



The Relationship Between School Culture and Pro-Environmental Behavior Among Senior High School Students in Yogyakarta

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Abstract: Currently, students are expected to have the ability to solve environmental problems, especially in everyday life, which is known as pro-environmental behavior or action. One strategy for teaching students' problem-solving skills is to increase pro-environmental behavior. This study aims to obtain empirical data or facts that are actually true and reliable regarding the relationship between school culture and pro-environmental behavior in students. This research is motivated by the existence of a school culture that is useful for strengthening pro-environmental behavior for students. The method used in this research was a quantitative method with a correlational research design. The sample in this study amounted to 30 students because the distribution of values would be closer to the normal curve. The results of the study have a positive correlation level of .976 with very strong correlation results. Thus, this study concludes that there is a significant relationship between school culture and pro-environmental behavior with a positive correlation. This study implies that it can be used as a reference material in developing school culture to improve pro-environmental behavior.

Keywords: school culture, pro-environmental behavior, environmental care

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INTRODUCTION

The role of the teachers as one of the crucial human resources in the school organization will significantly determine the success of achieving the goals of the school organization. One of the main reasons for this statement is that the success of teaching and learning at school will create a qualified human resource. Teachers are ever considered the most critical agents in the school system, for they are the main actor who deals with students as an educational object. Moreover, the students today called the millennial generation are no less creative than their teachers in any kind of understanding of the materials and technology (Febriantina et al., 2020). Organizational culture, which forms the basis of the concept of school culture, has become popular in scientific management literature focusing on organizational performance, productivity, managerial effectiveness, and organizational behaviors (Shebli & Alhosani, 2022).

An important topic in the area of school culture is the search for evidence on whether the key elements of a strong, positive school culture are linked to sustainable school improvement and the subsequent application of positive experiences in practice. Currently, researchers from several countries are paying significant attention to leadership in education settings. As stated, improving student achievement has become the focus of policymakers in many jurisdictions. Effective school leaders have a strong, positive influence, directly or indirectly, in improving schools and their outputs (Eger & Egerova, 2023). A positive school culture can create a culture of quality, such as a culture that always supports excellence, a culture of discipline, a culture of togetherness, and other cultures that are oriented toward the quality of education (Rifma & Meiztari, 2018).

A school culture strongly affects not only individuals but also group decisions and actions in the organization. Moreover, school culture ensures a sense of order and reduces employees' uncertainty and dissatisfaction. Thus, if school culture is not properly handled, it affects safety, the extent of social problems in schools, and students' academic achievement at large. School culture should always be monitored to remain positive. If school culture is deteriorating, school leadership needs to change the culture of the school. Studies focused on hygiene factors, mostly ignore cultural aspects regardless of the existing diverse cultural background in the schools. Schools are dynamic environments, complex and peculiar social organisms held together by their unique culture. Understanding cultural dimension is essential (Abdulahi, 2020). According to Susilo et al. (2018), school culture is the dominant values embraced by a school. It is the philosophy underlying the school policies for all the school elements and components in carrying out the duties. Furthermore, it also signifies the

assumptions or beliefs held by the school members. In addition, school culture is defined as the patterns of basic assumptions, a system of values, beliefs, and customs as well as various products of schools that encourage the school members to cooperate based on trust which invites all members to contribute to new ideas and provide opportunities to renew the schools. This school culture is the spirit of creating a conducive school climate. Therefore, schools must have distinctive characteristics that can be identified through the values they hold, the attitudes they have, the habits they display, and the actions shown by all school personnel who form a particular unit of the school system. Watson warns us that if the culture is inhospitable to learning, then student achievement may decline (Retnasari et al., 2023). Another opinion says that principals are responsible for building a pervasive culture of teaching and learning in each school (MacNeil et al., 2009).

