Improving the Understanding of Man-Ecological Dominant Concept in the Utilization of *Hutan Raya Pocut Meurah Intan* as Learning Source with Outdoor Study Method

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**Abstract.** The environmental damage is mostly caused by human beings, such as forest fires, landslides and floods. Human beings should maintain the environment because they are highly dependent upon the environment in meeting the needs of their life. In the area of Aceh Besar, environmental damage, especially in the forest, has been severe due to illegal logging. The research aims to improve students’ understanding of humans’ roles in maintaining the environment and human domination in contributing to environment damage. The aim will be achieved through understanding of Man-Ecological Dominant Concept in geography instruction using the method of outdoor study to Taman Hutan Raya Pocut Meurah Intan. The research use experimental method at Public Senior High School 1 Lembah Seulawah. The results shows that there is significant difference, namely 0.000 < 0.05, before and after the treatment for the understanding of Man-Ecological Dominant concept, and there is behaviour change in students who use outdoor study method and audio visual media. Students improve their understanding and can develop environmental awareness in utilizing the environment as learning sources. Based on this findings, it is recommended that more the utilization of environment as learning sources is more intensified to see the factual impacts of environmental damage.

1. Introduction

Environment is everything existed in this earth surface which can influence and meet the need of human life [1]. Space unity with all objects, abilities, conditions and living creatures including human beings influence the life survival and welfare of humans and another living creatures.

Human beings have various kinds of need in their life, and with science and technology human can control and change the environment. Today, humans feel that this nature is created for them, therefore nature should be conquered for their interest. As the time goes by, population increase will become complex problem for environment. Human need of life survival is increased but job vocation is increasingly rare, so it will invoke social problem such as poverty. Therefore, human will more careful and choose a shortcut by exploiting environment without seeing the impact which will be occurred. The excessive exploitation of environment will give negative impact to humans, for example forest destruction, the extinction of certain ecosystem, etc.

The problem of environment damage in Indonesia is increasingly worrying, the lack of humans’ awareness and responsibility in managing environment become the biggest factor which cause environment damage. Environment damage occurred such as natural resource degradation particularly
water and land, is indicated by water resource depletion (underground and surface water, both its quantity and quality), the widespread of critical soil, land productivity and the widespread of forest destruction (particularly because of encroachment) both mountain forest and coast forest (mangrove). Even the numbers of forest destruction in Indonesia is one of the highest in the world, a very ironical statistic, even though uniquely, the rate of deforestation or forest destruction in Indonesia in the last three periods showed declining, that is, about 2 million hectare per year in the period of 1980-1990 and then declined by about 1.5 million per year during 2000 – 2009, and decline again by about 1.1 million hectare in the period of 2009-2013 [2].

The environmental problem or these destructions are dominated and caused by human being such as technology development, population pressure and poverty. The population pressure which is increasingly high will be result in poverty. This because of less employment or vocation so it can cause environmental damage. The high number of population and poverty will make humans to search conversion lands as settlement, such as plantation and woods stealing to meet their needs of life. Because of that human activity, the lands which should be functioned as supporting area or have conversion function will lose its function after exploited for settlement area or such kind of thing so it cause environmental imbalance. Therefore, human beings can be said have not had awareness of environmental preservation.

Geography is a subject which study human beings and their environment in which one of its concepts is Man-Ecological Dominant concept. Man-Ecological Dominant concept stated that human being is dominant factor in ecosystem, and interaction between human and environment is frequently dominated by human beings. Geography concept become foundation to reveal the phenomena exist on the earth surface, so we can understand the cause-effect, functional relation, the process of geography problems and phenomena occurred in daily life in which one of concept is human as dominant ecology (Man-Ecological Dominant) [3]. By not considering the damages which will be occurred in order to meet the needs of life, humans exploit environment beyond supporting ability of the environment itself. Due to the dominant role of human in ecology system, human should remember that their dependence on environment is very big. The role of environment is very big for the existence of humans, so in their life humans should preserve the environment and should be wise in exploiting environment. In the other word, because environment give big contribution for human’s existence then environment should be conserved in order to give continuous advantage so human. As humans who have dignity and good moral, humans should maintain and take care of their environment continually so human’s life in this world become prosperous and safe [4].

