right and obligation of all so that learning is about a valuable resource, namely nature and everything that surrounds it (Fernández et al., 2019; Sookngam et al., 2021; Thomas et al., 2019).

Environmental sanitation is an environment that has health standards ranging from infection prevention to the improvement and maintenance of mental and social well-being (Schnabel et al., 2019; Sindua et al., 2020; WHO, 2018). Sanitation in rural areas has been proven through infrastructure for example (latrines), and hygiene notices are deployed and to invest in sanitation systems has become a global development (Benova et al., 2014; Jiménez et al., 2019; Mensah & Enu-Kwesi, 2019). The environmental sanitation breakthrough targets the reduction of contamination of environmental indicators of sewage.

Method

- *Research design*

1
This study used a mixed research method with an explanatory design. Mixed Method Research is a combination of quantitative and qualitative research methods. This descriptive design as a first step collects quantitative data, analyzes it and formulates the results of the analysis. Based on this quantitative data, the qualitative data is collected through various methods, and a content analysis is performed (Creswell, 2012).

- *Research Instruments*

The instruments in this study included observation sheets for the qualitative stage and questionnaires for the quantitative stage. The observation sheets helped in understanding the concept while the questionnaire collected student responses on environmental care characters. There were 61 valid statement items on the questionnaire, which used a Likert scale to measure the responses. The scale consisted of 4 points with scores: 4 for Not very good, 3 for Not good, 2 for Good, and 1 for Very good. Each statement represented an indicator of conceptual understanding, environmental care characters, and student responses. In understanding the concept, two general indicators of the character of caring for the environment were used, namely having an awareness of preserving the environment and being grateful and caring for the environment. There were two indicators of student response too, namely beautifying classrooms and schools with plants and participating in keeping the environment clean.

- *Population and Sample*

The population of the study comprised all students of fourth grade students in elementary schools in Jambi City (SDN 120) and fourth grade students in primary schools in Muaro Jambi Regency (SDN 220). The sampling technique was purposive sampling which collected sample through snowballing technique until the desired sampled size of 50 students was reached from each school, making the total of 100 students who participated in this study. The use of snowballing sampling technique saves time, money and effort, and makes it easier to select a more relevant sample of participants, resulting in accurate and comprehensive survey results.

- *Data analysis technique*

31
A descriptive statistical data analysis technique was used which included inference tests, hypothesis testing and a few other tests like a normality test, a linearity test, and a homogeneity test. The normality test was used to determine

whether the data were normally distributed (Psaradakis & Vávra, 2020). Linearity test was used to determine whether two variables were in a linear relationship. Homogeneity test was used to determine whether several groups of research data had the same variance. The hypothesis was tested in the form of a t-test and correlation tests. The t-test was used to determine the comparison between the attitude variable and the scientific literacy variable. Correlation test determined the relationship between the variables of interest, attitude and scientific literacy of students. The SPSS version 26 was used to measure results.

Results

This section describes the results of student response to the variables of this study namely the character of caring for the environment and student learning outcomes in thematic subjects. In the first variable of character of caring for the environment, two indicators were used: general environmental care and the curious and critical care about the environment. In the variable of student learning outcomes, two indicators were used, namely the cognitive domain and the affective domain. Table 1 shows student response variables on thematic subjects.

Table 1.

Description of student response variables on thematic subjects

School	Category	Interval	F	%	Mean	Median	Min	Max
SDN 120 Jambi City	Not Very good	1.0-6.0	4	8	3.3	3.0	1.0	4.0
	Not good	7.0-14.0	8	16				
	Good	15.0-21.0	15	30				
	Very good	20.0-28.0	23	46				
SDN 220 Jambi City	Not Very good	1.0-7.0	5	10	3.4	3.3	1.0	4.0
	Not good	8.0-14.0	8	16				
	Good	15.0-21.0	15	30				
	Very good	20.0-28.0	22	44				

SDN 120 Jambi City is seen higher than SDN 220 Jambi City in the student response variables on thematic subjects, so it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City. Likewise, we see similar results in the description of the environmental care character variable on the environmental care indicator as seen in Table 2.

Table 2.