School culture should not appear as static "but a self-perpetuating cycle which reflects the collective ideas, assumptions, and beliefs that reflect each school's identity and standard behavioral outcomes" (Raban & Dhurumraj, 2023). The lack of attention to school culture has an adverse effect on the character-building of students due to the low productivity and effectiveness of the school. State "school culture has an impact on the accomplishment and behavior of students, as well as the motivation, productivity and job satisfaction of teachers. The cultural substance will provide support and identity to the school and will form a framework for learning activities. A positive school culture can create a culture of quality, such as a culture that always supports excellence, a culture of discipline, a culture of togetherness, and other cultures that are oriented towards the quality of education. This is also supported by the results of research conducted by Ali et al. (2016) which state that "the highest level of school culture will help achieve the effectiveness of schools at the highest level" (Rifma & Meiztari, 2018).

Perceived school culture is defined as the values, attitudes, and behavioral norms that are created and shared by school members, including students, teachers, and other staff. Based on the JD-R model of work engagement, perceived school culture significantly influenced the development of student behavior and teachers' attitudes toward the job. For example, research suggested that positively perceived school culture, characterized by cooperative interpersonal relationships, sharing of responsibilities, innovations, inspiring vision, and challenging mission, promoted students' motivation to learn, which in turn improved their academic achievement and engagement in schools. By contrast, negatively perceived school culture, characterized by damaged interpersonal relationships, vague goals, lack of innovation, and inefficiency, was associated with low achievement scores and low school engagement among students (Fu et al., 2022).

One of the things related to a good school culture is that it can maintain the school environment in the quality of school improvement. Environmental awareness is knowledge that helps one to acquire the values, skills, and knowledge necessary to live sustainably. Environmental awareness plays an important role in developing a society that is well-informed about environmental issues to become responsible citizens in caring for the environment. Environmental stewardship is understanding environmental issues and the steps to be taken to realize good practices toward environmental conservation. Environmental awareness is essential in environmental management and the protection of living organisms. Environmental awareness translates into environmentally conscious behavior such as pro-environmental behavior. Environmental awareness can have a greater impact if applied in real life (Mkumbachi et al., 2020).

Many environmental challenges are rooted in human actions, so researchers and policymakers believe that these problems will be reduced through the promotion of pro-environmental behavior. The emergence of this idea in the 1960s-1970s led to an increased interest in environmental studies among the academic and scientific community (Shafiei & Maleksaeidi, 2020). Pro-environmental behavior is individual behavior that is carried out intentionally to reduce environmental damage and preserve the environment. Pro-environmental behavior refers to behavior that promotes environmental protection regardless of whether the behavior is done intentionally or unintentionally to protect the environment. Defined pro-environmental behavior as individual behavior that has less negative impact on the environment and more benefits in protecting the environment from damage. Indicators of pro-environmental behavior are intention, need, and possibility (Mkumbachi et al., 2020).

Preventing environmental problems can be achieved if all humans behave more environmentally friendly. To achieve this, environmental education plays an important role. Environmental education is an important way to address environmental issues to protect and preserve the environment. The focus of environmental education is to foster people to understand, value, and apply sustainable pro-environmental behavior. Through environmental education we can learn ways to address environmental problems, preventing more damage to our environment, and we can also learn how to protect and preserve the environment (Djuwita & Benyamin 2019). In line with the increasing public awareness of the need to preserve the environment. Leaders with pro-environmental behavior are the ones with environmental leadership and will take environmentally friendly policies (Constantinus et al., 2021).

Studies in psychological factors of pro-environmental behavior have found the existence of a causal relationship between individuals' environmental awareness with pro-environmental behavior. Behavioral change

theory assumes that individuals with strong environmental values know the impacts of their behavior on the environment. To justify how environmental awareness leads to pro-environmental behavior, the theory of behavioral change is used. The theory of behavioral change holds the notion that when people are well informed about environmental issues, they become more aware of human-induced environmental problems which in turn motivates them to live a sustainable life. Knowledge builds attitudes, beliefs, and eventually the desired behavior (Mkumbachi et al., 2020). Measuring the environmental perceptions of children has assumed increasing significance since it correlates with their pro-environmental behavior and indicates the need for research into future environmental education. pro-environmental behavior refers to actions that prevent harm to or safeguard the environment (Nuryadin et al., 2023).

