

Maulana et al., 2015

Volume 1 Issue 1, pp.31-43

Year of Publication: 2015

DOI- <https://dx.doi.org/10.20319/pijss.2015.s21.3143>

This paper can be cited as: Maulana, I., Maharani, C., & Aurisa, H. (2015). Anticipating Global Climate Changes by Using Ecopedagogy in Historical Studyin Indonesia University of Education. PEOPLE: International Journal of Social Sciences, 1(1), 31-43

This work is licensed under the Creative Commons Attribution-Non Commercial 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

ANTICIPATING GLOBAL CLIMATE CHANGES BY USING ECOPELAGOGY IN HISTORICAL STUDYIN INDONESIA UNIVERSITY OF EDUCATION

Ikmal Maulana

*Departement of Historical Education, Indonesia University of Education, Bandung,
Indonesia*

maulanaikmal26@yahoo.co.id

Citra Maharani

*Departement of Historical Education, Indonesia University of Education, Bandung,
Indonesia*

citrama26@gmail.com

Halfiani Aulia Aurisa

*Departement of Historical Education, Indonesia University of Education, Bandung,
Indonesia*

halfianiaulia@gmail.com

Abstract

This article focused on the analysis of the study paradigm changes in one of historical subjects in Indonesia University of Education. Nowadays, historical study only focused on human activities in the past without seeing the human interactions with nature, and how the nature reacts to human being. It means that historical study which evolves nowadays is using anthropocentric paradigm which placed human being as the centre of life. Various disasters that happened

should change the way people see anthropocentric paradigm to Ecocentrism. Based on the conditions, one of the historical subjects in Historical Study Department in Indonesia University of Education in evolve historical study using Ecopedagogy through this approach, students are expected to have ecological intelligences such as empathy for all forms of life, embracing sustainability as community practice, making something that invisible become visible, anticipating unintended consequences, and understanding how nature sustains life. Based on the research conducted using Ecopedagogy approach in historical study, students can realize, and implement the importance of building a good relation with nature as shown by historical event.

Keyword

Anthropocentric, Ecocentric, Eco Pedagogy, Ecopedagogy Intelligence

1. Introduction

Nature is part of life. History noted that there was a change and sustainability caused by human and nature. Baesed on the development there are two factors caused the course of events occurring from time to time especially the natural factors of life. Understanding as well as experience about what is happening in the past is always related to how these communities see the changes that happened to the environment. Nowadays, climate changes is in a serious position. The global temperature is significantly increased, sooner or later it will caused the climate change. This is the real warning from the environment. Why is it so? It were due to human behavior in the past and it affects thing that took place today. In which an exploitation is the natural factor climate change today.

Climate has been a fundamental force in shaping human history. Year-to-year variations in the weather influence crop yields but more significantly major, long-term trends have affected the ability of humans to settle parts of the globe, influenced the way plants and animals are distributed and placed limits on the crops that can be grown. (Counting, 2007: 11)

It is needed peoples' self-consciousness in order to anticipate global climate change. In addition the self-consciousness can be obtained by learning process. The function of learning is transferring the value from the one whom doing learning activity. The result of learning is expected to make a better behavior for someone.

The real effort in raising public awareness of the environment or the problem of global

climate in Indonesia is through Environmental Education (EE) subject, which in the subject there are efforts to integrate environmental concerns and the value of learning at school. However, in order to raise awareness towards environment not only from the Environmental Education (EE) subject, but also can be integrated with all subjects, including teaching history.

Teaching history that have been developed in Indonesia is too focus on facts, so the learning activity is boring. Whereas according to Evans (2000, p. 152-160 cited in Supriatna 2007, p.10) the critical approach in learning history can be developed by adding some contemporary issues that is happened in the society, including the current environmental problem.

As a science history continues to grow. Within the more specific aspect, which generally describes the events of the past and evolved towards more complex than just a sequence of the past. The emergence of a new historical writing that The New History provide some varieties of new line in the writing history. Hence, the Orientation was changed from anthropocentric to be ecocentric oriented. The Ecocentrism emerge as human beings who have higher intelligence than the other creatures on earth feel entitled to what is available in this realm including controlling the realm for their own purposes (Supriatna, 2012). On the other hand, an Anthropocentrism is a perspective that puts the human being at the center of the earth caused environmental degradation of various regions of the world Chew (2001). However, with the development of writing new history comes the Environmental History. Environmental History is known in early '70s as well as other disciplines (Swidler, 2012). Environmental history is a branch that focusing on cultural history, the concept of direct interaction with the environment or humans and the environment. In this Inception, environmental history is the part of radical effort to reconstruct history from the perspective of minorities (Swidler, 2012).

