

THE CONTRIBUTIONS OF DISCIPLINE AND ENVIRONMENTAL KNOWLEDGE ON CLEAN BEHAVIOR OF STUDENTS IN PUBLIC ELEMENTARY SCHOOL KAMPUNG BARU PARIAMAN, WEST SUMATERA

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ABSTRACT. This study aims to obtain a description of the contribution of discipline and environmental knowledge to the clean behavior of students in public elementary school of 19 Kampung Baru, Pariaman. A quantitative approach was used in this research. The sample of this research were the students in grade I-VI at public elementary school and taken by a simple random sampling of 81 students. The data were collected by asked to fill in the questionnaires. Results showed that: (1) There was a contribution of discipline (X_1) to students' clean behavior (Y) equal to 27.70%, (2) There was a contribution of environmental knowledge (X_2) to students' clean behavior (Y) equal to 53.00% And (3) There was a contribution of discipline (X_1) and environmental knowledge (X_2) to the students' clean behavior (Y) of 54.20%. The results suggest that the discipline (X_1) and environmental knowledge (X_2), either individually or jointly contributes to students' clean behavior (Y). This provides some explanation as to why principals and teachers in school should monitor the students' discipline and environmental knowledge. This knowledge can support the clean behavior of the surrounding environment. On the other hand, it is also advisable for students to always improve their own discipline and environmental knowledge.

Keywords: behavior, clean, elementary students

PRELIMINARY

The school aims to prepare the students for the values and competencies that might be needed in the form of knowledge, attitudes, and skills. Schools as educational institutions play an important role in train the character early on, during childhood phase. However, the school can also be the place of disease transmission if not appropriately managed.

Children in the school age tend to get a various disease. The emergence of different disease that often affects children in the school age associated with clean behavior. Hence, teaching the children about clean behavior in school is an absolute necessity.

A good character must be built in everyone so that they will have responsibility for their behavior. The school has an important role in the development of children personality, for example in their way of thinking, acting and behaving. Clean behavior is one of the awareness that owned by individuals, families, and groups to the personal and environmental hygiene.

Clean living habits that taught since earlier in life indeed accompanied by a disciplined character that owned by the students. Discipline will help the students to build their behavior, develops their attitude of responsibility that includes increasing awareness which is useful for improving the quality of themselves. Individuals who are disciplined will perform a task with orderly and organized manners and follow the applicable rules. Apparently, it will give a positive impact because it can make their lives well-organized.

According Purbantara (2013) behavior is a form of real action. The theory states that behavior is a given action or response to a stimulus to achieve a goal or to survive their life.

Skinner, a behavioral expert, in Putra (2002), distinguishes the behavior becomes natural behavior (innate behavior) and operant behavior. Natural behavior is a behavior that brought since the organism was born, in the form of reflexes and instincts, whereas operant behavior is a behavior that is formed through the learning process.

In the development of behavior, it is influenced by internal and external factors. According to Soekidjo (2003) the internal factors that affect the development of behavior are the knowledge, intelligence, perception, emotion, and motivation, whereas the external factors are both physical and nonphysical include climatic, human, socio-economic, and cultural.

Roger in Soekidjo (2003) revealed that before people acquire new behavior, there was an on-going process that happens to the people. Awareness was the first thing that arises in the process, where the person is aware towards the upcoming stimulus, then their interest will focus toward the stimulus. Next, evaluation, the people will evaluate whether the forthcoming stimulus was good for them, then try to do things according to the stimulus, and finally adopt the new behavior following the knowledge, awareness, and his attitude toward the stimulus.

Torndike in Razali (2007) explains that the stimulus will cause a particular response. The intensity of the relationship between the stimulus and response can be induced through repeated practice.



Thus, something that learned later (transfer of training) will influence subsequent behavior.

Environmental factors are the most significant factor in determining health status. Therefore, the environmental knowledge is important. Environmental education can increase understanding and awareness of society in the search for solutions and prevention of environmental problems. Some good habits regarding the clean behavior (i.e., taking out the trash to its place, using the toilet and cleaning it after use, etc.) are important to train as early as possible because they will implement this behavior into later in life.

SD Negeri 19, Kampung Baru, which is in Pariaman, a city in West Sumatera. This school is one of the favorite elementary schools which has obtained an A level in the accreditation status. As one of the institutions of formal education, this school is very influential on students' formation. The total of class in this school are 13 class, where the total students in the academic year 2016/2017 as many as 408 people.

Green Open Space such as trees, plants, living pharmacy, composter, and the trash bin is environmentally friendly infrastructure that is already available in this school. The intensity of using the facilities as well as their environmental knowledge can encourage and improve their behavior to have a cleaner life.

