

# GROWING CHILDREN'S WATER CONSERVATION AWARENESS THROUGH WRITING AND DRAWING METHOD

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## ABSTRACT

Objective of this essay is to explain the importance of water conservation behavior to children through writing and drawing method. Children are encouraged to participate in this activity based on 4 reasons. 1). Children are the future leaders. Their awareness on water conservation should be developed in early ages. 2). Children usually have soaring curiosity and startling imagination. Therefore they may have surprising method to conserve water. 3). Children usually amused to learn new thing and then practicing it incessantly. They call it playing. 4). Water conservation campaign to children is less likely performed. In this campaign, children are facilitated to write an essay about water conservation; then it is illustrated with children's drawing. Later on, they read it in front of their friends. Usually, they are enthusiastically participated in these activities. Those attractive essays will be published on school wall magazine, website, T-shirt, and calendar. Hence, the children's works actually are precious resources for water conservation campaign. Their works are obviously understood by other children. Children may have different language with adults when explaining difficult and important issue such as water conservation.

**Keywords:** Water conservation, children, writing, drawing.

## INTRODUCTION

Water conservation behavior is a kind of alertness that water is precious for sustaining our life. The quantity of fresh water in the earth is very limited; therefore water availability should be maintained (Seneca Nation of Indians). Fresh water is crucial for human, animal, and plant. Without water, there will no life in the world. It is very important to discuss, since people tend to utilize all natural resources, including water, excessively without the awareness to conserve. This situation certainly will lead to the earth eco-system disequilibrium (Davis, 2008). When this alarming situation is neglected and there is no concrete effort to conserve, our life will certainly be vanished.

The importance of this water conservation related to the limited people who have good access to the fresh water. Currently, it is about 1.2 billion people live in fresh water shortage areas. Later on, it is about 1.6 billion people or nearly one-fourth of people in the world as whole face economic water

shortage. It is predicted that by the year 2025, it is about 2 billion people will have difficulties to access fresh water. This difficulty also related with numerous problems such as politic, economy, human rights, food scarcity, increasing conflict, poor health and sanitation (OCHA, 2010). This serious problem of accessing fresh water will surely enforce us to conserve water. The best way to conserve water is through education since education relates to the behavior changing (Fisher, Bell & Baum, 1984).

The problem in water conservation education is that children are not aware that water is precious. Among urban children, water is perceived as liquid from tap. When the faucet is not working, then the tap is broken. The parents will call a plumber or water company. For children in rural areas, water is perceived as a liquid that flows in the river, while the water daily necessities obtained from wells. This means that the children did not understand the importance of water. For adults, the perception of the water is about the no synchronization between the water used in their house to the water bills they had to pay. This was revealed in a study involving 776 households in 16 villages near the Wei River Basin in China. The results showed that the respondents (adults) perceive the water used outdoors is fewer in number than he had to pay. The water used in their home is perceived much more than water that must be paid (Fan, Wang, Liu, Yang, & Qin, 2013).

The purpose of this essay is to explain the importance of building the awareness of water conservation in children. Although many adults who are less aware of the importance of conserving the water, yet this article is more focused on children. Why the education to love the environment for children is important? This is due to the formation of attitudes, behaviors, and values in childhood will have an impact on their adult life. Childhood experiences about water conservation were memorable and will be carried over into adulthood, and continuously affect the individuals. So education of caring the environment in children will lead to the sustainability of these activities (Samuelsson & Kaga, 2008). In addition, when children receive education about water conservation, they will then transmit the positive things to their parents and other family members (Damerell, Howe & Milner-Gulland, 2011). Hopefully, the impact is a lot of community members will be more concerned in water conservation.

The uniqueness of this paper is that this article involving children. Environmental education, especially on children, are rarely discussed (Davis, 2008). This is crucial since children are the ones who will soon face the water shortages. This paper also includes ways to build children's awareness about the importance of water conservation, through writing and storytelling methods. So the method is also very useful to improve the literacy of children in the field of water conservation.

## **WATER CONSERVATION BEHAVIOR**

Water conservation behavior is an intentional act to conserve the use of water suitable for consumption, so the amount of money we have to pay in the water bill will be reduced. When someone was in the area where the water management system is related with septic system, then the water conservation behavior means efforts to prevent water pollution. This is because the septic system may cause bacterial contamination to the nearby water sources such as wells, lakes, and rivers (University of Illinois Extension, nd.).

