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PROMOTING EARLY ENVIRONMENT EDUCATION: THE CASE OF A NATURE SCHOOL IN INDONESIA

Imelda Grace Siregar [1] and Maria Ana T. Quimbo [2*]

[1]PhD in Agricultural Education Student (College of Public Affairs and Development, UP Los Banos)

[2]Professor (College of Public Affairs and Development, UP Los Banos)

*Corresponding author: mtquimbo@up.edu.ph

ABSTRACT – Progressing climate change that happens nowadays needs very urgent and imperative comprehensive and systematic actions with strong support from the wider community equipped with sufficient and proper knowledge, understanding and awareness about climate change issues. One of these actions is increasing capacity of the young generation through early environmental education. This study explored the role of the Nature School in enhancing environmental awareness and environment-related behavior from early age.

This paper tackled the environmental awareness and environment-related behavior of the students of the Nature School that integrates environmental education in their daily activities, learning process and practices, and offers more environmental-friendly surroundings and facilities. Another focus of the study was to see whether selected student factors influenced their environmental awareness and environment-related behavior. Results showed that students in the Nature School possessed a moderately positive environment-related behavior. School teachers, like the parents and family members, played important role as source of information and knowledge for the students. None from the selected student factor was found to influence awareness and environment-related behavior of the students.

The study concluded that children learn better about the environment if they have direct experience and are more familiar with what they see around them. Engaging students by learning through hands-on activities brings them closer to the environment. Practical approach may be a critical method for reconnecting children with the nature, thus, enhancing environmental awareness and promoting positive environment-related behavior.

Keywords: Nature School, environmental education, environmental awareness, environment-related behavior

INTRODUCTION

Environment has increasingly been threatened by progressing changes in climatic conditions and its associated impacts. The increase in global mean temperature in the last decades has led to the increase in sea level rise and extreme changes in weather conditions such as changes in rain distribution and intensity and more frequent and extreme hurricanes, storm surges, floods and droughts. These have affected people's livelihood in many ways and in many sectors such as health and food security.

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It is therefore very urgent and imperative to take comprehensive and systematic actions to address climate change. However, until now the efforts to combat the climate change are concentrated mostly on the debate and discussion at international level, while real actions on the ground is still very limited in scale and scope, unsystematic, and sporadic leading to insignificant contribution to halt the progressing climate change and minimize its impacts. It is very obvious that there is lack of support from the wider community to adapt/mitigate climate change as indicated by minimal change of their behavior that can reduce the emission. It is mainly caused by lack of knowledge, understanding and awareness about the climate change issues starting from the early level of education.

For these reasons, this study was conducted to investigate the level of awareness of young generation about climate change and general environmental issues, specifically in the Nature School, a school that uses nature as a place of learning. More so, how the children's awareness influenced their behavior was also analyzed. The young people were chosen as subject for this study as they will be the decision makers in the future and potentially can contribute significantly in the efforts to address climate change.

The Nature School has been around for decades in Indonesia. To date, there are about 50 Nature Schools around Jakarta alone, and more than 100 in the whole country. The idea was to reduce the cost to establish a school to a minimum by replacing expensive school buildings and teaching tools and equipment with the outdoors and nature. In the Nature School, the students learn outdoors, where subject matter is learned not only in theory but practiced directly. These concepts bring the students closer to nature thus make learning activities more enjoyable. Classrooms in a Nature School are built as open-air classrooms, which in addition to reducing electricity cost, also makes the children so close with the nature.

Studying about nature with direct experience can stimulate students' creativity. The Nature School has the purpose of providing children with a stimulating, entrepreneurial, and sustainable environment in which to develop and learn by example. As Jonassen (1992) said, learning should consist of experiences that facilitate knowledge construction. It is important to create real world environments that employ the context in which learning is relevant, focus on realistic approaches to solving real-world problems, and provide tools and environments that multiple perspectives of the world. Bandura (1977) also introduced Social Learning Theory which posits that people learn from one another, via observation, imitation, and modelling. The people learn through observing others' behavior, attitudes, and outcomes of those behaviors. Most human behavior is learned observationally through modeling. From observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action. These elements are among the major components of the Nature School curriculum.