The behavior is essentially goal-oriented. Behavior is motivated by a desire to obtain a particular purpose. Some people with a high motivation to act can achieve certain goals that they want.

Individuals who have the knowledge, skills and positive attitude towards environment usually have the intention to have a responsible behavior. The clean behavior that taught since they were young could help them to have a better response to improving their health.

The development of thinking and behavior are critical in the age of 6-12 years old. Children at 6-7 years old usually entering the elementary school and then the school environment will be full of children that in their developmental process (i.e., physic, social and emotional)

School-aged, especially elementary school, usually called as the time when the intellectual is start to develop. This school-aged time is the right time to teach them about the clean behavior because children will be easier to train at this school-aged time.

According to Heriyatni (2013), cleanliness is a human endeavor to maintained a healthy environment sustainably. We will never reach the cleanliness without an awareness of every individual, society, and community to maintain cleanliness.

The Ministry of Health of the Republic of Indonesia explained that the definition of clean behavior is a set of behaviors that practiced based on consciousness as a result of learning that makes a person able to help themselves, which aims to realize

a clean conduct public health. Clean behavior is part of a program that has been launched by the government, which is "Perilaku Hidup Bersih dan Sehat (PHBS)" or clean and healthy behaviors.

According to Wibowo (2013), the clean behavior is a series of various forms of behaviors/actions towards the waste management. For example, behavior that pollutes the environments as an irresponsible action or actions to maintain the environment as the responsible one.

Clean behavior can be expressed as an act or respond to an environmentally responsible behavior in order to be maintained the environment. Individuals who have the knowledge, skills, positive attitude towards the environment and towards pro-environmental behavior, typically tend to have responsible behavior.

People did not realize that they are part of this universe so that the environmental crisis is not yet a common concern. Indeed, humans are part of the environment. Both interact in an ecosystem.

Discipline does not happen by itself, but it must be generated from the actions of the people. Thus, it is important to train or teach people about the discipline, so they can regulate and control himself in order to do something that is socially acceptable to the environment and avoiding behavior that could damage the environment.

The emergence of self-consciousness in environmental disciplines related to the integration of environmental education that began at early age. Correspondingly, Filisyamala Martsiswati and Suryono (2016) finds that the discipline needs to be taught as early as possible to the students, so they will be able to behave by the rules in the community.

According to Perkins in Yanuarita (2011), discipline is a responsibility of a person to organize, manage, and control their behavior and attitude, so that their existence does not harm others and oneself. According to Masruroh (2015), the discipline is obedient to the commands and rules in which individuals can develop the ability to discipline ourselves as one of the characteristics of individual maturity.

According to Soegeng Prijodarminto in Prasetyo (2008), the discipline can be considered as conditions that created and developed through a series of behaviors that indicate the values of obedience, loyalty, and regularity that have become a part of behavior in life. Behavior was created through a process that guided by the family, education, and experience.

Discipline can be expressed as a conscious behavior of an organism to be obedient, submissive, and accountable to the rule of order. In the application of discipline, it needed to make rules and regulations. Discipline is one of the supporting factors in improving the quality of education/school.

According to Von Glaserfeld in Kumurur (2008), knowledge is a collection of facts, and it was

considered as a process of formation (construction) that is evolving and changing. Our knowledge is a construction of our thinking. He emphasized that knowledge is not an imitation of reality.

According to Syamsuri Razali (2007), knowledge is an object that belongs to a science. Hamilton in Razali (2007) states that the domain knowledge is essential for the formation of a person's actions.

Knowledge is not a description of the world, but the knowledge is always the result of a cognitive construction of reality through one's activities. Knowledge about the world is a human creation that is constructed from experience.

According to Jumadil (2015), environmental knowledge is already integrated into education curriculum that implements Adiwiyata program in their school. Environmental Education is the way to improve the knowledge, awareness, and skills of the communities in sustaining the environment.

Most of the knowledge gained through the eyes and ears. One's knowledge has different intensity and level. Soekidjo (2003) argues that knowledge or cognitive domain is important for the formation of a person's behavior. In the cognitive domain, there is six level of knowledge, namely knowledge, comprehension, application, analysis, synthesis, and evaluation.

According to Indonesian's Law No. 32 in 2009, The environment is the unity of objects, powers, condition, and human including their behavior that will influence the situation itself and other living creatures. Thus, environmental knowledge can be defined as everything that is associated with the environment after the direct contact with nature through the instrumentality of the senses and lead to an immediate impression in people's mind.

An effort to maintain and develop clean and healthy habits carried out in an integrated manner through educational programs and services at the school implemented with the School Health Unit. The School Health Unit purpose to improve the quality of education and learning achievement of learners to develop hygienic behavior and healthy life.

