ECOLITERACY PERSPECTIVE OF INSTRUCTIONAL IMPLEMENTATION OF GEOGRAPHY LEARNING IN ENVIRONMENTAL CONSERVATION EDUCATION

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ABSTRACT

The damage to the ecological environment is currently at an alarming stage so that concrete actions are needed to maintain, care for and preserve it. Concrete actions taken can foster awareness of the environment so that environmental damage can be minimized. As a literature study, this paper attempts to photograph the facts and phenomena of current environmental problems in the perspective of ecoliteracy and instructional development of geography learning. Using a descriptive method based on existing documents, articles and books, the development of this paper tries a multidisciplinary approach to cognate sciences, namely ecological studies and geography. The next finding is that the Environment-Based Curriculum is applied at the high school level by getting students to love the environment; have a creative stage as a place for students to learn outside the classroom; and apply education from geography subjects in everyday life.

Keywords: *ecoliteracy; geography; environmental preservation*

INTRODUCTION

The threat of environmental damage today, more specifically in the current post truth era, is a real challenge for the various efforts of the Indonesian people to get out of the ecological crisis that is engulfing the world. The increasing use of gas emissions from fossil fuels has become a global issue that has made Indonesia the center of the spotlight because its forest lands are still the mainstay of the world's lungs (Prihanta, 2013). Within that framework, it is important for geoliteracy education for the nation's generation, especially among the world of education, to always take moral and ethical roles and responsibilities in maintaining a sustainable and well-maintained natural environment (Soemarwoto, 2001).

Indonesia is one of the countries in the world that is experiencing ecosystem disturbances, either in the form of deforestation, pollution of sea water, rivers and lakes, and serious air pollution. As a result, there were floods, landslides, disease outbreaks due to water and air pollution, and even food crises due to pollution, pest attacks, and seasonal irregularities.

This situation is exacerbated by the leakage of the ozone layer and the melting of the north pole which can result in the sinking of some land in certain countries. In Indonesia, forests

are already in stage 4 state, where 3.2 million hectares of forest are destroyed every year, 39% of natural habitats are destroyed, and at the same time, 60% of rivers throughout Indonesia, are polluted. Meanwhile, 70% of coral reefs were damaged and the state lost IDR 300 trillion per year due to illegal fishing, the worst thing was that from 2009 to 2019, there were 5,650 people who died an average of 524 people per year (Rimbano and Rahma, 2019).

Responding to the above phenomenon, the Government of Indonesia and the international community have agreed on the importance of protecting the earth from pollution and damage. One of the government's commitments in protecting the earth from pollution and damage is implementing education for sustainable development (Sugandhy & Hakim, 2007). This commitment is considered the key in preparing the population with knowledge, skills, values and attitudes so that current development does not sacrifice future generations (MenLHK, 2013).

Solving problems of environmental management and maintenance is the responsibility of all sectors, one of which is by making optimal use of the education sector. The poor condition of environmental quality can be caused by the lack of knowledge of students about environmental protection and management. This is also evidenced by the authors' findings during field observations. The author found that there are still students who do not understand the importance of protecting the environment, such as the culture of throwing garbage carelessly. If allowed to continue, then a culture like this is difficult to change (Iskandar, 2014).

It is never too late to overcome and anticipate this worse situation. Efforts to maintain the sustainability of nature must be the moral responsibility of all humans on this earth. This endeavor departs from the basic understanding that a natural environment and a balanced ecosystem are the breath of life (Tapung, 2021). Thus placing nature in an equal position with humans, will make it easier for humans to see nature as a part of themselves that has influenced their lives. Encouraging environmental sustainability and sustainability leads people to the idea of a green civilization. In line with that, pro-environment education policies are also an important issue to always be elaborated on (Shinta, 2019). Green civilization is a civilization that is aspired to together, where a balance of natural ecosystems is formed, so that it has implications for preventing ecological disasters. One of the basic activities that can support the concept and practice of green civilization is to initiate ecoliteracy in every line of human life with three main activities, namely reading, writing and planting (Abdulah, 2021 in Tapung, 2021).

Geography is a science that can support life throughout life and encourage the improvement of a better and sustainable life. In the context of education, geography is an important subject for inculcating the values of love for nature and the environment (Soemarwoto, 2001). Therefore, geography needs to be developed through the educational process. With this, the science of geography has an impact on the development of an environmental philosophy that prioritizes harmonious relations between humans and the natural geographical environment that

surrounds them (Skolimowski, 2004). By continuing to echo positive efforts that encourage an ethic of socio-economic development based on the preservation of the ecological environment, it is hoped that there will be real control over the fact that tropical forest land is increasingly being eroded and coastal natural damage is being caused by the exploitation of mangrove forests (Ogino K. & Chihara M (eds).), 1986).

Scientifically, geography has approaches, methods and techniques as a general scientific discipline (Abler, 1977). One of them is the method of spatial analysis. Geography is a deep discipline and must be able to synthesize problems. The science of geography can help us to evaluate various policies related to the protection and management of natural resources and the environment, including policies for the management, utilization, development, maintenance, restoration, monitoring and control of the use of natural resources and the environment, both theoretically and practically (Downs, 2007). R. M, Heffron, SG, and Gallagher, SM 2012). Geography as an academic discipline has applied potential to increase understanding of the world and its contents. According to Haris (2012) Geography is a science that examines all aspects that exist on the earth's surface with spatial concepts for the utilization of existing development on the earth's surface. The results of this geographical study are directed to the interests of programs, processes, and the success of development. With a comprehensive understanding of its ethical concepts and tasks, geography in the framework of a geoliteracy perspective seeks to be at the forefront of encouraging positive efforts to maintain and preserve the living natural environment, particularly the forestry sector (Tambunan, 2019).