Based on these explanations, it can be said that with the Emerging of Environmental History signaled a paradigm shift in teaching history from Anthropocentric to Ecocentrism. Ecocentrism is a view that puts nature with all its contents as the center, human nature can not be separated with the place where they stay (Supriatna, 2012). Global climate change is a climate change affecting human life. Based on the fundamental definition, global climate change is greatly affecting the spatial aspects of human life, because of the impact of changing human living pattern (space). Although this has been revealed for a long time, just some people who did the effort. It is supposed to do a prevention through a learning process by the younger generation.

Due to the nature of awareness to the younger generation, they are aware of the long-term impact of global climate change that must be overcome before the widespread impact. In relation to the global warming issue, if we look up to history study, it turns out there is a flow of the writing of the history of the Environmental History that has a related approach to address current environmental issues, called Ecopedagogy. In history, Ecopedagogy can be used as an approach for selecting learning materials and as a critical perspective that is relevant to postmodern thinking about the importance of learner autonomy (Supriatna, 2011).

Ecopedagogy approach can be used to understand the four laws that have not been written to maintain environmental sustainability, which are (1) All things always connect with each other, (2) All things will have benefits, (3) The environment knows what is best for, and (4) There is no something coming out of nothing (Foster, 2005). Thus, when we see how to solve the problems through learning, Ecopedagogy approach is relevant, because in it is contained the critical perspective of current environment associated with the past as a benchmark.

2. Discussion

2.1 The Realistic Condition in Learning History in Indonesia

According to Supriatna (2012, p. 123), argued that learning history just describe historical facts without giving a value in daily life, so Said Hamid Hassan said teaching history only an "ocean of facts". With the orientation of a curriculum that emphasizes the element of essential history, the teachers in Indonesia seem not have plenty of time and space to combine the learning materials to the realities of social life. They like being chased time for transmitting the learning materials of history in accordance with the syllabus that refers to an official document by using the curriculum *esensilis* or *perennials* as a body of knowledge to be transmitted or curriculum as an effort to achieve certain goals (curriculum as a product). According to Smith, (in Supriatna, 2012) in our curriculum, history teachers always do not have enough time to deliver learning material in accordance with the target achievement from the curriculum. As a result, teaching history at schools very instructional and expository because teachers and students have to achieve the target of the curriculum in the form of academic excellence as measured by behavioristic approach in accordance with the operational objectives (Supriatna, 2012).

With such a curriculum, history teachers just work with the objective purpose. They

mobilize their power just to reach the curriculum goals or academic purpose. The observation at the school where Teacher Students are teaching in front of the class, suggest that the students should be trained with some worksheets for students. The activities contains an objective questions and short answers of brief historical fact are often regarded as active learning. In fact, such activity is described a process to achieve the objectives outlined in the instrument behavioristic and positivistic be easily measured objectively. This activity make the history easy to understand because some students seems not attracted by history with comparing with other subjects as well as to burden them with having to memorize and recall a number of facts (rote learning) to be tested at the end of the learning activities. As a result, student activities to build attitudes and personality in the learning process cannot be seen by the teacher (Wiriaatmadja. 2002, p. 150). Therefore, the natural of history is considered by students as boring subject, the subject to memorize dates, or cluein accordance to the young's perspective is "hard to move on" subject.

2.2 Learning History based Anthropocentric

Along with the development of time, human nowadays are having higher intelligence compared with other living creatures on earth, and make human entitled to what is available in this realm include control it for their own purposes (Supriatna. 2015, p.2). This perspective called as anthropocentrism. Domanska (cited in Supriatna. 2015, p.5) defined "here is the attitude that presents the human species as center the world". Furthermore, Domanska in *Beyond Anthropocentrism in Historical Studies*.

"The attitude that presents the human species as the center of the world, enjoying hegemony over other beings and functioning as masters of a nature which exists to serve its needs. This attitude leads to speciesism (assigning different values or rights to beings on the basis of Reviews their species membership) and is related to the kind of discrimination that is practiced by man against other species." (Domanska, 2010).