Objectives

This study was conducted with the following objectives:

1. Describe the environmental education activities in the Nature School;
2. Discuss the level of environmental awareness and environment-related behavior of students in the Nature School; and

3. Analyze through comparative method the level of environmental awareness and environment-related behavior of the students with respect to:

    - Sex
    - Grade level
    - Academic performance
    - Family income
    - Parents' education

METHODOLOGY

This study used a combination of desk research, observation, interviews, and survey in one Nature School in West Java, Indonesia.

The questionnaires were administered among randomly selected Grade Five and Grade Six students in the Nature School. The assumption is that the result of the environmental education can be observed much clearer on students that have received the education for many years. The population of grades five and six constituted 71 students. The simple random sampling was used to select respondents (sample) and the distribution of the sample is 15 students from the grade five and 15 students from grade six.

The survey questionnaire contained closed-type questions. They were created using Likert assessment scale, which consisted of a series of statements expressing positive or negative statement towards certain notion. The questionnaire was pretested in another private school and revised the questions that were difficult to understand by the students. The students completed the questionnaire in about 30-45 minutes.

The general information about the schools was collected through interviews with the principals. Secondary data regarding the academic performance of the students were collected from the school.

Collected data and information were analyzed using statistical techniques and processed using statistical software. The study used the descriptive survey method and mean analysis to determine the level of environmental awareness and the level of environment-related behavior of the students. The following statistical tools were used in this study:

1. Percentage and pie charts were used to describe the characteristics of the respondents.
2. The questionnaire used Likert Scale, which is a psychometric response scale to obtain participant's preferences or degree of agreement with a statement or a set of statements. The respondents were asked to indicate their level of agreement with a given statement by way of an ordinal scale (Bertram, 2012).

    To measure the level of environmental awareness, a 5-point scale (1 = not aware, 2 = a bit aware, 3 = aware, 4 = very aware, and 5 = very much aware) was used and interpreted as follows: scale 1 with the range 1.00 – 1.79 interpreted as "very low", scale 2 with the range 1.80 – 2.59 interpreted as "low", scale 3 with the range 2.60 – 3.39 interpreted as "moderate", scale 4 with the range 3.40 – 4.19 interpreted as "high", scale 5 with the range 4.20 – 5.00 interpreted as "very high".

Another 5-point scale (1 = never, 2 = rare, 3 = sometimes, 4 = often, and 5 = always) was used to measure the level of environment-related behavior. The responses were interpreted as follows: scale 1 with the range 1.00 – 1.79 interpreted as "least favorable", scale 2 with the range 1.80 – 2.59 interpreted as "favorable", scale 3 with the range 2.60 – 3.39 interpreted as "moderately favorable", scale 4 with the range 3.40 – 4.19 interpreted as "highly favorable", scale 5 with the range 4.20 – 5.00 interpreted as "very highly favorable".

3. The t-Test and Analysis of Variance (ANOVA) were used to test the significance of mean differences of selected variables as follows:
    a. The t-Test for independent groups was used for the variables Sex and Grade Level.
    b. The ANOVA was used for the variables Academic Performance, Family Income, and Parent's Educational Attainment.

RESULTS AND DISCUSSION

Environmental education activity in Nature School

Students have farming/gardening activities every week. In this activity, students are taught how to grow plants in harmless and sustainable way in a garden, which they maintain on their own.

Figure 1. Farming/Gardening Activity

The Theory of Transfer by Perkins (1991) was in line with these practices. Perkins proposed that rich learning environments affect how students process information. He suggested that a discovery approach and real nature experience would allow students to build their own understanding.

The Nature School also teaches the students about waste management where they learn to segregate and manage (through recycling and selling) the wastes. They have schedule for collecting the trash (for example, Tuesday discovery approach allows for paper and cardboard and Wednesday for plastic, can, and bottles). The pots that they use in their garden also came from recycled items such as rubber boots, bottles, plastic containers, among others. They also sorted the trash into those that they can use (reuse and recycle) and those that they could sell (Figure 10). The money that came from selling was used to buy cleaning tools and drinking water. This activity also taught the students about financial management, business skills, and entrepreneurship.