In essence, environmental problems stem from human behavior. The change of behavior is a necessary condition to improve the environmental situation. Pro-environmental behavior plays an important role in decreasing the waste of natural resources, reducing the emission level of pollutants, and weakening environmental damage, thus being an effective way to deal with environmental problems and protect environmental sustainability. Therefore, the study of pro-environmental behavior has become one of the fields with both research value and research prospects and has attracted the attention of scholars from many disciplines (Tian & Liu, 2022). Human behavior is the main driver of environmental degradation and climate change. Preserving our standard of living requires behavior change, and the most successful attempts will be informed by a solid understanding of what causes behaviors that affect the natural environment (Lange & Brick, 2021). Environmental Behavior Intentions can also be caused by environmental physics understanding. The intention to behave in protecting the environment arises from knowledge from school. The understanding gained will encourage a person's intention to environmental behavior (Desnita et al., 2023).

This study aims to examine the relationship between school culture and pro-environmental behavior to know and understand environmentally sound schools as an effort to build environmental character so that students love their school environment. Thus, love for the environment, effectiveness in learning, and competency standards can be better. The novelty that is targeted is that concern for what is happening to the earth and our environment is important to reduce the adverse effects on the environment and this can be achieved through a school culture that creates environmental education, especially for the younger generation. Of course, environmental education is important to be given to every generation, but it is most important to be taught to the younger generation. The younger generation is the generation that will face the environmental problems inherited from previous generations (Djuwita & Benyamin, 2019).

METHODS

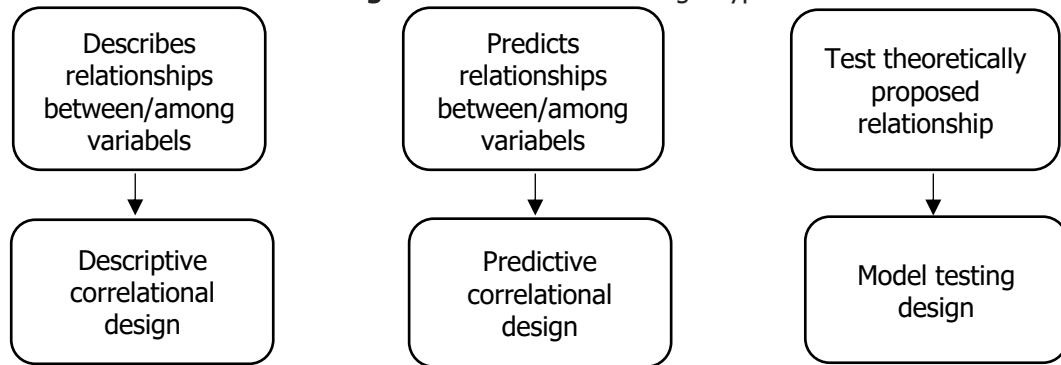
The researcher sought to understand the relationship between two variables: school culture and pro-environmental behavior and therefore a correlational research design was chosen. Correlational research (Aryanto et al., 2023) design is generally used when researchers want to study whether one variable is related to another and if there is a relationship, what is the level and direction of the relationship. In the correlational research design, the approach chosen by this research is quantitative research which focuses on numerical and objective data. This research requires a larger sample for better generalization and in a quantitative approach, results are obtained based on a more representative sample. The correlational research design investigates the relationship between variables without the researcher controlling or manipulating any of the variables (Miot, 2018).

Correlation reflects the strength and/or direction of the relationship between two or more variables. The direction of a correlation can be either positive or negative. Correlational research refers to a non-experimental research method that studies the relationship between two variables with the help of statistical analysis. Correlational research design does not study the effects of outside variables on the variable under study. In cases where conducting experimental research is unethical, correlational research can be used to determine the relationship between 2 variables. For example, when studying humans, conducting experiments may be considered unsafe or unethical. Therefore, choosing correlational research would be the best option. The sample in a correlational study should be randomly selected from a target population and described in detail. This research was conducted in senior high schools in the Cangkringan sub-district (Rusu et al., 2021).

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in this study totaled 30 people, where the minimum number of 30 was close to the normal curve. This research was conducted in senior high schools in the Cangkringan sub-district, Yogyakarta Province.