In related to the statement above, Domanska mentions that the attitude of this anthropocentrism causes humans to enjoy the nature of hegemony (domination) over other creatures and serves as controller of nature are there to serve the needs of human beings. This attitude led to the emergence of speciesism (assigning different values or rights of beings on the basis of their membership of the species) and human discrimination against other living.

It can be said that the environment in this context is only rated as an object of exploitation

and experimentation for the sake of humans. Based on its characteristics, this paradigm tend to focus that only humans who have the right of domination and a vital role to change and set the pattern of ecosystem, while nature has no role for it.

Human interaction with the environment in the anthropocentrism is also deeply embedded in the culture of modern humans. The form of implementation of anthropocentric paradigms embedded in modern culture based on anthropocentrism. Anthropocentrism based history paradigm has the characteristics that learners are always proud of the technologies created by humans from time to time. An important point that is overlooked in this study is that technologies created by humans from time to time of course is the result of exploitation and human experiments on nature. Anthropocentrism history based paradigm still has the conventional learning pattern, where this study tend to forget that is nature as a part of life which has an important role in regulating the history on earth.

In its development, anthropocentric paradigm is supporting the actions of exploration and natural experiments carried out by modern humans. Ironically, anthropocentric paradigm based learning history is still used in the educational curriculum from the elementary level to high school in Indonesia and even the educational curriculum for University student. Actually anthropocentricis good as long as producing learners who can develop technological innovation. However, the problem is how anthropocentric paradigm is actually encourage learners to act and experimental exploration of nature unwisely. Based on the opinion of Sugiharto & Rachmat (2000, pp. 72-73) that the environmental crisis is happening today because of modern culture influenced anthropocentric perspective. Where this perspective generates patterns of human behavior that is exploitative, destructive, and do not care about nature. Perspective as well as the behavior of quite crucial impact on nature. The real impact of this is the existence of climate change is affected by global temperatures is increasing significantly.

Where in the 21st century, the global temperature will increase from earlier centuries, according to (2007, p. 391) "Forecasting future climate change is a diffucult bussiness ..."

"...The first is that climate change will be much faster in the twenty-first century than it was in the last few Decades of the Twentieth Century. There is no doubt that the level of carbon dioxide in the athmosphere will pass 400 ppm within the next ten years".

. "... An averange rise in Temperatures . in the twenty-first century of between 1.4°C and 6.4°C, although the mid-high attitudes will see rises about 40 per cent greater than this-between

7.9°C and 8.1°C".

Besides Ponting believes that climate change is happened to Polar Regions are. Furthermore, Ponting (2007, p. 394-395), "There is increasing evidence that climate change is now occurring on a far greater scale and at a far faster rate than any time in the past".

"There is now an accumulating amount of evidence that climate change in the Polar Regions has been far more dramatic than expected given the overall global IncreasedTemperatures only by about 1°C in the Twentieth Century. This evidence Reinforces the view that dramatic changes in the earth's climate may happen far sooner than had previously been assumed".

Based on the data above, we conclude that the anthropocentric paradigm is a conventional learning are not aligned with the problems of the present, which is already put nature not only as an object that supports the interests of human beings, but also as a thing that helped determine the human history in the past, the present, to the future.

2.3 Learning History based Ecosentrism

Ecosentrism is a part of biocentrism. Biocentrism take seriously every life and living things in the universe. All living things deserve consideration and moral concerns. Nature needs to be treated in a good way, regardless of whether it is worth to human beings or not, because every life on this earth should be protected and saved. (A. Sonny Keraf 2010, cited in Firdaus).

As a continuation biosentrism, Ecocentrism often equated with biosentrism, because there are many similarities between this theory, which is important in protecting and saving nature. But both these theories there is a difference, namely in terms of ethics, the ethics biosentrism expanded to include the biotic community. While on Ecocentrism's ethics expanded to include the whole ecological communities. (Sonny Keraf 2010 in Firdaus).

Aldo Leopold proposed article entitled A Sand County Almanac, Leopold said that:

"That actions are right insofar as they have a tendency to preserve the integrity, stability, and beauty of the biotic communities. Also Leopold talks about the value of respecting and protecting species, particular places, wild predation, evolutionary history, ecological energy circuits, wilderness areas, and land health. "(In Wood. 2010)

Based on the statement, Leopold states that a person's actions is right when they can hold the tendency to preserve the integrity, stability and beauty of the biotic community. Leopold (in

the Wood. 2010) added, it is important for people to respect and protect other living, a life, wild predation, evolutionary history, ecological energy circuits, wilderness areas, and land health. This ideology is the foundation of Ecocentrism.