Description of environmental care character variables on environmental care indicators

School	Category	Interval	F	%	Mean	Med	Min	Max
SDN 120 Jambi City	Not Very good	7.0-12.25	6	12	3.2	3.0	1.0	4.0
	Not good	12.35-17.5	8	16				
	Good	17.6-22.75	19	38				
	Very good	22.85-28.0	17	34				
SDN 220 Jambi City	Not Very good	7.0-12.25	8	16	3.0	3.0	1.0	4.0
	Not good	12.35-17.5	10	20				
	Good	17.6-22.75	16	32				
	Very good	22.85-28.0	16	32				

SDN 120 Jambi City is seen higher than SDN 220 Jambi City in the environmental care character variable on the maintenance indicator, so it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City (Table 2).

The description of the environmental care character variable on the curious, critical, and environmental care indicators are shown in Table 3.

Table 3.

Description of environmental care character variables on indicators of curiosity, criticality, and care for the environment

School	Category	Interval	F	%	Mean	Med	Min	Max
SDN 120 Jambi City	Not Very good	7.0-12.25	4	8	3.0	3.0	1.0	4.0
	Not good	12.35-17.5	6	12				
	Good	17.6-22.75	15	30				
	Very good	22.85-28.0	25	50				
SDN 220 Jambi City	Not Very good	7.0-12.25	8	16	3.0	3.0	1.0	4.0
	Not good	12.35-17.5	7	14				
	Good	17.6-22.75	15	30				
	Very good	22.85-28.0	20	40				

SDN 120 Jambi City is seen higher than SDN 220 Jambi City in the environmental care character variable, while the indicators are curious, critical, and cares about the environment. So it can be said that SDN 120 Jambi City is once again superior to SDN 220 Jambi City.

Table 4 presents the description of student learning variables on the indicators of the cognitive domain. It can be seen that SDN 120 Jambi City is higher than SDN 220 Jambi City in the student response variable on the indicator of having beautify classes and schools with plants. So it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City in this variable as well.

Table 4.

Description of student learning outcomes on indicators of cognitive domain

School	Category	Interval	F	%	Mean	Med	Min	Max
SDN 120 Jambi City	Not Very good	10.0-17.5	5	10	3.3	3.0	1.0	4.0
	Not good	17.6-25.0	8	16				
	Good	25.1-32.5	17	34				
	Very good	33.6-40.0	20	40				
SDN 220 Jambi City	Not Very good	10.0-17.5	7	14	3.0	3.0	1.0	4.0
	Not good	17.6-25.0	9	18				
	Good	25.1-32.5	16	32				
	Very good	33.6-40.0	18	38				

Table 5 shows the description of the variables of student learning outcomes in the affective domain indicators.

Table 5.

Description of student learning outcomes variables on affective domain indicators

School	Category	Interval	F	%	Mean	Med	Min	Max
SDN 120	Not Very good	9.0-15.75	4	8	3.7	3.0	1.0	4.0
Jambi	Not good	15.85-22.5	7	14				
City	Good	22.6-29.25	18	36				
	Very good	29.26-36.0	21	42				
SDN 220	Not Very good	9.0-15.75	7	14	2.5	3.0	1.0	4.0
Jambi	Not good	15.85-22.5	7	14				
City	Good	22.6-29.25	19	38				
	Very good	29.26-36.0	17	34				

It can be seen that SDN 120 Jambi City is higher than SDN 220 Jambi City in student learning outcomes variables on affective domain indicators. so it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City.

Table 6 exhibits the normality test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City.

Table 6.

Normality test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City.

Variable	School	Kolmogorov-Smirnov		
		Statistic	Df	Sig.
Student responses	SDN 120 Jambi City	.074	50	.200*
	SDN 220 Jambi City	.075	50	.200
Environmental care character	SDN 120 Jambi City	.087	50	.200
	SDN 220 Jambi City	.088	50	.200*
Student learning outcomes	SDN 120 Jambi City	.097	50	.200
	SDN 220 Jambi City	.095	50	.200*

Based on the results in Table 6, it can be said that the data is normally distributed. The normality test was obtained by the Kolmogorov-Smoirnov test, the significance value was > from 0.05. Similarly, the homogeneity test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City was also taken, the results of which are shown in Table 7.

Table 7.

Test the homogeneity of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City

School	Variable	N	Sig. (2-tailed)
SDN 120 Jambi City	Student response	50	0.77
	Environmental care character	50	0.78
	Student learning outcomes	50	0.79
SDN 220 Jambi City	Student response	50	0.68
	Environmental care character	50	0.66
	Student learning outcomes	50	0.67

Based on the table above, it can be said that the homogeneity test has a homogeneous pattern at SDN 120 Jambi City and SDN 220 Jambi City. It is proven that the result of sig (2-tailed) is more than 0.05. The linearity test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City are described in Table 8:

Table 8.