Figure 2. Waste Management Activity

The school and media had a critical role in educating the students and raising the level of their environmental awareness. The results disclosed that the students obtained information about the environment primarily from the school and TV (93.3% and 83.3%, respectively). They also got this information from the internet (73.3%) and in smaller percentages from books and magazines and other sources (38.3% and 15%, respectively).

Even while the main source of information about environmental issues was the school, the questionnaire results disclosed further that most of the students (73.3%) preferred to discuss the topic with the family members. It is assumed that close and intensive family relationship encouraged the students and made them comfortable to share and discuss issues they did not understand, or were curious of, with the parents and other family members.

They also talked about environment topics with friends from school (56.7%) and other friends (46.7%). This is important as the peer group (friends) could generate shared values and standards for behavior (Berk, 2006).

Environment topic was also the subject of discussion with teachers (56.7%) at school. As classroom is a complex social system in which teachers engage with many students each day (Jackson, 1968), and hence, can influence the students awareness and attitude. Children may adopt teachers' positive or negative views and start to live up to them (Berk, 2006).

Majority (77%) of the students found that the environment is an interesting topic to discuss, while only few students (23%) said that the topic was not interesting. The high interest created an opportunity to improve their knowledge and awareness by providing them with more information and/or encourage discussion about environmental issues. For instance, more information can be given through interesting books that are suitable for their age (story book with pictures) as well as showing interesting short films as the children nowadays are really interested in audio-visual information.

Environmental awareness and environment-related behavior

Overall, students from this Nature School had "High" level of awareness about various environmental issues (*Mean=3.59*) (Table 1). Specifically, they were more aware about waste management issues (*Mean=4.21*) than general environment issues (*Mean=3.48*). Meanwhile, they were least aware about global warming/climate change issues (*Mean=3.07*). It was perceived that the students were more aware about waste management issues because these are more visible activities and can be seen daily in their surroundings. An example was the waste segregation activities practiced at home and in school which is discussed in the later section of the paper.

For global warming/climate change issues, the students got "Low" level in three questions. The students may have limited awareness about the global warming/climate change issues because these issues are less visible and are much more scientific and theoretical. This topic can become an input to classroom instruction to inform and create greater awareness among students about climate change.

The students were aware enough that rice, vegetables and fruits are grown using herbicide and insecticide (question number 3), but this can be enhanced more in the future to give more explanation on the advantages and disadvantage and the harmful effects of using chemical inputs.

They had high awareness that forest is important for our fresh water supply as this would minimize flood events downstream (question number 5 and 20) because they knew the benefit of the trees through the school environment and were familiar enough with this issue.

The respondents were more aware about issues they can see or often encounter, such as those that can be seen under the group of general environmental issues. For example they were more aware about air pollution from cars.

Table 1. Summary of environmental awareness of students

Statements		**Mean**	**Verbal Interpretation**
General Environment Issues			
1	Our environment (river, land, etc.) is polluted through our (human) activities.	3.77	High
2	Environmental pollution is dangerous to our health.	4.00	High
3	Rice, vegetables, and fruits are grown using herbicide and insecticide.	2.87	Moderate
4	Most of our wood furniture comes from cutting primary forest.	2.93	Moderate
5	Forest is important for our fresh water supply and to minimize flood events downstream.	3.80	High
6	Fossil fuel (oil) is non-renewable energy.	4.13	High
7	Development of large infrastructure such as building and housing estates will dry up the ground water.	2.47	Low
8	Car use contributes to air pollution.	4.20	Very High
9	Land erosion leads to sedimentation of waterways and river deltas.	3.03	Moderate
10	Number of endangered and extinct species has increased significantly.	3.60	High
Mean		**3.48**	**High**
Global Warming/ Climate Change			
11	Climate change is happening globally.	3.37	Moderate
12	Climate change is a result from increasing temperature globally (global warming).	3.27	Moderate
13	Human activities that release emission of greenhouse gases are the main causes of climate change.	2.87	Moderate
14	Carbon is one of the major greenhouse gases.	2.27	Low

Table 1. Summary of environmental awareness of students (Continuation)