How to conserve water? Water conservation is one of the caring behavioral for the environment. Caring about the environment behavior can be obtained through education. This is because the environment education will make people aware about environmental issues, teaches about everything that can and cannot be done, and how to deal with environmental problems (Fisher et al., 1984).

Could environmental education build individual's awareness on the importance of the environment and practiced in everyday behavior? There are a lot of objections that education can make people realize the importance of conserving the environment behavior, especially in water conservation. The objections are based on three assumptions, which may tend to be wrong (Fisher et al., 1984):

1. The assumption that man is always rational and has consistent behavior. People will be willing to change their behavior for new information. The new information may only benefit themselves or the broader social environment (behavioral altruism).
2. The assumption that by concentrating on one aspect of cognition, we will be able to change other relevant cognition aspects.
3. The assumption that the attitude towards the environment will last long and affect the behavior towards the environment.

Although the role of education in building the awareness about the importance of water conservation is weak, but the education should has to be done. This is because the United Nations has made a declaration that 2005-2014 is the period of education for sustainable development (Burnet, 2008; Howe, 2015). Education was seen as a strategic way to bring awareness to the importance of the environment conservation and the awareness should be continued by the next generation.

## **WATER CONSERVATION EDUCATION ON CHILDREN**

It is very important to involve children in water conservation education. This is because the children's experience will later become the foundation of behavior in their adulthood. In addition, there are seven reasons why environmental education for children, especially water conservation is important to be put forward (Didonet, 2008). First of all, childhood is the period of the formation of personality, life values, and attitudes. All of that will lead their way of thoughts, feelings, and behavior for the rest of their lives. When in childhood someone had an education about water conservation, it is likely that as an adult later he also has pro-environment behavior.

The second reason, children are very sensitive, have high curiosity, and very interested in natural elements. They like to experiment creatively and explore the natural elements such as plants, flowers, water, seeds, fire, and wind. Emotionally and intellectually, they are easily moved by the natural things. Intensive experience with nature in childhood will be carried over into adulthood. Now, not a few adults were able to express the memory of clear rivers of his childhood. Therefore educating children about water conservation is also efficient.

The third reason, materials about the concern for the environment, including water conservation, is very close to children's world. This is because the environmental education curriculum usually contains only two things: (1)

knowledge based on concrete and real experience related with nature; (2) the skills of recycling and transforming discarded items into useful things. Childhood is the time to play and the themes often involve objects that exist in the environment, including rivers, hills, forests, secondhand goods, and so on. The children are very happy when they get skills about the principles of recycle and turn discarded things into toys. As an adult, people become familiar and not become awkward to recycle and turn discarded things into valuables.

The fourth reason, environmental education does not only mean environmental and economical concerns, but also significantly of the philosophy and pedagogic values. Nowadays, everyone is persuaded to be a hedonist. People easily buy new things to follow fashion, although the old stuff is still feasible to use. The environmental education, including water conservation, will make people weigh back several times before buying new items.

The fifth reason, children are at the stage of pre-contemplation (Morris, Marzano, Dandy & O'Brien, 2012). At this stage, children have not understood the urgency of environmental issues, especially water conservation. For example, when the flow of water in the taps is off, kids can only ask for help to their parents to fix the tap. Intensive discussions between parents, teachers, and children will bring proper understanding and concern to the water conservation (Davis, 2008).

Those five reasons show that education about the environment, especially water conservation can indeed be done on children. Then what is the evidence that children have been able to actively participate in environmental education? A study of the behavior of water conservation on children has been carried out at a kindergarten in Brisbane Australia. The study involved 119 children aged 2.5 to 6 years old, and 19 teachers (Davis, 2005).

Davis (2005) explains that by the year 2002, Australia experienced a severe drought. However, children at the Kindergarten school can still meet their water needs. After a few weeks of discussions, the teachers and the children agreed to create a mini project on water conservation. The mini project was fully coordinated by the children. The things that teachers did were holding discussions, looking for possible alternative solutions, doing various experiments, reading stories about the river, and so forth. The interesting thing is when the children's knowledge has increased about conserving water. They made some creative actions, such as making symbols, pictures, and writing messages about water conservation. Examples of the messages were: "do not leave the tap water continued to pour", "use a small button to flush the toilet," "turn off the water hose after used ". The messages were placed on all existing water sources (Davis, 2005, 2008). The children's comments proved that the kids are able to participate actively in water conservation, as long as the adults around them also give concern and do real supportive actions.