Linearity test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City

School	Variable	N	Sig. (2-tailed)
SDN 120 Jambi City	Student response	50	0.034
	Environmental care character	50	0.035
	Student learning outcomes	50	0.036
SDN 220 Jambi City	Student response	50	0.021
	Environmental care character	50	0.022
	Student learning outcomes	50	0.023

Based on the Table 8, it can be ascertained that the linearity test is linearly distributed at SDN 120 Jambi City and SDN 220 Jambi City. It is evident that the sig (2-tailed) result is smaller than 0.05. The t-test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City are described in Table 9:

Table 9.

T-test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City

School	Variable	N	Sig. (2-tailed)
SDN 120 Jambi City	Student response	50	0.039
	Environmental care character	50	0.038
	Student learning outcomes	50	0.037
SDN 220 Jambi City	Student response	50	0.015
	Environmental care character	50	0.014
	Student learning outcomes	50	0.013

Based on Table 9, it can be found that there is a significant difference between student responses, environmental characteristics, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City. It is proven from the results of sig. (2-tailed) is less than 0.05.

Likewise, the regression test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City are described in Table 10:

Table 10.

Regression test of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City

School	Variable	N	Sig. (2-tailed)
SDN 120 Jambi City	Student response	50	0.034
	Environmental care character	50	0.036
	Student learning outcomes	50	0.038
SDN 220 Jambi City	Student response	50	0.023
	Environmental care character	50	0.025
	Student learning outcomes	50	0.027

Based on the table above, it can be said that there is an effect of student responses on environmental characters, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City. Proven from the results of sig. (2-tailed) is less than 0.05.

Results of Interviews with Students Against Inner Tribes as Characters Caring for the Environment

In-depth interviews were conducted with fourth grade students at both SDN 120 Jambi City and 220 Jambi City, and their responses about environmental care character and learning outcomes obtained by students at school were collected. The students argued that they were familiar with the character care about the environment, for example, since they were diligent in throwing garbage in good places, planting trees in the school environment and because it made them diligent and the learning outcomes obtained were also quite good in cognitive and affective domains. A few probe questions were asked about the tribe of the inner children who lived in the middle of the forest and students' opinions about them. The students said that through TV they had come to know that in the forest it was rare to find garbage only leaves that fell from trees and in the forest there was also a clean and clear river. The students thought that the forest might be guarded by tribal children in an effort to care for the environment in the same way that the students did (Kamid et al., 2021).

Discussion

The results of the data were processed using three types of tests, namely descriptive statistical tests, assumption tests, and hypothesis testing. Descriptive statistical test results were shown in the form of percentage, mean, median, minimum, and maximum value and the result was analyzed based on the five categories chosen for this study. Based on table 1, the average number of students chose Very good category with the percentage of 44% for SDN 120 Jambi City, Good for SDN 220 Jambi City with 24%. So it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City in student response variables on thematic subjects. Based on table 2, the average number of students chose the Good category with the percentage for SDN 120 Jambi City 38% Good and SDN 220 Jambi City 32% good. So it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City in the environmental care character variable on environmental care indicators. Based on table 3, the average number of students chose the Very good category with the percentage for SDN 120 Jambi City 50% and SDN 220 Jambi City 40% Very good. So it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City in the character of caring for the environment on the indicators of being curious, critical, and caring for the environment. Based on table 4, the average number of

students chose the Very good category with the percentage for SDN 120 Jambi City 40% Very good and SDN 220 Jambi City 38% Very good. So it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City in the variable learning outcomes on indicators of the cognitive domain. Based on table 5, the average number of students chose the Very good category with the percentage for SDN 120 Jambi City 42% Very good and SDN 220 Jambi City 34% Very good. So it can be said that SDN 120 Jambi City is superior to SDN 220 Jambi City in learning outcomes variables and in affective domain indicators.

The next test was the assumption test which consisted of a normality test, a homogeneity test, and a linearity test. The normality test was carried out to determine whether the data was normally distributed or not by looking at the Kolmogorov Smirnov results that were greater than 0.05. Based on table 6, the results of the normality test of student responses, environmental care character, and student learning outcomes showed for SDN 120 Jambi City which is 0.200 and at SDN 220 Jambi City is 0.200. It can be said that the results obtained are > 0.05 so it can be said that the data is normally distributed. The second assumption analysis test was about linearity test which also produced similar results. The next test was the homogeneity test carried out to find out whether the data was homogeneous or not with the results of $\text{sig} > 0.05$ then the data had a homogeneous pattern. Based on table 7, the results of the homogeneity test of student responses, environmental care character, and student learning outcomes are at SDN 120 Jambi City which are 0.77, 0.78, 0.79 and at SDN 220 Jambi City are 0.68, 0.66, 0.67, hence it can be said that the results obtained > 0.05 so it can be said that the data is homogeneous. Based on table 8, the results of the linearity test of student responses, environmental care character, and student learning outcomes are at SDN 120 Jambi City 0.034, 0.035, 0.036 and at SDN 220 Jambi City 0.021, 0.022, 0.023 it can be said that the results obtained > 0.05 so that it can be said that the data is linearly distributed.