Figure 1. Correlational Design Type



Makowski et al. (2020) argue that researchers generally use correlational designs when they are not sure whether variables are related to each other, when they think variables are related to each other but are not sure how they are related, or when they think variables are related to each other, but do not know how strong the relationship is. All correlational designs demand a conceptual framework or explanation of why researchers think these variables are related to each other and how. The basic assumptions of this design are that the variables exist in the population, the sample represents the population (probability sampling), the variables can be measured accurately and there is no manipulation of the variables. The purpose of this study is to determine the relationship between school culture and pro-environmental behavior of SMAS in Cangkringan District, Yogyakarta Province, the study used the product moment analysis technique with the help of SPSS26 for Windows.

RESULT AND DISCUSSION

This research was conducted at SMAS in Cangkringan District, Yogyakarta Province with several tests carried out, namely the data normality test can be seen using the Kolmogorov-Smirnov normality test. The normality test is an attempt to determine whether the variable data approaches the normal distribution population or not. The purpose of the normality test is to test whether the data being analyzed is in the form of a normal distribution or not. The normality test is also carried out as a prerequisite for determining the type of statistics to be used in processing the data of a study to determine the relationship of the variables studied. In statistics, the Kolmogorov-Smirnov test (K-S test or KS test) is a non-parametric test of a continuous equation, a one-dimensional probability distribution that can be used to compare a sample with a reference probability distribution (one-sample K-S test) or to compare two samples (two-sample K-S test). The normality test in this study was carried out with SPSS26 with the basis for decision making is if $\text{sig} > 0.05$ then the variable is said to be normally distributed. The results of the analysis can be seen in the following table:

Table 1. Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		30
Normal Parameters^{a,b}	Mean	0,0000000
	Std. Deviation	648922548
Most Extreme Differences	Absolute	0,162
	Positive	0,160
	Negative	-0,162
Test Statistic		0,162
Asymp. Sig. (2-tailed)		.043 ^c

The results of the normality test using the Kolmogorov-Smirnov model, the acquisition of a significant value of 0.043. Because the sig value > 0.05 , it can be concluded that the two variables have a normal data distribution because the sig value > 0.05 . The linearity test aims to determine whether the two or more variables tested have a linear relationship or not significantly. This test is usually used as a prerequisite in linear correlation or regression analysis. The basis for decision-making in the linearity test is if the probability value > 0.05 then the relationship between variables (X) and (Y) is linear. The results of the analysis can be seen in the following table:

Table 2. Linearity Test Results

		ANOVA Table					
			Sum of Squares	df	Mean Square	F	Sig.
School Culture and Pro-environmental Behavior	Between Groups	(Combined)	25412,700	25	1016,508	8,049	0,028
		Linearity	24696,675	1	24696,675	195,553	0,000
		Deviation from Linearity	716,025	24	29,834	0,236	0,990
	Within Groups		505,167	4	126,292		
	Total		25917,867	29			

The linearity test results in the deviation from the linearity row obtained a sig value of 0.990. Because the sig value > 0.05, it can be concluded that the two variables have a linear relationship. Analysis of Variance (ANOVA) is used to test the distribution or variation of means in the explanatory variables simultaneously or together whether it has significantly explained the variation of the variables described. With a significance level ($\alpha = 0.05$) and the value of the degree of freedom (df) for the numerator (df_1) with the formula $df = k-1$. then determine the degree of freedom (df) for the denominator or df_2 with the formula $df_2 = n-k$. where k is the number of all variables (independent + dependent) and n is the amount of data. In this study the value of $k = 2$ and $n = 30$. then the value of df_1 in this study is $df_1 = 2-1 = 1$ and $df_2 = 30-2 = 28$ so that by looking at the F table value with $df_1 = 1$ and $df_2 = 28$, the F table value is 4.20. The results of the analysis can be seen in the following table:

Table 3. Linear Regression Test Results Of X and Y Variables

		ANOVA^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24696,675	1	24696,675	566,256	.000 ^b
	Residual	1221,191	28	43,614		
	Total	25917,867	29			

F count with F table from the table above it is known that the value of F count is 566.256. So it can be concluded that $F \text{ count} > F \text{ table}$ ($566,256 > 4.20$), meaning that there is an influence of organizational culture variables (X) on pro-environmental behavior variables (Y). After carrying out statistical tests ranging from validity, reliability, normality, linearity, and regression tests, then conduct a correlation test with the Pearson product-moment model. The results of the analysis can be seen in the following table:

