

Full Length Research Paper

The effects of green schooling knowledge level and intensity of parental guidance on the environmental awareness of the early age student

Sihadi Darmo Wihardjo^{1*}, Sofia Hartati¹, Yuliani Nurani¹ and Agus Sujarwanta²

¹Faculty of Education Science, State University of Jakarta, Indonesia.

²Post Graduate Program Muhammadiyah University of Metro, Metro Lampung, Indonesia.

Received 17 December, 2015; Accepted 9 January, 2017

This study was conducted to determine the effect of green schooling knowledge and parents guidance on the environmental awareness of the students. This study used a quantitative approach with the ex-post facto method. This study was conducted in Muhammadiyah 41 elementary school in East Jakarta at July to December on the 2nd semester of the academic year of 2014/2015. The data were collected from a sample which consisted of four third grade elementary school students drawn randomly. The data were analyzed using two ways ANOVA. The results showed that: 1). There were significant differences of green schooling knowledge level on the student's environmental awareness; 2). There were significant differences in the intensity of parental guidance on the environment to the student's environmental awareness, and 3). There were significant differences in green schooling knowledge level and the intensity of parental guidance on the environment to the student's environmental awareness. Both variables might be considered to improve the student's environmental awareness.

Key words: Green schooling knowledge, intensity of parental guidance, environmental awareness.

INTRODUCTION

Environmental awareness as a part of education could not be ignored by the school. The educational institution as the primary stakeholder is obliged to improve the environmental awareness of students since they were on early stage in the school. The patterns of human consumption was affected by continuously growing of modern life, also affecting the environment, because exploiting the natural resources is the only way to fulfill the human subsistence that grows massively, in the other side also disrupting the environment sustainability.

The decrease of environmental carrying capacity is indicated by the number of natural disasters which is caused by human behavior. Forest fires, floods and landslides that occurred in Indonesia are the evidence of environmental awareness crisis. To prevent further damage, it is necessary to do an early anticipation through environmental education in the schools since an early age.

From the viewing point of science, awareness is a part of social psychology which adopts the cognitive domain.

*Corresponding author. E-mail: sihadiwihardjo@gmail.com.

Awareness is generated through feelings and actions which influence each other. Awareness could be observed from the attitude and behavioral changes after getting various information. Environmental awareness is influenced by the personality and the value system where they live, therefore: 1). Every individual is a part of the environment, so that, its existence and sustainability are affected by the environment they live; 2). Human beings must become active agents who act as the ecosystem advisers in managing natural resources, and 3). Every individual reserve the right to enjoy the good and healthy environment, preserve the good and healthy environment, and also obliged to prevent the damage and pollution to the environment.

Concerns about the environment are very important for today's life, or in the future. Nowadays, the lack of environmental awareness among us has caused many environmental damages. There is still hope of fixing it by improving environmental awareness among young children. Schools have an important role to play in teaching the children on the concept of environment. It seems like impacting on them knowledge on the green environmental concept (green schooling). The value system is adopted by the family, in this case, the student's parents, could be urged to provide guidance to students, and, it could complete the behavioral construction function, which is performed at school. Both factors became important in providing environmental education in order to improve environmental awareness of the students at an early stage.

According to Anderson (1972: 34), awareness is a conscious mental process due to a dominant and obtrusive impulse or stimuli. Another opinion expressed that the human's awareness is not a value, but rather as a domain or complementary values. Awareness, in this case, assign a value of the environment, not to the people, so the main point of human awareness is the domain, where all the individuals and cultures complement and holds the value to each other (Gilmour and Duck, 1980: 14).

According to Bennett (1997: 145), there is environmental awareness on the individual knowledge, feelings and tendencies. The comprehension of environmental awareness is determined by the amount of experience and emotional connection acquired from learning, whether formal, non-formal, and informal.

According to Miller (1993: 335), environmental awareness is a human way to conserve nature in order not to be bothered or harassed by others, who are not responsible. The concept of the environmental awareness originated from the changes in society's view of the environment. This point of view recognized as a new paradigm, that assumes 1). The supply of natural resources that provided by the earth are not infinite; 2). Humans and nature must be connected harmoniously; 3). Each individual has a responsibility for solving

environmental problems; 4). Humans are the part of nature, not the master of nature, because of that, when humans destroy nature they also destroy themselves.