The activity of geography learning in school can become one way to develop Man-Ecological Dominant concept through the utilization of environment in learning process. The transfer of Man-Ecological Dominant concept to students not only limited to knowledge but also in making them aware of wise attitude toward environment. Geography teachers are demanded to be able to innovate and creative so they can design learning source and then actualize them as learning media. To develop the awareness of Man-Ecological Dominant concept, geography teachers should utilize learning source existed in closest environment. It is expected that Taman Hutan Raya Pocut Meurah Intan is made to become learning source namely to recognize, improve understanding to local environment and students in order not being influenced by misbehaviour toward environment. So finally it will grow awareness and love to environment so it can be practiced in daily life such as not become greedy in exploiting environment, respecting, maintaining and socializing environmental preservation. The role of learning source in geography learning is very big. Teach source enable students to understand teaching material and the goal of learning will be achieved.

Environment is very important as learning source but most geography teachers in Aceh Besar Regency particularly in SMAN 1 Lembah Seulawah had not utilized it. Conceptually, environment has big role to be made to become learning source. One of learning sources which utilize the existing potency to understand Man-Ecological Dominant concept is Taman Hutan Raya Pocut Meurah Intan.
2. Methods
Design of study used in this study is Quasi Experiment Design. This design is used to find out cause-effect or result test of two groups namely Pre-Test and Post-Test which is done before and after treatment. Quasi experiment method is usually used to conduct study in class and school in order to find out cause-effect invoked from material, media and method in learning process.

The population of this study are all students in even semester in SMAN 1 Lembah Seulawah, 2016/2017. Sample used in this study consist of two groups, namely class XI1 with 22 students as control group and class XI2 with 22 students as experiment group. Data collection technique is by using test (items) of multiple choice distributed to students. The test administered in this study is pre-test and post-test.

3. Results and Discussion
The formulation of first problem answered in this study is “Is there difference of Pre-Test and Post-Test of students in SMAN 1 Lembah Seulawah by using outdoor study method toward the understanding of Man-Ecological Dominant concept in utilizing Taman Hutan Raya Pocut Meurah Intan?” As for the hypothesis proposed is There is difference in test result of students in SMAN 1 Lembah Seulawah by using outdoor study method toward the understanding of Man-Ecological Dominant concept in utilizing Taman Hutan Raya Pocut Meurah Intan as learning source.

The question of that problem formulation can be answered based on data of pre-test and post-test result score above, by using Spss version 20 for calculation. The following is the result of Paired Samples Test to find out the difference of Understanding Man-Ecological Dominant concept in students:

| Pair | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | t | df | Sig. (2-tailed) |
|------|------|----------------|-----------------|------------------------------------------|---|----|----------------|
| 1    | 29.54| 7.579          | 1.616           | -32.906 - 26.184                          | -18.2 | 21  | .000           |

Table 1 above showed that the value of Sig. (2-tailed) is 0.000 with degree of freedom is 21 and the value of t calculate is -18.2. Based on that value, in fact α is less than value of Sig. (2-tailed) that is 0.000 which shows 0.000 < 0.05 so H0 is rejected and H1 is accepted. Then it can be concluded that there is difference of test result in students of SMAN 1 Lembah Seulawah by using outdoor study method toward the understanding of Man-Ecological Dominant concept in utilizing Taman Hutan Raya Pocut Meurah Intan as learning source.

The result of finding and analysis by using statistic test showed that mean score of pre-test is 47.4242, and from 22 sample of study, it is obtained minimum score of 36.67 from 2 students whereas maximum score is 56.67 from 2 students. After given treatment in Outdoor Study class, post-test is given which obtain mean score of 76.9697. Based on 22 sample of study, it is obtained minimum score of 70.00 from 3 students whereas maximum score is 83.33 from 3 students. The result of Paired Samples Test calculation showed that the value of Sig. (2-tailed) of 0.000 with degree of freedom is 21 and the value of calculation is -18.2. Based on that value, α is less than the value of Sig (2-tailed) that is 0.000 which shows 0.000 < 0.05 so H0 is rejected and H1 is accepted. Therefore, it can be concluded that there is difference of test result in students of SMAN 1 Lembah Seulawah by using outdoor study method toward the understanding of Man-Ecological Dominant concept in utilizing Taman Hutan Raya Pocut Meurah Intan as learning source.

The result of finding and analysis above is strongly related to relevant literature study. As mean score increase of pre-test and post-test showed that Outdoor Study method by utilizing Taman Hutan Raya Pocut as learning source had been able to increase students’ understanding of Man-Ecological Dominant concept. This reflect that students remember well and understand what have been learned.
This prove Dale Cone’s Experience theory which stated that “people will generally remember: 10% of what they read, 20% of what they hear, 30% of what they see, and 50% of what they hear and see.”