15	Extensive use of fossil fuels (e.g. for transportation and electricity) is one of the major contributors for carbon emission.	2.57	Low
16	Deforestation and forest fires contribute to carbon emission.	3.10	Moderate
17	Extensive farming also contributes to climate change.	2.50	Low
18	Climate change impacts agriculture sector and food production.	2.80	Moderate
19	Climate change impacts people's health through outbreak of diseases.	4.03	High
20	Planting trees and reforestation will help to reduce carbon emission.	3.97	High
Mean		**3.07**	**Moderate**
Waste Management			
21	Decomposition of plastic will take thousands of years.	4.23	Very High
22	Litter and garbage can be divided into recyclable and non-recyclable one.	4.47	Very High
23	Used paper can be recycled and reused.	4.50	Very High
24	Chemicals from the old batteries can pollute the environment.	3.40	High
25	Throwing garbage into the river will contribute to flooding.	4.67	Very High
26	Garbage and litter can harm/jeopardize the animals.	4.07	High
27	Garbage and litter in our surrounding can help diseases to spread (e.g. malaria, pest).	4.10	High
28	Liquid waste from factory can endanger fishes in the river and ocean.	4.63	Very High
29	Burning household and industry wastes will pollute the air.	4.03	High
30	Increasing household wastes, particularly in the big cities will require extensive landfills.	4.03	High
Mean		**4.21**	**Very High**
Overall Mean		**3.59**	**High**

As for the environment-related behavior, the students from this Nature School had an overall mean value of 3.10, which is described as “Moderately Favorable” level. However, this was lower than the mean value of their environmental awareness (3.59) as discussed in the previous section. This indicates that awareness of the students does not necessarily always translate to positive behavior change towards the environment.

The students got the lowest awareness level in question number 1, which was about the wood products from the primary forest. It showed that they did not have adequate idea about where the wood products come from. For question number 2, the respondents had “Favorable” level. It seemed that they do not pay attention yet about their behavior in saving the water. For question number 6 about the use of books made of recycled paper, the students gave “Favorable” level, which means they did not notice whether the books were from recycled paper or not.

Interesting to note is that the environment-related behavior of the students associated to global warming/climate change was higher than others, although the awareness level about the issue was low (see Table 1). It is assumed that their positive behavior was more related to other reasons than their awareness. For example, their behavior to switch-off the lamp (question number 12), turn-off the TV (question number 16), and not going alone when using car (question number 20), are for reducing expenses (economic reason). Wearing thin clothes when the weather is hot might also be because it is more comfortable for the students. The mean from these issues was 3.48 which was described as “Highly Favorable”.

However, it has to be stressed that the behavior of the students is also influenced by their surroundings. Jonassen (1992) in his Constructivism Learning Theory said that it is important to create real world environments that employ the context in which learning is relevant, focused on realistic approaches to solving real-world problems, and provide tools and environments that multiple perspectives of the world. The environment should not only be limited in the school but also in their other surroundings, for example is their house. This was one of the reasons why the students’ behavior related to waste management was mostly low although they had high awareness about it (Table 1). For example, lack of a special used - battery disposal bin made it impossible for the students to dispose used battery (question number 30). The mean from waste management issues for the students from the Nature School was 2.84 which in verbal interpretation was categorized as “Moderately Favorable”. Interestingly, for question number 25 the students from this Nature School also registered a “Favorable” level even though they practiced to make compost at school. It means that still, the family influenced the behavior of the students, if the family member or parents did not practice it, and the students did not really translate it in their behavior.

Reusing materials was not much practiced yet by the students as shown by “favorable” level in question number 28. This behavior could be enhanced by setting a good example to the students by the elders, such as teachers and parents.

