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diterbitkan oleh  
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**Universitas Surabaya**

**10<sup>th</sup> Pusham**  
**Ubaya**

# **ENVIRONMENTAL EDUCATION AS PART OF HUMAN RIGHTS EDUCATION**

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## **Introduction**

Nowadays, "pollution" has become a very common condition if we live in a big city. We can find pollution almost in every corner of our lives, such as air, noise and water pollution. Even the domestic garbage has become a very big problem if we do not have recycling system. The growth of the world's population is the main factor that contributes to the degrading of the natural environment. More people mean more food, energy, houses, and roads. Then it will lead to increase the number of industries, farming and power generation which is seriously damaging the environment and making the environment unhealthier for the humans, animals, and plants to live in it (Gray, 2000).

Based on this condition, environmental education has become part of the school curriculum in most develop countries. For example, in England and Wales, environmental education is not taught as an independent subject but all subjects have to show some contribution to raise pupils' awareness of the environment (Scott & Oulton, 1998). So far, for developing or less developed countries, environmental education is not part of the school curriculum. For example in Indonesia, there are some researches on the issue of entering environmental education in the school curriculum but it does not happen until today.

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In Indonesia national school curriculum environment issues are part of the science education. As explained by Wahyudi (2004) in his research, based on curriculum 1994, in primary school, science education is introduced at the beginning of year 3. The purpose of this is more or less to give information through observation of various and modified environment. For the secondary school, science education consists of physics and biology and the general purpose of these lessons are to enable students to understand scientific concepts and can use it to fulfill human needs. There is only one point which is mentioned about raising students' awareness about environment sustainability.

If we compare this curriculum with the oldest version, there are more points explained about student should be responsibility of environment and love nature as part of God's creation (Seumahu, 1987). From Wahyudi's research on rural and urban areas of secondary schools in Kalimantan Selatan (South Borneo), he found out that the teacher is more likely to teach about science inside classroom although South Borneo is wealth with natural resource, such as rain forest, river, mountain and other diversity of plants (Wahyudi 2004). This finding is similar with Seumahu's research in Ambon (Nusa Tenggara Timur island), that the syllabus for teaching science education is highly centralized and does not allow for sufficient adaptation of syllabus concepts to the local environment. In this case, students do not aware of their own environment (Seumahu, 1987). Both this research shows that the curriculum does not make any significant contribution to raise students' awareness of the environment. Instead, the curriculum gives only basic knowledge of science and do not use any local issue for teaching about environment.

According to Keiny and Zoller, there is a different in the emphasis of "classical" science education and "contemporary" environmental education (Keiny & Zoller, 1991). We can see the differences of these two subjects from the table below:

Table 1: Comparison Between "Classical" Science Education and "Contemporary" Environment Education

Science Education	Environmental Education
1. "Knowing" – concerning the state of the art in the disciplinary subject-matter studied.	1. "Relating to" and "Deciding" – concerning pressing inter-disciplinary environmental problems.
2. Position is characteristically rationalist, quantitative, abstract, atomistic and static.	2. Position is inclined to be intuitive, qualitative, concrete, holistic and dynamic.
3. Emphasis on the theoretical at the expense of the practical.	3. Emphasis on the practical at the expense of the theoretical.
4. Striving for the 'pure' scientific truth (the "right" solution) without concern for practicality and applicability.	4. Awareness and concern for implied short- and long-term consequences of any "best" possible solution.
5. Using the scientific principles, concepts and conceptual schemes for explaining the universe.	5. Using the scientific principles, concepts and concept schemes in their "technological" sense; i.e., for influencing the direction of change and development.
6. Dealing with isolated phenomena (and 'problems') from a disciplinary point of view; exact 'neutral'; and impartial analysis of facts.	6. Dealing with actual problems in their real context; inter-disciplinary system approach in analysis.
7. Only one correct solution is possible for a given problem.	7. Many resolutions are possible contingent on value –judgement considerations.