According to Afandi (2013) the common goal of environmental education by UNESCO in Tbilisi conference in 1997 is as follows:

1. To help explain the problem of awareness and concern about the interrelationship between economic, social, political, and ecology in urban and rural areas
2. To give a chance to everyone to develop the knowledge, values, attitudes, commitment, and skills needed to protect and improve the environment
3. To create a new pattern of behavior in individuals, groups, and society towards the environment.

Hiswari (2007) suggests that the level of understanding of the environmental knowledge is the results of an environmental learning process to the students' attitudes toward the environment. Environmental education is expected to be embedded and transformed on the students.

Discipline and environmental knowledge of the students are two factors that influence the success of the school in creating and maintaining the environment to keep it clean.

The current study is the contribution of discipline and environmental knowledge toward the clean behavior of students in the elementary school in Pariaman.

The problem statement from the current study is how much the contribution of discipline and environmental knowledge toward the clean behavior of students in SD Negeri 19 Kampung Baru, Pariaman.

METHOD

This research was conducted with a quantitative approach that belongs to the type of survey research.

As a causative research, this study was aimed to reveal their relationship and the contribution of variables that exist. As these variables include the clean behavior of students (Y), discipline (X₁), and knowledge of the environment (X₂). In this research, as well as interviews to sharpen the results that have been obtained using a questionnaire instrument.

The population was students in SD Negeri 19 Kampung Baru, Pariaman. Proportional random sampling was used to gather the sample of the study and as a result, there were 81 students that participated in this study.

To obtain the data from the variables, the researchers used questionnaires in the form of multiple choice where validity and reliability of the tools already met. A correlation and ANOVA were conducted to analyze the data using the SPSS for Windows Version 23.00. interview method was also conducted in order to get the deeper result and these results were reported in a descriptive or qualitative form.

DISCUSSION

Based on the results of the normality test, a significant probability of students' clean behavior (Y), discipline (X₁), and environmental knowledge (X₂), for 0.200, 0.181 and 0.056, respectively. These results suggesting that the distribution of data is normal (as seen in Table 1).

As shown in Table 2, The first hypothesis was analyzed by simple regression correlation analysis. The results showed that the correlation coefficient between discipline (X₁) and students' clean behavior (Y) was significantly correlated [$r_{xy} = .526$,

$p < .0001$]. Thus, there was a significant correlation between students' clean behavior and discipline with $.277$ coefficient determination (27.70% of contribution).

Table 1.
Normality Test Results Summary

Variables	Significance	α (Alpha)	Information
Behavior Clean (Y)	.200	0.05	Normal
Discipline (X ₁)	.181	0.05	Normal
Environmental Sciences (X ₂)	0.056	0.05	Normal

Table 2.
Correlation Test Results Summary The relationship between X₁ with Y

Correlation	Correlation Coefficient	Probability Significance	Coefficient of Determination	Relationship X ₁ to Y
X ₁ with Y	0,526	0,000	0,277	There Relations

These results suggest that the discipline remained significantly related to the variable Y, means that improvement of the students' discipline will improve their clean behavior as well.

The second hypothesis analysis was shown in Table 3. The results showed that the correlation between environmental knowledge (X₂) and students' clean behavior (Y) was significantly

correlated [$r_{xy} = .728, p < .00$]. Thus, there was a highly significant correlation between variable X₂ and Y with .530 (53% of contribution) toward the students' clean behavior.

This suggests that environmental knowledge remained significantly related to the variable Y. The increasing of environmental knowledge will increase the students' clean behavior.

Table 3.
Correlation Test Results Summary The relationship between X₂ with Y

Correlation	Correlation Coefficient	Probability Significance	Coefficient of Determination	Relationship X ₁ to Y
X ₂ with Y	0.728	0,000	0.530	There is a relationship

The third hypothesis results were presented in Table 4. The correlation between discipline and environmental knowledge was highly significantly correlated [$r_{xy}=.737, p =.0001$]. Therefore, there was a significant correlation between discipline and

knowledge of the environment together with a coefficient of determination .542 (54.20% of contribution) towards the clean behavior of students.

Table 4.
Multiple Correlation Test Results Summary

Correlation	Correlation Coefficient	Probability Significance	Coefficient of Determination	Contributions X ₁ to Y
X ₁ and X ₂ with Y	0.737	0,000	0.542	Significant

Table 5.
Test Results Summary F

Model	Sum of Squares	Df	Mean Square	F	Significance
Regression	8515.196	2	4257.598	46.234	0,000
Residual Total	7182.828	78	92.088		
	15698.025	80			

Based on the results of the F test, $F(2,80) = 46.234, p < .0001$. Thus, the multiple linear regression equations were significant and could be used to express the magnitude of the relationship between independent variables and the dependent variable in this study.