Outdoor Study is an activity to deliver learning outside the class involving students directly with their surrounding environment, in accord with the material taught. Learning process by using outdoor study method can be used in certain materials in order to create active learning atmosphere for students, but the aim of learning should be achieved well. The aim of learning by using outdoor study method is to direct students to be able to develop their talent and creativity by providing setting in outdoor which very meaningful for the formation of students’ attitude and mental to increase their awareness, appreciation, and understanding toward surrounding environment. Learning by using outdoor study method also aims to give context in the process of recognizing social life in practical (real) world in order to introduce various activities outside the class which can make learning become more creative, and give important contribution in the effort to change students’ behaviour toward environment. Field trip/outdoor study method can develop students’ mental basic comprising sense of curiosity, sense of interest, sense of reality and sense of discover geography phenomena in field [5-8].

The implementation of learning in utilizing Taman Hutan Raya Pocut Meurah Intan to increase understanding of Man-Ecological Dominant concept by using outdoor study method have two stages namely preparation stage, implementation stage and follow up stage. In preparation stage, there are some steps which should be done by researcher, namely (a) make the plan of learning implementation (learning tools), (b) make pre-test and post-test items, (c) make students worksheet or LKS, (d) conduct initial study to location which will be utilized as a site of learning process and (e) enhance students’ skill in observing and responding, and (e) self-development in socializing. This outdoor study method not only applied in social studies subject, but also it can be applied in Natural Science subject. The research which is titled ‘increasing the understanding of energy resource concept through outdoor study learning method with this outdoor study method capable to increase students’ understanding of concept [9]. Learning by using outdoor study method run well because using direct learning in learning process so students can interact directly with environment. After observing, examining and studying this research elaborated above, if compared with this research, then it is known that the result of study is the same namely learning by using outdoor study method can increase concept understanding in students. However, it is undeniable that there are some obstacles in learning implementation by using outdoor study method, among others are (a) students’ concentration toward learning is disturbed because learning process is done in last hour of teaching and learning process and student had followed physical education subject before. (b) The filling of student’s worksheet which is based on group cause some groups only rely on their group mates, in the other word, not all group members are active.

4. Conclusions

Environmental damages are mostly caused by human beings such as forest fires, landslides and floods. It should be that humans maintain the environment because they are highly depended on environment in meeting the needs of their life. In the area of Aceh Besar, environmental damage particularly in the forest has been severe due to illegal logging. This research aims to improve students’ understanding of humans’ role in maintaining environment and their domination in contributing to environment damage. Through understanding of Man-Ecological Dominant concept in geography learning by using outdoor study method to Taman Hutan Raya Pocut Meurah Intan. The result showed that there is significant difference, that is, 0.000 < 0.05, before and after treatment in understanding of Man-Ecological Dominant concept. Therefore, it can be concluded that there is difference in test result of students’ understanding toward man-ecological dominant concept by utilizing Taman Hutan Raya Pocut Merah Intan as learning source in outdoor study class before and after treatment.

References
[1] Muhammin 2015 Membangun Kecerdasan Ekologis (Bandung: Alfabeta)
[2] FWI/GVW website 2017 [Online]. Available: https://www.wri.org/sites/default/files/pdf. (WABSITE)
[3] Pasya K G 2002 Geografi Pemahaman Konsep dan Metodologi (Bandung: Buana Nusantara)
[4] Siregar L 2009 Pemikiran Filosofis Yang Mendasari Pemeliharaan Lingkungan Hidup: Studi Kasus Banjir di Kawasan Cengkareng Jakarta Barat dan Banjir Kawasan Kelapa Gading Jakarta Utara Bumi Lestari 9 pp. 37-47
[5] Sumaatmadja N 1997 Metodologi Pengajaran Geografi (Jakarta: Bumi Aksara)
[6] Grace dkk. 2013 Pengaruh Metode Outdoor Study Terhadap Minat Belajar Siswa Pada Mata Pelajaran Geografi Kelas X Di Sma N 1 Mawasangka Kabupaten Buton Sulawesi Tenggara Social Science 1 pp. 1-10
[7] Sudarmi dkk. 2015 Penerapan Metode Pembelajaran Outdoor Study Terhadap Pemahaman Belajar Geografi penelitian Geografi (JPG) 3 pp. 1-9
[8] Behrendt M, Teresa 2014 A Review of Research on Shool Field Trips and Science Education ISSN 1306-3067
[9] Daryanto 2014 Peningkatan Pemahaman Konsep Sumber Energi Melalui Metode Pembelajaran Outdoor Study Didaktika Dwija Indria 2 pp. 1-5