Source: *Conceptual issues in environmental education*, edited by Keiny & Zoller

We can see from the table above that the purpose of environmental education is not only enriching the knowledge of student with basic information about environment but also how to act to find the possible solutions. This idea is also supported by Kath Murdoch (1993) based on her own experience as primary teacher and lecture of education in University of Melbourne, that: "Environmental education encourages children to reflect on their learning and to develop the skills to act on what they have learned."

From the above explanation, it seems that science education in Indonesia is what Keiny and Zoller called as the "classical" science education. Teachers only give the students basic information about environment without any activities which directly relate to the environment itself. In reality, students can see many actions contribute to the environment problems, such as littering in public facilities, polluted rivers, and unhealthy drinking water. Therefore, the need of raising students' awareness of the environment should be start quickly.

The efforts of raising students' awareness of the environment have been done by some NGOs in Indonesia. One of the efforts had done by Center for Human Rights Studies at University of Surabaya in 2001. The center held a project called "Better Environment for a Better Life". In this essay, we will describe and analyze this project. We choose this project because it tried to educate students about environment and also child rights.

## **Background information about project**

This project was carried out for students from Junior High School in some areas in Surabaya and Gresik. There were seven public schools

involved in this project. Each school represented by three students which were chosen by the school itself. These schools were became the choice of this project because they located near the river bank and also based on the observation on the pollution level of each river. In details:

Table 2: Pollution Level

Name of School	Pollution Level
Wringinanom, Gresik	Not Polluted
Bambe, Gresik	Medium Level
Driyorejo, Gresik	High Level
Jambangan, Surabaya	Medium Level
Kedung Baruk, Surabaya	Medium Level
Medokan, Surabaya	Medium Level
Kenjeran, Surabaya	High Level

Gresik is one of the regions in East Java which has high economic growth rate. It is divided into seven sub-district area. Three schools were involved in this project are located in Wringinanom sub-district (Wringinanom Junior High School) and Driyorejo sub-district (Bambe and Driyorejo Junior High Schools). This region is known as industrial town. The name is given because there was a major contribution from industrial sector to this regency (48,5% in 2000 and 48,16% in 2001). 420 big and middle industries are located in this regency and this number will increase in the future. The local government thinks that this is a good opportunity for this regency because the industry can give job for the local people. According to the local government list, in

Wringinanom, there are 28 companies/industries and in Driyorejo, there are 133 companies/industries (*Gresik on History*). The existence of the companies/ industries in this area has a direct relation with the river pollution. There are many industries dump their waste on the river without recycling it first.

As for Surabaya area, it is very different story. Surabaya is considered as the second big city in Indonesia after Jakarta (the capital city). Many people move to Surabaya to find a better job or better life. Yet, they deal with a very busy city which cannot hold many migrants from out of town. Surabaya is divided into four parts, which is South, East, North, and West. In each part there are some sub-districts. The four schools are located in three different sub-district which are Kenjeran sub-district (Kenjeran Junior High School), Jambangan sub-district (Jambangan Junior High School), Sukolilo sub-district (Kedung Baruk Junior High School) and Rungkut sub-district (Medokan Junior High School). Like any other big city, Surabaya deals with the fast growth of population. The comparison between the amount of the people and the land is not balance anymore. We can see from the four sub-districts where the schools are located:

Table 3: Population Density

Name of Sub-District	Wide	Number of people per 1 square kilometer
Kenjeran	14,42 km <sup>2</sup>	9144
Jambangan	4,19 km <sup>2</sup>	9364
Sukolilo	23,69 km <sup>2</sup>	4227
Rungkut	21,08 km <sup>2</sup>	5279

By looking at this number, we can imagine the population density in this city. Many people mean more garbage and people tend to throw their garbage into the river. The reason is there is no recycling system for the domestic garbage. Besides, we should also remember that many people mean many needs. More people need land to build their houses. Many children need education and playground. Many people need work. So the land is used not only to build houses but also for building school, office building, shopping centers, parks, parking lots and many other things. This is one of the reasons why many houses or school area built near the river banks.