Table 4. Correlation Test Results

		Correlations	
Culture		Culture	Environment
	Pearson Correlation	1	.976**
	Sig. (2-tailed)		0,000
Environment	N	30	30
	Pearson Correlation	.976**	1
	Sig. (2-tailed)	0,000	
	N	30	30

In Table 4 above, the significant value of the school culture variable and pro-environmental behavior is 0.000, meaning that $0.000 < 0.05$, thus the school culture variable and pro-environmental behavior have a relationship or correlation. In this table we can also find out that the Pearson Correlation between school culture with pro-environmental behavior is 0.976 with the degree of relationship between these two variables which is very strongly correlated and the form of the relationship between these two variables is positive which means that the higher the school culture, the higher the pro-environmental behavior. This is in line with Schoen's opinion that school culture is student-centered activities and how students' needs are considered in schools (Yli-Panula et al., 2022).

The problem to be addressed in this study is whether there is a significant positive relationship between school culture discipline and pro-environmental behavior. Based on the results of data analysis, there is a positive correlation between school culture and pro-environmental behavior in high schools in Cangkringan District, Yogyakarta Province. The results of the correlation analysis between school culture variables and pro-environmental behavior showed a correlation of 0.976 with a significance level of 5%. With the results of this positive correlation, it can be stated that the higher the school culture, the higher the pro-environmental

behavior, and vice versa, the lower the school culture, the lower the pro-environmental behavior with the amount of its effectiveness contribution. Based on the results of the correlation analysis between school culture and pro-environmental behavior, the r -value is 0.976 with $p = 0.000$ ($p < 0.05$), indicating that there is a significant positive relationship between school culture and pro-environmental behavior. This supports the hypothesis that there is a significant positive relationship between school culture and pro-environmental behavior.

These results prove the theory of school culture according to (Liu, 2023) School culture is an important carrier of educating people, and all teachers and students are the object of educating people. The "carrier" acting on the "object" seems to be a microscopic process, but its action process is extremely complex and has its own unique mechanism of action. Because the relationship between the two variables is close and strong, it can be seen that school culture is one of the factors that encourage the growth of habits that are adjusted to whether or not a culture is applied in a school, specifically pro-environmental behavior in high school students in Yogyakarta. A positive correlation where the better and higher the frequency of application of school culture carried out by students, will be followed by an increasing awareness of students consciously or unconsciously in carrying out activities that provide benefits to the environment.

CONCLUSION

This study found that there is a positive and significant relationship between school culture and pro-environmental behavior. Based on this calculation, it can be interpreted that school culture has a strong relationship with pro-environmental behavior, or the more effective the application of school culture is carried out, the higher the students' pro-environmental behavior will be. This finding is a representation for the world of education that the value of school culture has been realized in schools in Yogyakarta Province so that there is protective behavior to create a healthy environment. Thus, students are accustomed to doing activities that minimize environmental damage and provide benefits to the environment consciously or unconsciously in everyday life. Based on these results, it can be concluded that if the implementation of school culture is implemented better, the pro-environmental behavior of high school students in Yogyakarta Province will be better.