Table 2. Summary of environment-related behavior of students

Statements		**Mean**	**Verbal Interpretation**
General Environment Issues			
1	I ask my parents not to buy wood products from primary forest.	1.77	Least Favorable
2	When I have to do washing-up, I do not rinse everything under running water first.	2.30	Favorable
3	While brushing teeth, I turn off the water tap.	4.30	Very Highly Favorable
4	I prefer to eat seasonal fruits from the local than import/hybrid fruits (US Apple, Kiwi, Grapes).	3.20	Moderately Favorable
5	Whenever possible I prefer to eat organic vegetables.	2.57	Favorable
6	I use books made of recycled paper.	2.30	Favorable
7	I ask my parents and family members to limit the use of plastic bags.	2.97	Moderately Favorable
8	I participate in activities to protect the environment.	3.17	Moderately Favorable
9	I ask my friends and others not to hunt and kill animals in our surrounding.	3.23	Moderately Favorable
10	When walking in a nature reserve, I stick to the path	4.07	Highly Favorable
Mean		**2.96**	**Moderately Favorable**
Global Warming/ Climate Change			
11	I ask my parents to use energy-saving bulbs.	3.37	Moderately Favorable
12	I switch off lamps in my bedroom or CR if I do not use them.	4.50	Very Highly Favorable
13	When it is hot I wear thin clothes.	3.37	Moderately Favorable
14	I plant trees or plants.	3.37	Moderately Favorable
15	When it is very hot in my bedroom, I will open the window or try to use only fan and not the air condition (AC).	3.07	Moderately Favorable

Table 2. Summary of environment-related behavior of students (Continuation)

16	I immediately turn off Computer, TV, and radio/CD/DVD player when I do not use them.	4.07	Highly Favorable
17	I try to avoid burning garbage.	3.80	Highly Favorable
18	I try to avoid using tools with kerosene.	2.93	Moderately Favorable
19	I prefer to use public transport/bicycle/go on foot than car/motorbike.	2.73	Moderately Favorable
20	When riding a car, I try not to go alone but with other people together with me.	3.63	Highly Favorable
Mean		**3.48**	**Highly Favorable**
Waste Management			
21	I put my garbage/litter into the allocated place (garbage bin).	4.27	Very Highly Favorable
22	I separate biodegradable and non-biodegradable garbage.	3.53	Highly Favorable
23	I bring my own bag when go shopping.	2.63	Moderately Favorable
24	I prefer to buy drinks packaged with reuse/recycle materials (paper, glass/bottle).	3.30	Moderately Favorable
25	I help to make compost.	2.27	Favorable
26	I donate my old magazines, books, toys, and clothes.	2.87	Moderately Favorable
27	I prefer to buy personal books produced with recycled paper.	2.33	Favorable
28	After unwrapping a present, I keep the wrapping-paper and use it again.	2.00	Favorable
29	I refuse and don't take advertising brochures given in shopping center or distributed from house to house.	2.87	Moderately Favorable
30	When my batteries are run down, I take them to a special disposal bin.	2.37	Favorable
Mean		**2.84**	**Moderately Favorable**
Overall Mean		**3.10**	**Moderately Favorable**

Environmental Awareness and Environment-related behavior

With Respect to Sex

The environmental awareness of both boys and girls had moderate mean values of 3.63 and 3.52, respectively. Likewise, the environment-related behavior of boys and girls also had moderate mean values of 3.10 and 3.07, respectively (Table 3). Results of *t*-test revealed that there is no significant difference between boys and girls with respect to their level of environmental awareness ($p< 0.65$) and environment-related behavior ($p< 0.06$). This supported the previous study by Sharmin (2003) where she found that there was no significant difference between boys and girls in terms of environmental awareness. However, Sengupta, Das and Maji (2010) found out that the relationship between the environmental awareness and environmental-related behavior was significant. However, the research findings also revealed that this relationship was not direct or strong. Another important finding was that the girls were observed to be more environmentally aware than the boy students although sex had no effect on environment-related behavior.

Table 3. Environmental awareness and environment-related behavior of students with respect to sex

Sex	**Number**	**Environmental awareness**		**Environmental-related behavior**	
		Mean	**Verbal Interpretation**	**Mean**	**Verbal Interpretation**
Boy	17	3.6359	Moderate	3.1082	Moderate
Girl	13	3.5277	Moderate	3.0785	Moderate

With Respect to Grade Level

The environmental awareness of both Grades 5 and 6 had moderate mean values of 3.72 and 3.45, respectively. Meanwhile, the environment-related behavior of Grades 5 and 6 also had moderate mean values of 3.00 and 3.18, respectively (Table 4). Results of t-test indicated that there was no significant difference between Grades 5 and 6 with respect to their level of environmental awareness ($p<0.299$) and environment-related behavior ($p<0.765$).