## **Detail Activities of the Project**

The purpose of this project is to raise students' awareness of their environment (whether it surrounds their school or even surround their house). It is hope that this project will influence the behavior of these students and also make them understand that environment should be taken care for the future generation. In order to achieve this goal, Andragogy method was used in this project. According to Knowless, andragogy is premised on four crucial assumptions about the characteristics of adult learners that give students a self-concept, experience, readiness to learn, orientation to learning and motivation to learn (Smith, 1999). The method is different from pedagogy methods. We can see the differences of these two subjects from the table below:



Table 4. Comparison of The Assumptions of Pedagogy and Andragogy Following Knowles (Jarvis 1985: 51 in Smith, 1999)

	<b>Pedagogy</b>	<b>Andragogy</b>
The Learner	Dependant. Teachers directs what, when, how a subject is learned and tests that it has been learned.	Moves towards independence.  Self-directing. Teacher encourages and nurtures this movement.
The Learner's Experience	Of little worth. Hence teaching methods are didactic.	A rich resource for learning. Hence teaching methods include discussion, problem-solving etc.
Readiness to learn	People learn what society expects them to. So that the curriculum is standardized.	People learn what they need to know, so that learning programs organized around life application.
Orientation to learning	Acquisition of subject matter. Curriculum organized by subjects.	Learning experiences should be based around experiences, since people are performance centered in their learning.

Source: Andragogy, Smith, 1999

The participants in this project, as it is mentioned before, are students from seven Junior High Schools. Each school sent three students representative to involve in this project. The role of these students was to find other students who interest in joining this project for about four months. Since this project is not part of the school curriculum, the activities should be done after school or on Sunday. There are two types of activities: indoor and outdoor activities.

The indoor activity is two days training for students' representative. The main purpose of this training is giving information about environment problems, such as what are the causes, how we can reduce it and how important are the natural resources for human being. Child rights are also introduced in this training in order to know whether the students are familiar with these rights or not. The students are accompanied by their teacher because this activity is held out of town. From the report of this project, it is shown that the existence of the teacher really influences the process of the training (Noeswantari, 2002). Students do not feel freely to share their opinion or say something. The students still see their teacher as the one who control the session and teacher is one who has the authority to speak out. Although the trainers try very hard to break the silence, only a few students dare to speak out their opinion. Actually, students understand and have some ideas on both subjects (environment issues and child rights). This is shown when they fill out questionnaire after the training. After training, students representative have a responsibility to ask other students, as many as they can, to join the outdoor activity.

Outdoor activities are carried out after the training in order to see students' responses and also how many friends they can ask to join this project. There is an interesting increase in the number of students who involve in this activity. The students' representative is not only able to ask their school's friends to join but also other child from their neighborhood from different school. In averages, the number of the child is doubled.

The outdoor activities divide into three activities. The first activity is writing an essay based on the poster from the trainer. The poster is about "The Unhealthy River". Students are asked to choose one interesting topic based on what they see in the poster and write an essay about it. The purpose of using this poster is to reflect the students' opinion on the river's condition near their school or their house. Several opinions which are then shared by the students based on the poster are:

1. River is polluted by community who use the river. There are some activities which contribute to the pollution, such as some people throw their garbage to the river and factory dump the waste on the river.
2. Pollution in the river becomes worse because there is no awareness from the community about cleanliness and environment conservation.
3. There is a need to make the community aware of the environment so they do not throw their garbage on the river anymore.
4. Community needs an efficient and effective technology to recycle the garbage.

5. Government should make a firm regulation and sanction to punish whoever dumps garbage or waste on the river (individual or factory).