REFERENCES

- Abdulah, B. A. (2020). Determinants of teachers' job satisfaction: School culture perspective. *Humaniora*, 32(2), 151.
- Aryanto, A., Revolis, M., Oribe, Y., & Yo, H. (2023). Application of digital image correlation method in RC and FRC beams under bending test. *Geomate Journal*, 24(101), 118-125.
- Constantinus, A. L., & Haryanti, K. (2021). A study of local wisdom, social interest, and pro-environmental behavior in improving environmental leadership performance. *Journal of Southwest Jiaotong University*, 56(5).
- Desnita, D., Usmeldi, U., & Hidayat, H. (2023). Students' environmentally-friendly behavior: The mediating effect investigation. *Jurnal Pendidikan IPA Indonesia*, 12(1).
- Djuwita, R., & Benyamin, A. (2019). Teaching pro-environmental behavior: A challenge in Indonesian schools. *Psychological Research on Urban Society*, 2(1), 26.
- Eger, L., & Egerová, D. (2023). The relation between leadership and expected results from the educational process within school culture. *Journal of Elementary Education*, 16(1), 1-19.
- Febriantina, S., & Aliyyah, R. R. (2020). How school culture and teacher's work stress impact on teacher's job satisfaction. *International Journal of Learning, Teaching and Educational Research*, 19(8), 409-423.
- Fu, C., Zhao, Z., Wang, H., Ouyang, M., Mao, X., Cai, X., & Tan, X. (2022). How perceived school culture relates to work engagement among primary and secondary school teachers? Roles of affective empathy and job tenure. *Frontiers in Psychology*, 13, 878-894.
- Lange, F., & Brick, C. (2021). Changing pro-environmental behavior: Evidence from (un)successful intervention studies. *Sustainability*, 13(14), 1-5.
- Liu, C. (2023). School culture educating people: Realization path and action mechanism. *Open Journal of Applied Sciences*, 13(3), 321-326.
- MacNeil, A. J., Prater, D. L., & Busch, S. (2009). The effects of school culture and climate on student achievement. *International Journal of Leadership in Education*, 12(1), 73-84.

- Makowski, D., Ben-Shachar, M. S., Patil, I., & Lüdecke, D. (2020). Methods and algorithms for correlation analysis in R. *Journal of Open Source Software*, 5(51), 2306.
- Miot, H. A. (2018). Correlation analysis in clinical and experimental studies. *Jornal Vascular Brasileiro*, 17, 275-279.
- Mkumbachi, R. L., Astina, I. K., & Handoyo, B. (2020). Environmental awareness and pro-environmental behavior: A case of university students in Malang City. *Jurnal Pendidikan Geografi*, 25(2), 161-169.
- Nuryadin, A., Subagiyo, L., Sulaeman, N. F., Dinurrohmah, S., & Rahmawati, P. S. (2023). Investigation of students' pro-environmental behavior around Indonesia's new capital city. *International Journal of Evaluation and Research in Education*, 12(2), 594-600.
- Prasojo, L. D., Habibi, A., Yaakob, M. F. M., Mukminin, A., Haswindy, S., & Sofwan, M. (2019). An explanatory sequential study on Indonesian principals' perceptions on ICT integration barriers. *Electronic Journal of e-Learning*, 17(1), 1-10.
- Raban, F., & Dhurumraj, T. (2023). The influence of school culture on teacher development during COVID-19. *International Journal of Research in Business and Social Science*, 12(3), 461-473.
- Retnasari, L., Hakim, A. P., Hermawan, H., & Prasetyo, D. (2023). Cultivating religious character through school culture. *International Journal of Educational Qualitative Quantitative Research*, 2(1), 27-34.
- Rifma, R., & Meizatri, R. (2018). Vocational high school culture. *Journal of Educational and Learning Studies*, 1(1), 23-28.
- Rusu, M., Ghendov-Mosanu, A., & Sturza, R. (2021). Correlation analysis of experimental data applied in the study of the extraction process. *Journal of Applied Mathematics and Physics*, 9(12), 3019-3031.
- Shafiei, A., & Maleksaeidi, H. (2020). Pro-environmental behavior of university students: Application of protection motivation theory. *Global Ecology and Conservation*, 22.
- Shebli, A. A., & Alhosani, M. (2022). The role of school leadership practices in school culture: A systematic literature review. *Journal of Positive School Psychology*, 6(3), 6655-6663.
- Susilo, M. J., Kartowagiran, B., & Vehachart, R. (2018). Modeling of cultural effect on school autonomy at religion-based school in Indonesia. *Jurnal Pendidikan IPA Indonesia*, 7(3), 364-375.
- Tian, H., & Liu, X. (2022). Pro-environmental behavior research: Theoretical progress and future directions. *International Journal of Environmental Research and Public Health*, 19(11), 6721.
- Yli-Panula, E., Jeronen, E., & Mäki, S. (2022). School culture promoting sustainability in student teachers' views. *Sustainability*, 14(12), 7440.