To instill the values of this new paradigm, we need an environmental education whose its implementation could be done by giving the green knowledge schooling. The main purpose of environmental education is to instill: 1). Personal or social groups awareness and sensitivity to the environment; 2). Understanding and comprehension of the environment and its problems; 3). Awareness of the environment and emerge the desire to contribute to environmental protection; 4). The benefits of the expertise in identifying and resolving the environmental problems; and 5). The opportunity for participating in the environmental problems solving (Michael, 1990: 272-273) show in Figure 1. The environmental awareness model that could explain how the information could trigger the environmental positive attitude and behavior could be explained as follows:

This model illustrates that the information and knowledge of a person or a group will determine whether a person has a concern or otherwise does not care for the environment. Furthermore, a high level of environmental awareness will most likely push the individual into portraying positive behavior that could support environmental sustainability. On the contrary, if a person's concern for the environment is at a low level, it is difficult to expect he could be prosecuted for positive behavior towards the environment.

Environmental awareness, in the context of this study, is influenced by knowledge of green schooling and parental guidance. According to Suriasumantri (2005: 104), knowledge is everything that we know about a particular object which is directly or indirectly and act as mental repertoire which enriches human cognition. The contents of knowledge itself was mentioned by Davenport and Prusak (1999: 1), as a collection of human experiences, values and related information which bind to the object which is used as fundamental to receive new information and experiences, to evaluate information and experiences which furthermore are applied in a person's minds. As described by Thio (1994: 4), the benefits of knowledge covering a wide range of purposes: decision-making, valuation, imagination, problem-solving, classification and consideration, and all the above mentioned are a mental process.

All aspects of life that could be reached by the human senses, could be considered as an object of knowledge. Everything that is known as knowledge does not occur accidentally, but it is obtained through the process and methods which are developed by humans according to their necessity. As stated by McKnight (2011: 5), human being must have two basic concepts in order to interact with each other, namely: knowledge and mental skills. Knowledge is comprehension of the object through the mind consciousness. Meanwhile, the brain skills are the

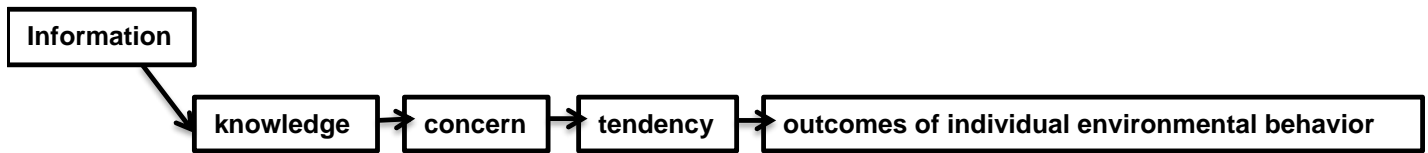


Figure 1. Model of environmental awareness.

ability of a person to be able to influence others in the organizational structure. Skill is also the manifestation of knowledge, and as a form in the implementation process. According to Bloom et al. (1984: 62-67), knowledge is included in the cognitive domain and it has nine aspects: facts, rules, relations between objects, methodologies, classifications, principles, generalizations, theories and structures.

It has been tested by human experience that information in the knowledge could be used to solve specific problems. Therefore, knowledge is also known as a source of answers to the questions that are found in life and could be used as a tool to solve various problems. Knowledge as a form of human mind power wealth which is is very important and useful. Not only to answer the question that always comes into the human minds, but it also helps people to solve their problems.

Parents' guidance factors are related to early childhood period, in the view of Ki Hadjar Dewantara, where children included in the age range of 0-7 years were specified into Windu I category. Children included in this period are called childhood or garden child. The most suitable education for them is giving example and habituation. The parent's guidance to their children is more general. This counseling intends to instill the values that are positive to the child, including the environmental concerns and awareness. The values of the environmental concerns and awareness embedded in the child are expected to be a provision of further activity both in the home and at school.

According to Newcomb (1968), as quoted by Khan (1984: 33), people prefer to like rather than dislike others. This is because a person will feel more safe and comfortable when you are in an environment that consists of people who have a similar character with him. According to Arellano (1973) as quoted by Partowisastro (1983: 235), the presence of good guidance is characterized by 1). Efforts to help individual to achieve the optimal development; 2). Assistance is given in a democratic situation, not the authoritarian situation; 3). Assistance is given to determine the objectives that must be achieved, as well as, how to achieve it by the development of the individual; and 4). Assistance is provided to increase the ability of the individual so that he can make decisions and solve his own problems. Guidance in this context emphasizes providing

assistance to children in order to increase their awareness of the environment, especially at home.