From this opinion, we can see that the students have a clear understanding on maintain their river. All students who live in Gresik area said that they motivated their family members and their friends not to throw garbage on the river anymore. Even, two of the students have an argument with their mother because they do not want to throw the garbage on the river. These two students feel that their mother does not appreciate their opinion because child should obey their parents. They feel that this condition is not always true because children can also have their own opinion. In this point, they are true. Based on article 12 of the Convention on the Rights of the Child, a child can freely to express opinion especially concerning with their own life. In this case, throwing the garbage into the river has a direct effect for the child because sometimes the child uses the water too.

The second activity is taking a picture. The trainers ask the students to take a picture around their neighborhood about any activities which have relation with the project. The purpose of this activity is finding how the students can reflect the poster with the reality. After taking the picture, the students should state the reason why they take the picture and what they find out about the activity whether it is damaging their environment or conserving their environment. Some interesting reflections of the pictures are:

1. Recycling used goods
2. Many factories dump the waste to the river
3. River become garbage trash

4. Some people still are using the river to defecate and it is also polluted the river.
5. There is no awareness on environment conservation and people do not consider that what they do now will affect the future generation.

These pictures' reflections show that the students really understand what happens around their neighborhood. They know something should be done and they want to participate in maintain the healthy condition of the river. Unfortunately, the parents or community leader think that they are a small child who does not understand anything.

The third activity is three day exhibition of all the pictures that students are taken. This activity will also follow by discussion between the students and the local government on topic of healthy river. This exhibition is held in one of the shopping mall in order to raise other people awareness on what happen in their city. Sadly, the comparison between the number of the shopping visitors and the number of people who really stops by to look at these pictures is not balance. Many people are only passing by the exhibition area not even steal a glance.

In addition to all of these activities, there is also two days training for the teachers' representative from the seven chosen school. Yet, only a few teachers show up to follow the training. Even in the first day of training, two teachers leave the room before the training ended. It seems that environmental education does not an interesting topic for most of the teachers.



## **Advantages of the project**

All the activities in this project are contributed a certain degree of understanding for the students. The training for the students is a good activity in which students can have much information that they need in order to apply it in their life. This flow is similar to taxonomy of education objectives which is known also as Bloom's Taxonomy. In Bloom's Taxonomy there are six steps of learning (Coil 1999). It is started with remembering (acquiring and/or learning factual information) and understanding (understand the information on basic level). This step can be seen from the training where the students learn about information related to environment issues and child rights. The students' ability to fill out the questionnaire reflects their understanding on both subjects. The next step is applying the information in a new context and analyzing or examining the information in detail. This is shown through the students' discussion about the "Unhealthy River" poster and the essay that the students write about this poster. The last two steps are evaluating and creating. According to Bloom's Taxonomy, in evaluating steps, student should be able to judge the value of something. This ability reveals in their concern of the community behavior of polluting the river. The students also make some suggestion such as planting more trees around the river to stop the river from flooding. The trees should be able to produce some fruit so the community can use the fruit or sell it. This idea is simple but very genuine and this is part of the creating steps (ability to express original thoughts) in Bloom's Taxonomy.

The fact that there are two types of activities is also good for the students. The students can directly connect with the real condition by

the outdoor activities. In environmental education, outdoor activities are really important for student so that student has an experience and learning from it. In Australia, the outdoor education has been used by many teachers. The teachers said that it can enhance teaching and learning in all curriculum area. Moreover, learning can be more effective if first-hand experiences are included especially for the environmental concepts and issues (McRae, 1990). Based on McRae's opinion, by using outdoor activities, both teachers and students explore the learning materials and enjoy the discovery together. The teachers and the students are sharing the joy of working the learners-way; they could learn together. In this situation, teachers and students become co-learners. Besides, students learn to make choices and participate in the decision-making process about projects and rules of conduct. They have the freedom to express their opinions and learn the give and take of conversation. Cooperation is the hallmark of interactions as children develop a sense of independence in moving from one task to another. Their confidence extends to their interactions with adults and they connect their school learning freely with the outside world. Sharing the responsibility for laying down rules of conduct and inculcating positive ways of communicating relieves the teacher of the strain of keeping control.