Ballard and Pandya (1990) and Seever (1991) reported that direct experiences related to environmental education in earlier grade levels can increase environmental awareness of the students, but this study showed no significant difference between Grade 5 and Grade 6. This is probably because the teaching materials on environmental issues being used for Grades 5 and 6 were quite similar. In addition, the respondents were almost from the same age bracket of 9 to 11 years. The young age of the students also explained the moderate level of environmental awareness as they just started to 'learn' about their environment. Some studies, however, identified an increase in overall environmental concern once children reached at least 11 years of age (Eagles & Demare, 1999; Kahn, 1999; Kellert, 1985).

Table 4. Environmental awareness and environment-related behavior of students with respect to grade level

Grade Level	Number	Environmental awareness		Environmental-related behavior	
		Mean	Verbal Interpretation	Mean	Verbal Interpretation
Grade 5	15	3.7200	Moderate	3.0047	Moderate
Grade 6	15	3.4580	Moderate	3.1860	Moderate

With Respect to Academic Performance

Table 5 shows that the mean values of environmental awareness and environment-related behavior of the students with respect to the academic performance was at moderate level. The students from the three groups (low, average and high performers) had almost the same mean values in environmental awareness as well as in environment-related behavior. This was then tested using ANOVA-Test which showed no significant difference across mean values of the three groups ($F=0.162$, $p< 0.851$) for environmental awareness. It implies that academic performance of the students was not a factor in gaining awareness about the environment and other environmental issues. There was also no significant difference across mean values of the three groups ($F=0.084$, $p< 0.920$) for environment-related behavior. It means that environment-related behavior of the students was similar at any level of academic performance. Overall, the results imply that greater environmental awareness or development of more positive environment-related behavior was not explained by student academic performance. Sengupta, M. (2005) in her study "Environmental Awareness of the Environmentally Active and Passive Students in relation to Motivation and Academic Performance" likewise found no difference in environmental awareness due to academic performance.

Table 5. Environmental awareness and environmental behavior of students with respect to academic performance

Academic Performance	Number	Environmental awareness		Environmental-related behavior	
		Mean	Verbal Interpretation	Mean	Verbal Interpretation
Low	4	3.4525	Moderate	3.0675	Moderate
Average	20	3.6015	Moderate	3.1200	Moderate
High	6	3.6383	Moderate	3.0317	Moderate

With Respect to Family Income

Environmental awareness of students from middle-high income group was found to be at "very high" level while those from low income group was found to be at "moderate" level. Meanwhile, students who came from families with middle-low income and high income had "high" level of environmental awareness. Finally, students from all income groups had the same "moderate" level of environment-related behavior (Table 6).

Table 6. Environmental awareness and environment-related behavior of students with respect to the monthly family income

Family Income	**Number**	**Environmental awareness**		**Environmental-related behavior**	
		Mean	**Verbal Interpretation**	**Mean**	**Verbal Interpretation**
Low Income	5	3.3420	Moderate	3.2880	Moderate
Middle-Low Income	3	3.7633	High	2.9567	Moderate
Middle-High Income	2	4.2650	Very High	2.9800	Moderate
High	12	3.4867	High	3.0108	Moderate

Consequently, results of ANOVA-Test ($F=1.806$, $p< 0.182$) showed no significant difference between the mean values of the four income groups with respect to environmental awareness. This implies that differences in level of environmental awareness were not large enough to bring about significant differences despite the "very high" awareness level of students from middle high income group. This result indicates that the income of the family did not affect the environmental awareness of the students. Similar result was found with regard to environmental-related behavior of the students ($F=0.463$, $p< 0.705$). Although, the research from Zosia (2013) said that the students from higher income families were more resistant to abandon energy or resources related items than were students from lower income families. The study of evaluation of environmental education by Rovira (2000) also found that students from lower social economy background were less likely to encourage their families to recycle, placing the responsibility on other entities such as factories. Middle class students, however, took personal responsibility for environmental solutions, and students from higher background discussed more about recycling practices with their family. In the case of the present study, it found no significant difference, probably because most of them were from middle class family background without so many gaps in social background.