METHODS

This study was conducted in Muhammadiyah 41 Elementary School in East Jakarta from July to December in the 2nd semester in the academic year of 2014/2015. The method used was Ex Post Facto method with the 2x2 research design. The dependent variable of this research was the environmental awareness on the other side, as the independent variables were green schooling knowledge (X_1) and parental guidance (X_2). Samples were taken randomly and grouped into two groups based on their green schooling knowledge and intensity of parental guidance, the upper group consists of 10 students and the lower groups also consist of 10 students. Overall, the samples analyzed in this study consist of 40 students. The data were analyzed by using two ways ANOVA to test the hypothesis. Significance level (α) used in this study was 0.05.

RESULTS

Environmental awareness on the group with high level of green schooling knowledge

Environmental awareness was expressed by the score collected from 20 respondents after answering 30-grain instruments. The lowest environmental awareness score in the group of high-level green schooling knowledge (A_1) was 63 and the highest score was 75. The group range was 12 and the average (mean) was 68.20. From the 20 samples analyzed, distribution of the data could be tabulated in the frequency distribution as in Table 1.

As shown in Table 1, the distribution of score compared with the price mean = 68.20 are in the 2nd class interval (66-68) which consist of 9 people (45.00%). This frequency is also the largest, this means, environmental awareness profile on the learners with a high level of green schooling knowledge were moderate.

Environmental awareness of the group with low level of green schooling knowledge

Environmental awareness was expressed by the score obtained from 20 respondents after answering 30-grain instruments. The lowest environmental awareness score in the group of low-level green schooling knowledge (A_2)

Table 1. Distribution frequency of environmental awareness of the group with high level of green schooling knowledge.

Class interval	Lower limit	Upper limit	Absolute frequency	Relative frequency (%)	Cumulative frequency (%)
63 – 65	62.5	65.5	5	25.00	25.00
66 – 68	65.5	68.5	9	45.00	70.00
69 – 71	58.5	71.5	1	5.00	75.00
72 – 74	71.5	74.5	4	20.00	95.00
75 – 77	74.5	77.5	1	5.00	100.00
Total	-	-	20	100.00	-

Table 2. Distribution frequency of environmental awareness of the group with low level of green schooling knowledge.

Class interval	Lower limit	Upper limit	Absolute frequency	Relative frequency	Cumulative frequency (%)
57–59	56.5	59.5	2	10.00	10.00
60–62	59.5	62.5	1	5.00	15.00
63–65	62.5	65.5	6	30.00	45.00
66–68	65.5	68.6	11	55.00	100.00
Total	-	-	20	100.00	-

was 56 and the highest score was 68. The group range was 11 and the average (mean) was 64.80. From the 20 samples analyzed, distribution of the data could be tabulated in the frequency distribution as shown in Table 1.

As shown in Table 2, the distribution of score when compared with price mean = 64.80 are in the 3rd class interval (63-65) by 6 people (30.00%) which is classified as a medium category. The largest frequency is at 3rd interval class (66-68) which consist of 11 people (55.00%). This means, the environmental awareness profile of learners group with high level of green schooling knowledge is relatively high.

Environmental awareness on the group with high intensity of parental guidance

Environmental awareness was expressed with a score obtained from 20 respondents after answering 30-grain instruments. The lowest environmental awareness score in the group of low-level green schooling knowledge (B₁) was 57 and the highest score was 75. The group range was 18 and the average (mean) was 67.70. From the 20 samples analyzed, distribution of the data was be tabulated in the frequency distribution (Table 3).

As shown in Table 3, the distribution score when compared with the price mean = 67.70 are in the 3rd class interval (65 - 68) by 8 people (40.00%), which is classified as a medium category. This frequency was also the highest. This means, the environmental awareness

profile of learners group with high intensity of parental guide are relatively moderate.

Environmental awareness of the group with low intensity of parental guidance

Environmental awareness was expressed with a score obtained from 20 respondents after answering 30-grain instruments. The lowest environmental awareness score in the group of low-level green schooling knowledge (B₂) was 57 and the highest score was 68. The group range was 11 and the average (mean) was 65.15. From the 20 samples analyzed, distribution of the data was be tabulated in the frequency distribution (Table 4).