Actually, the pictures exhibition and discussion with the local government is a good exercise for students. The students have a chance to express their opinion and asking questions to the authority. This chance is very rare for them. Also, this activity makes them feel proud of what they can contribute as a child for making a better environment for a better life.



## **Flaws of the project**

There are several things that makes this project does not able to achieve all the purposes. The length of the project is too short to giving all the importance information regarding environment issues, child rights and the relation between these two subjects. The trainers could only give questionnaire to find out about the students' familiarity with child rights. There was not enough time for finding out more on how the students can implement their rights in the family.

The fact that the project is not part of the school activity is also limited students time in joining the activities. Sometimes, students should sacrifice their time for playing in order to follow the activity of this project. This is an irony condition. One of the purposes from this project is introduced child rights to the students so that they know what their rights are. On the other hand, this project violates the child's right which is the right to have a leisure time (in this case to play or do other activities after school).

The minimal involvement of teachers, parents and the community are also reducing the successful of this project. Teachers, parents and the community are the support system for the students. They should become part of the students' activities so that they can help students to achieve the goals. If not, they will become the obstacle for the students. For example, when one of the students told the teacher which factory dump the waste into the river, the teacher got angry. It turns out to be the factory is one of the biggest donations for the school.

From the description above, we can see that the need on environmental education and human rights education are really urgent. Many environment problems emerge everyday around the students

neighborhood. Most of the adult (teachers, parents, and community) do not regard children as an individual who also has the rights as adult. Schools in Indonesia should start to insert the environmental education and human rights education into the curriculum. The success of these two subject need a systemic approach from all support system surround the students. This is not an easy effort. Even country like Norway faced many obstacles to insert environmental education into their national curriculum (Benedict, 1999). There are some experiences which we can learn from the Norway. The effort of inserting the environmental education or human rights education should come from the higher mandate, in this case from the Ministry of Education. After that a curriculum guideline should be made about the two subjects. School's principal has a responsibility to integrate this curriculum guideline in order to help teachers in the implementations. Training for teachers should also available to help them have a better understanding in these subjects. In doing this, schools also need the support from actors outside the schools. These actors can be public or private institution or NGOs which have much knowledge and better understanding about these subjects. By doing all this efforts, students will have much benefit in their life and also the future generation.

The notion, that environment as the place where people live, can make teachers easier to teach both environmental education and human rights education as one subject. In human rights, there are also some rights which relate with environment, such as right to health and right to life. In this project, students find out many incident relate to right to health, such as:

- Community throws garbage into the river but they are still using it for their daily needs.
- Some of the students have skin disease after swimming in the river.
- One of the students said that there are some rice plantation cannot be productive anymore since many industries built surround it. Then this student wonder what they will eat if the rice plantation cannot produce rice anymore.

These three examples show that environmental education has a close connection with human rights education. The purpose of environmental education is really specific but we can still put it as part of the human rights education because both subjects are talking about the same actors which is human being.

## **Conclusion**

To summarize, the idea of teaching environment and human rights issues should be start right away in order to eliminate more damage to environment and also to stop any violence acts in the future. The project "Better Environment for a Better Life" is one example of raising student's awareness on environment and human rights issues. From the explanation above, we know that this project succeed in raising students' awareness about their environment. Yet, it does not reflect much about the progress on introducing child rights to the students and whether the students can implement their rights in the family or not.



Although the trainers faced some obstacles during the project, their experience can be used as a lesson for other people who want to try this kind of project. The fact that the involvement of teachers, parents and community as the children's support systems should not be left out is also important to remember. In other way, we can say that the most important thing is the willingness to change from schools, local government, and the community so that this kind of project can run smoothly.

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