History records that basically Ecocentrism been applied by humanity during the ancient civilization, natural environment with all its challenges considered as chance to generate creative and innovative action of technology that can support human life. Nature is regarded as a part of human life. Therefore, at the time that humans have the confidence to live in harmony with nature that does not threaten as human life (Supriatna, 2015, p.2).

In this Ecocentric paradigm, if implemented into learning activity, especially learning history will certainly associate the events that happened in the past with the current time in accordance with constructivist. The implementation of the learning activity, then ecocentrism implied into Ecopedagogy.

In history, Ecopedagogy can be used as an approach for selecting learning materials and as a critical perspective that is relevant to postmodern point of view about the importance of learners' autonomy (Supriatna, 2011). Thus, when we look at how to solve this problem through the learning process, it can be found that the approach of Ecopedagogy is relevant, because it is contained the critical perspective that is supported by the autonomy of learners to present environmental issues associated with the past as a benchmark.

Ecopedagogy approach contained in the Environmental History. However, with the development of writing new history, comes what is called the Environmental History or Environmental History. Environmental History is known to get in on the early '70s as well as other disciplines (Swidler, 2012). Environmental history is a branch that focusing on cultural history, the concept of directs interaction with the environment or humans and the environment. In this Inception, environmental history is the part of radical effort to reconstruct history from the perspective of minorities (Swidler, 2012).

Hence, there is an excess of the explanation of the Ecopedagogy approach, such as:

- It can be used as an approach for selecting learning materials and as a critical perspective that is relevant to postmodern thinking about the importance of learner autonomy (Supriatna, 2011).
- Ecopedagogy approach can be used to be used to understand the four unwritten laws

protecting the environment, are (1) All things always connect with each other, (2) All things will have benefits, (3) The environment knows what is best for, and (4) There is no something coming out of nothing (Foster, 2005).

- Ecopedagogy approach is an approach that is relevant, because in it is contained the critical perspective that is supported by the autonomy of learners to present the latest environmental issues associated with the past to serve as a benchmark.
- The real implications of the existence of The New History.
The terms of the teaching ecocentric history as follows.
- Using ecopedagogy approach.
- Teaching materials which contained rich teaching materials will be constructed into thinking material for learners.
- Environmental conditions or spatial become the main study in learning ecocentric history.
- There is a comparison aspect between the current time and the conditions that existed in the past.

3. Ecopedagogy-Based History

Ecopedagogy-based history teaching aims to prepare students to have an ecological intelligence, by understanding of sustainable development, the understanding of limited natural resources, and the ability to adapt and live in harmony with nature. The development of science today, requires educators to provide material pursuit is not only limited to the development of students' knowledge, but also how the knowledge can be meaningful for students, and how that knowledge can solve the problems that occur today such as the Global Climate Change. Because one factor why this climate changes continues to occur because of the lack of awareness to understand the importance to protect environment. One of the most fundamental effort in order to sensitize the society is through education, including the History education.

According to Hasan (2012) history leads to in-depth understanding of historical events that are important to build critical thinking skills, learning ability, curiosity, nationality and social concern. One symptom of this social concern is also cares and respect nature because nature cannot be separated from human life. To improve it and to anticipate the occurrence of global climate change should be developed based on historical learning ecopedagogy. Ecopedagogy has been applied in the education department of the history in Indonesia University of

Education by integrating environmental values in the concept and history interpretation. Some concepts or interpretations used in this models as follows.

No.	Concept	Ecopedagogy's interpretation	Conventional History
1	Pre Script People	<ul style="list-style-type: none"> - The ability to adapt with nature - Live in harmony with nature - Disaster Smoke haze in Riau - Going by wise attitude using natural resources 	<ul style="list-style-type: none"> - Types of early humans in Indonesia such as Pithecanthropus erectus, Meganthropus paleojavanicus, homo sapiens, etc. - The style of community life pre characters, for instance the concept of nomadic, sedentary, and the technology they use.
2.	Ancient Civilizations	<ul style="list-style-type: none"> - Theory of challenge and response - The ability of people to life in harmony with nature - Comparing life in contemporary society along streams and rivers in urban areas 	<ul style="list-style-type: none"> - Pattern life incoherent various ancient civilizations in the world such as the valley of the Nile, the Huang Ho river valleys, the Indus Valley and Mesopotamia valley civilization.
3.	Industrial Revolution	<ul style="list-style-type: none"> - Impact of industrial revolution to the environment - Exploitation of natural resources in the industry - The use of fossil asa fuel for engine. - Consumptive Behavior 	<ul style="list-style-type: none"> - Understanding the Industrial Revolution - The development of the industrial revolution - The invention of the steam engine - Industrialization various fields