From Table 4, the distribution of score when compared with the price mean = 65.15 are in the 3rd class interval (63-65) by 7 people (35.00%), which is classified as a medium category. The largest frequency score was in the 4th class interval (66 - 68) for 11 people (55.00%). This means, the environmental awareness profile of the group with low intensity of parental guidance was relatively high.

The results hypothesis test

Requirements analysis test

Normality of the population was tested with the Kolmogorov-Smirnov using the SPSS 16.0 for Windows; the result is summarized in Table 5. Based on the

Table 3. Distribution frequency of environmental awareness of the group with high intensity of parental guidance.

Class interval	Lower limit	Upper limit	Absolute frequency	Relative frequency (%)	cumulative Frequency (%)
57– 60	56.5	60.5	1	5.00	5.00
61 – 64	60.5	60.5	5	25.00	30.00
65 – 68	64.5	64.5	8	40.00	70.00
69 – 72	68.5	68.5	1	5.00	75.00
73 – 76	72.5	76.5	5	25.00	100.0
Total	-	-	20	100.00	-

Table 4. Distribution frequency of environmental awareness of the group with low-intensity of parental guidance.

Class interval	Lower limit	Upper limit	Absolute frequency	Relative frequency (%)	Cumulative frequency (%)
57 – 59	56.5	59.5	1	5.00	5.00
60 – 62	59.5	62.5	1	5.00	10.00
63 – 65	62.5	65.5	7	35.00	45.00
66– 68	65.5	68.8	11	55.00	100.00
Total	-	-	20	100.00	-

Table 5. Summary of population’s normality test result.

Number	Sample group	Sig. Kolmogorov-Smirnov	Significance (α)	Conclusion
1.	A ₁	0.283	0.05	Ho was accepted, normally distributed population.
2.	A ₂	0.263	0.05	Ho was accepted, normally distributed population.
3.	B ₁	0.260	0.05	Ho was accepted, normally distributed population.
4.	B ₂	0.550	0.05	Ho was accepted, normally distributed population.

normality test population in Table 5, it can be concluded that the population was distributed normally. In the homogeneity test, the population variance tested as much as 4 sample data. Based on the homogeneity test of the variance with the Barlett test, the value $3.38 < 0.95(3) = 7.81$ was obtained. Because the calculated value was less than the value of table, Ho was accepted with the significance level of 0.05. Therefore the sample variance in this study was obtained from the homogeneous population.

Test results hypothesis

First, the test result of the hypothesis "there was influence of green schooling knowledge and intensity of parental guidance on the environmental awareness"

based on the calculation by using the two ways ANOVA, is summarized in Table 6.

Based on summary of the hypothesis test results in Table 6, from the first hypothesis test, $F_{count} = 6.168^* > F(0.95)(1.36) = 4.11$ was obtained which means that Ho was rejected. The test results prove that the influence of green schooling knowledge on the environmental awareness was significant.

Second, the hypothesis tested was "there was influence of intensity of parental guidance on the environmental awareness". Based on a summary results hypothesis test in Table 6, in this test, $F_{count} = 4.531^* > F(0.95)(1.36) = 4.11$ was obtained which means that Ho was rejected. The test results prove that the influence of the intensity of parental guidance on the environmental awareness was significant.

Third, the hypothesis tested was "there was influence

Table 6. Summary of two ways ANOVA test result of the effect of green schooling knowledge and intensity of parental guidance to the environmental awareness.

Source	Do	JK	RJK	F _{ount}	S _{table}	
					α=0.05	α=0.01
Means	1	6502.500	6502.500			
Green schooling knowledge (A)	1	4.900	4.900	6.168*	4.11	7.39
Intensity of parental guidance (B)	1	3.600	3.600	4.531*	4.11	7.39
Int. A x B	1	6.400	6.400	8.056**	4.11	7.39
Error	36	28.600	0.794			
Total	40	6540.000	-			

of green schooling knowledge and intensity of parental guidance on the environmental awareness". Based on summary of hypothesis test results in Table 5, $F(0.95)(1.36) = 4.11 < F_{count} = 8.056^{**} > F(0.95)(1.36) = 4.11$ was obtained. The calculated value was different from the reception area, H_0 ($\alpha = 0.05$) then H_0 was rejected. The results prove that the simultaneous effect of the green schooling knowledge and intensity of parental guidance on the environmental awareness were significant.