Water conservation education in children, can also be done by the writing and drawing method. The children involved were at grade 1 to 3 (ages 6-8 years). The children were asked to write a short essay about the importance of water and water-saving behavior. Before writing, the children are asked some questions in order to know their knowledge on water conservation (Samaltani & Christidou, 2013). Below are some important questions.

1. What kind of water resources do you have at your house?
2. Where does the water you use at home come from?

3. Can we drink any kind of water? Why?
4. Are other children in other places also having a source of water like you have in your house? Why?
5. Who needs water?
6. What is the use of water at your house? At your school?
7. Do you use large or small amounts of water in your daily life?
8. Could you live without water? Why?
9. Is it possible that water will run out some day?
10. Why can we run out of water?
11. What will happen if we ran out of water?
12. In your opinion, should we do something to save water?
13. What can we do to save water at home? At school?
14. What will you do to help other children learn to save water at home? At school?

Based on these questions, then the children were asked to write a short essay about water conservation. The short essay was then illustrated with drawings and pictures with attractive colors. After completing their essay, children are encouraged to make a speech about their essay. Based on our experience in conducting writing course, those children are very enthusiastic to show their works in front of their friends. Later on the essay will be adhered at the school wall magazine. The essay and children's self-picture should also be published at the school website. There are two benefits of this strategy.

1. Through the school website, the children's essays will certainly be spread over the world. People who read it will understand the children's idea to conserve water either at home or at school. This information will inform others that the water conservation education has been conducted at that school. Hence the school will be admired since it has been pioneering on water conservation education in elementary school level.
2. Through the school wall magazine, the children's essays will inspire other children to do the similar thing.

When many schools can conduct the water conservation education just like our idea, hopefully, a lot of children will be inspired to conserve water either at their home or school. The children's water conserving behavior will also encourage their parents to have more awareness about the importance of water conservation. The water conservation as a part of environmental education actually can be transmitted between generations and it will stimulate behavior change (Damerell et al., 2013).

What is the expansion of this water conservation literacy on children? Below are several ideas that may develop the water conservation campaign activity:

- Conducting water conservation-themed drawing and poetry contests. The contests' participants are children/students at grade 1-12 (Schaap & Van Steenbergen, 2001). The level of these contests can be local, national or international.
- Conducting a story telling contest among children and the contest theme is water conservation based on local wisdom. Actually in

Indonesia, as well as in Bhutan, there are numerous myths and legends about a huge tree that is prohibited to cut down. All huge trees that grow near a source of water are believed protected by spirits. Those trees are treated with fear and then be respected. It is highly believed that if someone cuts down those trees, sickness even death would befall him or her. Actually this kind of belief has helped to protect the source of water for many rural communities in Bhutan (Dorji, 2009), China (Hamilton, 2002) as well as in Indonesia. This story should be introduced to children in order to develop their awareness that water is precious and should be respected.

- Conducting trainings for teachers to develop their knowledge, skills, and method to teach children about water conservation (Schaap & Van Steenbergen, 2001).
- Children are asked to find and report water leaks in their neighborhood. This activity has been implemented in Mexico. It is called the Water Conservation Program (Schaap & Van Steenbergen, 2001).

## CONCLUSION

The objective of this essay is to explain the importance of stimulating the awareness on water conservation among children through writing and drawing method. Children should be stimulated since they are in the pre-contemplation phase i.e. they do not aware that fresh water is precious and limited in quantity (Morris et al., 2012). Several water conservation strategies may be conducted such as creating essays illustrated with children's drawing. The essays then are adhered at the school wall magazine and also be published at the school website. Other interesting strategies are conducting various contests such as drawing, poetry reading, and storytelling, under the water conservation theme. Those children's work can be published in other media such as T-shirt, calendar, book illustration, and news paper. Actually, the children's works are precious resources for water conservation campaign. Their works are obviously understood by other children. Children may have different language with adults when explaining difficult and important issues such as water conservation.

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