Finally, the hypothesis test was conducted, namely through t-test and regression test. The first hypothesis test, namely the t-test, was carried out with the aim of knowing the comparison between two schools by comparing three variables. Based on table 9, the results of the t-test of student responses, environmental care characters, and student learning outcomes are at SDN 120 Jambi City namely 0.29, 0.028, 0.027 and at SDN 220 Jambi City are 0.16, 0.015, 0.014. so it can be said that there is a comparison between SDN 120 Jambi City and SMAN 10 Jambi City. It is proven from the results of sig. (2-tailed) is less than 0.05. In the second hypothesis test, which is about the correlation test, it is carried out with the aim of knowing the relationship between two schools and the relationship between three variables. Based on table 10, the results of the regression test of student responses, environmental care characters, and student learning outcomes are at SDN 120 Jambi City which are 0.034, 0.036, 0.038 and at SDN 220 Jambi City are 0.023, 0.025, 0.027 so it can be said that there is an influence between responses students towards the character of caring for the environment and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City. It is proven from the results of $\text{sig. smaller than } 0.05$.

This study agrees with previous research conducted by (Arent et al., 2020; Wiradika & Jaedun, 2019), where the process of student character development is very diverse. Strengthening the character of caring for the environment is achieved very effectively through activities to build positive character in students. The results of previous research also showed the application of environmental care for ecotourism-based character education in elementary school students and is implemented in several aspects such as

environment, development, and experience (Arent et al., 2020; Wiradika & Jaedun, 2019). The current research is an update of previous studies, namely by measuring the effect of elementary school students' responses to the environmental care character of the inner tribe and students' understanding of concepts in thematic learning material on the environmental care character of students.

7
Based on the formulation of the problem in the study, it was concluded that SDN 120 Jambi City had student responses, environmental care characters, and student learning outcomes were superior to SDN 220 Jambi City. There is a comparison of student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City on thematic subjects. There is an influence between student responses to the character of caring for the environment on student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City on thematic subjects.

Conclusions, Recommendations and Implications

Results based on a preliminary study conducted by researchers at SDN 120 Jambi City and SDN 220 Jambi City, it was found that the students' environmental care character was still low. The results reveal that students still often threw garbage out of place. Students often bought drinking water or snacks with plastic packaging, which is difficult to decompose. The plastic causes environmental pollution, so it takes an effort to improve environmental conservation in order to keep the environment healthy and clean. The effort is to improve the environmental care character of students at the elementary school level on thematic subjects.

The urgency of its implementation in this research is to remember that the environment is a major factor in the growth and development of every living thing on earth, it is important for every individual to have a concern for the environment, sanitize and conserve the environment. The conclusion of this study is that SDN 120 Jambi City has student responses, environmental care characters, and student learning outcomes that are superior to SDN 220 Jambi City. There is a comparison between student responses, environmental care character, and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City on thematic subjects. There is an influence between student responses to the character of caring for the environment and student learning outcomes at SDN 120 Jambi City and SDN 220 Jambi City on thematic subjects.

This study has a limitation, namely it only compares schools. However, there is no test with gender comparison between female and male students so that it can be known specifically the student response variables, environmental care character, and student learning outcomes. The researcher recommends conducting further research by generalizing on the level of education and the variables used. The researcher also suggests to conduct further research to compare student response variables, environmental care character, and student learning outcomes based on gender and also to conduct research at the elementary school level.

The implication of this research is significant since this study can be a reference for elementary school educators to improve the character of environmental care and student learning outcomes through student responses to thematic subjects. By integrating sanitation and environmental conservation into these thematic subjects. In the short term,

this research is useful and can be used as a benchmark to improve student response, concern for the environment, and student learning outcomes, especially at the elementary school level. In long term, this research can be used as a benchmark to conduct further research on student responses, environmental care character, and student learning outcomes.

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PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15