The results of interviews revealed that the disciplinary of the students in keeping the environment clean is already good enough. It can be

seen from the observations of the cleanliness of the school, as there was not much trash scattered or deliberately discarded by the students are not in place, and the cleaning schedule goes according to the plan, Friday cleaning day is held every week by the school.

However, to develop the students' disciplinary behavior is not easy. Students should be familiar and care for the environment.



The formation of students' disciplinary was influenced by the existence of the rules at school. The interviews result suggesting that students are happy to undergo the existing regulations, especially regarding the cleanliness. There were many obstacles that students' experience while developing the disciplinary. Thus, the principals may create solutions to make punishments or penalties for the students who are coming late or break the rules. Rewards and Punishments can be a motivation for the students to implement the disciplinary.

To achieve the implementation of discipline in the students' behavior, the awareness of the students is necessary. The support and cooperation from school to facilitate the implementation of current knowledge that owned by the students. Teaching and guiding the students to care about the environment should be a priority.

The students expressed their complaint through the interview about the lack of facilities and infrastructure in the school environment also become obstacles to maintain the sanitary condition. For example, the lack of waste management and the lack of toilet hygiene because there was not enough water.

In connection with the above findings, the need for particular attention to all parties to improve student disciplinary in order to enhance the students' clean behavior. With the increase of discipline, the students will develop better response on the social environment that will ultimately impact on the comfort and safety of the school environment.

Furthermore, the results of interviews conducted with the students also revealed that the environmental knowledge of the students in maintaining the environment cleanliness was excellent. Students have a good understanding of the environment because the school has been integrating the environmental education in teaching materials.

Theories related environmental knowledge that gained since childhood will help in increasing the awareness of the importance of a clean environment because it is also closely related to the health of students in the school. Behavior that is based on understanding will be last longer compared to behavior that is not based on knowledge.

A good knowledge about the environment will improve student awareness of the importance of environmental hygiene so that a clean environment can be maintained. A Cleanliness environment leads to a healthy life of the students. Health, in this case, cannot refer to aspects of treatment but instead refers to the prevention aspect, so it needs to be appropriately addressed so as not harmful to health.

Students' knowledge in environmental hygiene would be useful in waste management. For example, separate the garbage (organic and inorganic), maintaining the cleanliness of the bathrooms and clean water usage. With the increased knowledge of the environment, the behavior of

students will be better for the environment that will ultimately impact on the comfort and safety of the school environment.

The student's behavior should be controlled in order to achieve a clean environment. The role of schools in helping the implementation of the clean behavior of students is crucial so that when the children are in school, teachers need to pay more considerable attention to them, either directly through teaching them in the class or by the application.

CONCLUSIONS, SUGGESTIONS, AND IMPLICATIONS

Based on the above results it can be concluded as follows:

1. There was a positive and significant contribution to the discipline with the clean behavior of students. Student discipline was one of the factors that influence the clean behavior of students. Based on the results, students have a pretty good control to keep the environment clean. Students are still under the supervision of teachers so that they're disciplinary of clean behavior were not optimal yet.
2. There was a significant and positive contribution to clean behavior and environmental knowledge with students. Environmental understanding of student was one of the factors that influence the clean behavior. Based on the results, the students have a good experience in protecting the environment to keep it clean. The integration of environmental knowledge in the teaching material given by the teacher adds confidence the students to behave in a clean environment.
3. There was a positive and significant contribution to discipline and knowledge of the environment with the clean behavior of students. Increased discipline and knowledge about the environment can improve the behavior of students towards a clean environment so that the environment can be protected and have a positive impact on health.

Based on the results, here are some suggestions.

1. For teachers can be used as study materials to improve hygiene behavior of students with attention to discipline and knowledge of the environment.
2. For principals and teachers to continually monitor the environment of discipline and knowledge of the students because it can support clean their behavior towards the environment.
3. For students to be able to improve discipline and knowledge possessed environment continually.
4. For further research to conduct another investigation with other variables, so the variables that affect the behavior of the students can be identified clearer.



As the theoretical implication, the discipline and environmental knowledge can be used as a benchmark to improve the clean behavior of students. Student awareness as the leading actor in maintaining the cleanliness of the school should be supported and facilitated in order to train the students to become more aware.

The implications of this study indicate that the discipline and knowledge of clean environment affect the behavior of students. To improve the clean behavior, students need to maintaining discipline and knowledge possessed environment.

The practical implications of this research were students, try always to keep the environment clean, reminding each other of the importance of a clean conduct to be applied, as well as the students have new experiences to broaden their environment.

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