With Respect to Parents' Educational Attainment

Students whose parents had higher educational attainment also had higher level of environmental awareness. Moreover, all respondents had moderate level of environment-related behavior no matter how high or low the education level of their parents (Table 7). It was remarkable that most of the students had parents with university degrees.

Table 7. Environmental awareness and environment-related behavior of students with respect to parents' educational attainment

Parents' Education	Number	Environmental awareness		Environmental-related behavior	
		Mean	Verbal Interpretation	Mean	Verbal Interpretation
Below high school	1	2.8000	Moderate	2.8000	Moderate
High School	0	0	0	0	0
University	22	3.5164	High	3.1091	Moderate
Graduate	6	3.9133	High	3.0883	Moderate

Further analysis using ANOVA-Test ($F=0.2848$, $p<0.076$) gave result that there was no statistically significant difference in environmental awareness level with respect to parent's educational attainment. Similar result was found in terms of environment-related behavior ($F=0.819$, $p<0.489$) of students. These results indicated that educational background of the parents did not have influence both on the awareness level and behavior of students towards the environment although a study conducted by Astalin (no date) found that environmental awareness of the students may be explained also by the parent's education of the students. This is probably because one's awareness and behavior towards the environment also depends on other factors such as previous experiences and interaction with people around them.

CONCLUSION

The students are aware enough about certain environmental issues. But this level of awareness can still be enhanced in the future given proper guidance and exposure.

Children learn better with experience and they are also more familiar with what they see around them. Environment education requires a practical approach to show the children the real impact of degradation of environment. Learning through activities will bring the children closer to and engage with the environment/nature. A heavy emphasis on information content/knowledge and cognitive gains may overshadow the more exciting aspects of environmental education that have a stronger influence on environmental awareness and behavior.

Practical approach may be a critical method for reconnecting kids with nature and promoting positive environmental awareness and environment related behavior.

The parents need to join the students and teachers to make a daily impact. They need to live in a rich and engaging culture which offers each other daily examples of learning and reflection.

The no significant differences in the level of environmental awareness and environment-related behavior with respect to sex, grade level, academic performance, family income, and parents' education was expected given that the students were provided the same exposure and similar experiences at home and in school.

RECOMMENDATIONS

The following recommendations are given based on the findings and conclusion of the study:

1. The Department of Education in Indonesia should pay attention and give more emphasis to environmental education in the curriculum. The environment-related behavior for the children can be enhanced by utilizing a more practical approach in the curriculum in addition to the theoretical approach. This may be done by incorporating similar activities practiced in the Nature School such as engaging students in farming activities and exposure to proper waste management practices. Furthermore, topics on global warming and climate change may be integrated in work books or may be given as examples during classroom instruction. The coordinated work of curriculum planners, school evaluator, environment specialists and teachers is required to improve and promote an environment-friendly curriculum.
2. The schools should provide access to facilities that support environmental awareness. For example, the schools should provide segregated trash bins, so the students start to learn about waste management in their daily activities. School libraries should also make available sufficient information about environment, particularly for young students. These information materials should be given in proper format that will invite the interest of the students and teachers to learn various environment topics such as global warming, greenhouse gases effect, waste management and their effects on the environment.
3. Teachers, both of those who teach environment education or not, should be equipped with adequate knowledge about the environment. The knowledge can be gained through training, in-house seminar, and reading more information about the environment, among others. Moreover, teachers need to exert more effort to increase their own and their students' understanding about environmental problems and take more active role and responsibility in conserving the nature and environment.
4. Parents and family have important roles in enhancing the environmental awareness and environment-related behavior of the students. The family should also create an environment that supports the environmental awareness and environment-related behavior of students, such as discussion of relevant topics about the environment at home, providing segregated trash bins, and reusing and recycling wastes around the house. Raising environmental awareness and environment-related behavior should be a combined effort among the school, parents, and family members.

STATEMENT OF AUTHORSHIP

The first author conducted the initial conceptualization of the research problem, did literature search, gathered the primary data, and undertook the initial write up. The second author identified some relevant issues, provided guidance in data analysis, undertook the writing of the other parts of the paper, and improved overall coherence of the paper.

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