DISCUSSION

The hypothesis test results in this study were entirely significant. In relation to the findings of this study, the discussion could as follows:

First, a significant test results of influence of green schooling knowledge on the environmental awareness, was in accordance with the role of green schooling knowledge in the model built by Michael (1990: 272), that the information and knowledge a person or group of people have on the environment will determine whether someone has a concern or otherwise do not care about the environment. Descriptively, we could also find the fact that the average environmental awareness score in the group with high level of green schooling knowledge was 68.20. That average score was above the average score of the group with the low level of green schooling knowledge, which got an average of 64.80. Visually Profile of The Green Schooling of Muhammadiyah 41 elementary school in East Jakarta Figure 2.

Second, a significant test results of the intensity of parental guidance on the environmental awareness was relevant to what was mentioned by Ki Hajar Dewantara as cited by Santoso (2011), that children in the age range of 0-7 years, are called childhood or garden child, and the most suitable education for them are giving examples and habituations. The parent's guidance to their children

was more general. This counseling intends to instill the values that are positive to the child, including the environmental concerns and awareness. Similar statement was made by Purwanto (1990: 117), he explained that the attention of parents against children become one of the important factors that affect the desire or motivation of the children. Care of the parents was one of the important factors that influence the environmental awareness of the children. The desire or learning motivation in many children associated with family conditions, especially parents, without any desire to teach child might not be able to achieve satisfactory learning outcomes. The desire to learn in many children is associated with the state of their parent's condition. It is in accordance with the Santoso (2011: 11) opinion that parents play the most important role in their child education. Education will succeed if started from the beginning, in this case, since the children are at an early age. All aspects of personality could be guided, fostered and formed, so all the aspects are mature. Guidance has two meanings: 1). Guidance in general, which is equal to education or embedding the values, fostering morals, and directing students in order to be good; and 2). Guidance in particular, which is an effort or program to help to optimize the student's development. This guidance is provided through behavioral assistance, also to boost the development of student potential that mainly deals with concerns of the environmental awareness.

Conclusion

Based on the hypothesis testing and discussion, it could be concluded thus:

1. There was influence of green schooling knowledge on the environmental awareness of the learners who had a high level of green schooling knowledge as compared to participants who have a lower level of green schooling



Figure 2. Profile of The Green Schooling of Muhammadiyah 41 elementary school in East Jakarta.

knowledge.

2. There was influence of the intensity of parental guidance on the environmental awareness of the learners who had high intensity of parental guidance as compared to learners who had lower intensity of parental guidance.

3. There was simultaneous influence of green schooling knowledge and intensity of parental guidance on environmental awareness. The environmental awareness of the learners was determined by the green schooling knowledge and intensity of parental guidance.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

- Anderson KE (1972). Introduction to Communication Theory and Practice. Cumming Publishing Company: California.
- Bennet DE (1997). Evaluate of Environmental Educational Program. John Willey and Son, New York.
- Bloom Benjamin S, David RK, Betram BM (1984). Taxonomy of Educational Objectives: The Classification of Educational Goal. Longman Group Ltd: London.
- Davenport T, Prusak L (1999). Working Knowledge. Available at: [Http://www. Competent,Org.br/slidesallee22/tlsldohtm,p.1](http://www.Competent,Org.br/slidesallee22/tlsldohtm,p.1). Accession date: 12 July 2014.
- Gilmour R, Duck S (Ed).(1980). The Development of Social Psychology. Academic Press Inc. London.
- Khan AS (1984). Social Psychology. America Psychology Association. Iowa State University: In. C. Brown Publisher Dubuque.
- McKnight MR (2011). Available at: [Irttm://cobeidbsu.edu/msr/skilldoc/mcknight.htm,p.5](http://cobeidbsu.edu/msr/skilldoc/mcknight.htm,p.5). Accession date: 12 July 2011.
- Michael HW (1990). The Corporation, Ethics and the Environment. Quorum Books: London.
- Miller GT (1993). Living in The Environment. Concepts, problems, and alternatives. Wadsworth Publication Inc: California.
- Partowisastro K (1983). In the dynamics of Educational Psychology. Erlangga: Jakarta.
- Purwanto MN (1990). Educational Psychology. Rosda Karya: Bandung.

Santoso S (2011). "Concept of Early Childhood Education in Indonesia" Concept of Early Childhood Education According to founder. State University of Jakarta: Jakarta.

Suriasumantri JS (1998). An Introduction to the Philosophy of Science. Pustaka Sinar Harapan: Jakarta.

Thio A (1994). Sociology A Brief Introduction. Harper Collins College Publications, New York.