4	Imperialism in Indonesia	<ul style="list-style-type: none"> - Exploitation of natural resources and human resources - The form of economic colonization through consumer products based on natural resources 	<ul style="list-style-type: none"> - Colonization of the western nations in Indonesia - Cultivation - The policies undertaken by Western nations in the region
5.	Independency	<ul style="list-style-type: none"> - Freedom of the adverse effects of industrialization - Freedom of modern colonization - Freedom of unequal access to natural resources available in the local environment 	<ul style="list-style-type: none"> - Freedom of colonialism and Western imperialism. - Atomic bombs of Hiroshima and Nagasaki. - Establishment BPUPKI and PPKI. - Rengasdengklok Events. - The proclamation of Indonesia's independence.

Based on the table above, it can be seen that there is a difference between Ecopedagogy based with conventional learning that has been taking place in Indonesia. In conventional learning the teachers only describe historical facts so that learning activity becomes unattractive. In contrast to the teaching of history with Ecopedagogy based which not only describing the facts but also provide ecological values on the fact it makes history becomes rich and meaningful.

4. Conclusion

The conclusion is history not just focus on the exposure of facts, but must be accompanied by the inclusion of various contextual values, making learning activity more meaningful. The values of these contextual could be environmental problems that occur at today such as global climate change. Ecopedagogy-based history learning gives opportunities for students to be able to retrieve the value of how the nation earlier in life can be in harmony with nature, because according to the ancient peoples of the natural environment with all its

challenges can generate creativity and innovative invention in order to support human life. Nature is considered as a part of human life that should be preserved.

Ecopedagogy-based History has been applied to one of the subjects in the history department of Indonesia University of Education. By using this approach student began to understand the importance of protecting the environment, besides they realize to the negative impact if they are not able to live in harmony with nature. One implication is students are less consume energy for example by picking up the stairs instead of the elevator, opening the window rather than turn on the air conditioner (AC), turn off the lights when not in use as well as many other activities. It shows that the awareness of protecting the environment anticipate global climate change could be done by using the history through Eco pedagogy paradigm.

References

- Domanska, Ewa. (2010). Beyond Anthropocentrism in Historical Studies.[Pdf] Available in:
<http://ewadomanska.com/bibliografia/articles/>
- Firdaus, Azhar. (2014). Etika Islam dalam Melihat Alam.[Online] Available in:
<https://ui.academia.edu/AzharFirdaus/Posts>
- Hasan, Said Hamid. (2012). Pendidikan Sejarah untuk Memperkuat Pendidikan Karakter. Paramita Vol. 22 No. 1 - Januari 2012 [ISSN: 0854-0039]
- Sugiharto, Bambang dan Rachmat, Agus. 2000. Etika Lingkungan Hidup dan Pertentangan Politik. Jakarta: Kanisius.
- Supriana, N. (2011). Ecopedagogy DAN Green Curriculum dalam Pembelajaran Sejarah. Bandung, Seminar Nasional Pendidikan Sejarah, 18-20 Maret 2011.
- Supriatna, N. (2012). Penggunaan Konsep Ilmu Sosial dalam Konstruksi Sejarah. Paramita Vol. 22 No. 1 - Januari 2012 [ISSN: 0854-0039].
- Supriana, N. (2015). Green History, Belajar dari Pengalaman Historis Hubungan Manusia dengan alam. Artikel FPIPS UPI. UPI Bandung

Ponting, Clive. (2007). *A Green History of The World*. United States of Amerika: Penguin Books

Wiriaatmadja, Rochiati. (2012). *Pendidikan Sejarah di Indonesia, Perspektif Lokal, Nasional dan Global*. Bandung: Historia Utama Press

Woods, Marks. (2010). *Ecocentrism* [Pdf] available in: <http://www.sage-reference.com/view/greenpolitics/n38.xml>.