METHOD

This paper uses a literature study method. The data is collected from various sources or written documents, especially the latest works related to online learning, both in terms of media, approaches, methods, strategies and technical management of online learning from experts and educational practitioners published in the form of books, accredited journals. , as well as important writings, both policy documents and articles on digital-based education. Sources of data related to the latest ideas and thoughts can be found in various literatures in the form of books and articles, both printed and online, which are spread on various websides (elsevier, sage, google scholars, pdfdrive.com, online journals, seminars, conferences, etc.). .). The data analysis technique uses a descriptive analytical study (Kasiram, 2010). The author categorizes important themes in digital transformation-based learning systems and approaches and then conducts studies and analyzes by confronting various educational practices that have been and are currently taking place.

In this study, the author's methodological point of view is interdisciplinary. This means trying to photograph environmental issues from multidisciplinary cognate sciences, including ecological science related to ecoliteracy (Keraf, 2010) and geography which is also in touch with human spatial relations with their environment (Haget, 2001). Thus in the scheme of the method of developing

this study it can be said that Inter-disciplinary (interdisciplinary) is an intensive interaction between one or more disciplines, either directly related or not, through teaching and research programs, with the aim of integrating concepts, methods, and analysis.
Interdisciplinary approach is an approach in solving a problem by using a review of various perspectives of relevant or appropriate cognate sciences in an integrated manner. In solving problems in a particular issue, then with an interdisciplinary approach in one cognate science, it will enrich the perspectives and points of view of solving the problem that is being investigated, especially if it is applied in the education and learning process (Arikunto & Jabar, 2010).

Academically, interdisciplinary covers four fields, namely: knowledge, research, education and theory. Interdisciplinary knowledge involves the similarity of components from two or more disciplines. Interdisciplinary research combines components from two or more disciplines in the search for new knowledge, practice and artistic expression. Interdisciplinary education combines components of two or more disciplines in a single program of instruction (Cummings, 1989). Interdisciplinary theory takes interdisciplinary knowledge, research and education as its main object of study.

The Resulut Description and Discussion

Natural damage is currently in an alarming stage so that concrete actions are needed to maintain, care for and preserve the natural environment. Concrete actions taken can foster concern for the environment so that environmental damage can be minimized (Wulandari, 2016). This study is a scientific effort in describing the concern of every human being in education for the environment through various approaches, strategies and media. Therefore, this discussion is more focused on exploring a number of important aspects in environmental conservation education in the ecoliteracy perspective of geography (Keraf, 2010).

Despite increasing concern, environmental problems are getting bigger. This problem is documented in various international organizations such as the United Nations Environmental Program (UNEP), UNFCC (Climate Change) or UNDP. The problems facing the world include but are not limited to deforestation, pollution of water, soil, air, degradation of arable land, desertification, degradation of biodiversity etc. When the issue is confronted with the threat of climate change, the situation becomes even more complicated. The warming world and climate change will shake up ecosystems in all directions and layers of life on this earth (Soemarwoto, 2002).

Understanding the Definition of Environmental Conservation

Etymologically, the word "conservation" itself comes from the Latin word *conservare* which consists of two syllables, namely: *con* (together) and *servare* (keep/save) which has an understanding of efforts to maintain what we have (keep/save what you have). , but wisely (wise use). This term was first introduced by the famous American figure, Theodore Roosevelt (1902).

Meanwhile, according to Rijksen (1978), conservation is a form of cultural evolution where in the past, conservation efforts were worse than today. Conservation can also be viewed from an economic and ecological perspective, where from an economic perspective conservation means trying to allocate natural resources for the present, while from an ecological perspective, conservation is an allocation of natural resources for now and in the future.

When referring to its understanding, conservation is defined in several terms, as follows: first, preservation or conservation is an effort made by humans to preserve or protect nature (Joko, 2010). Second, conservation is the management of air, water, soil, minerals to living organisms including humans so that an improved quality of human life can be achieved. Management activities include surveys, research, administration, preservation, education, utilization and training (IUCN, 1968). Third, conservation is the management of human use of the biosphere so that it can provide or fulfill large and renewable benefits for future generations (WCS, 1980). Fourth, conservation is the active management of the biosphere which aims to maintain the continuity of species diversity, including the maintenance of biosphere functions such as ecosystem functions and nutrient cycles (Keraf, 2010). Fifth, conservation is the allocation of natural resources over time (across generations) that is socially optimal (Randall, 1982).

Lexically, according to the KBBI (2005), the term conservation is defined as preservation, conservation also has another meaning, namely: the activity of covering the inside of the ship's hull with a layer to protect it from rust. Thus, in general it can be said that conceptually, more specifically from the point of view of geography, the term conservation or what is known as preservation or protection is often clearly always associated with environmental problems such as conservation of natural resources, forest conservation, environmental conservation, water conservation, soil conservation, and so on. This is nature as a place for us to live and look for sources of livelihood, it is very important to maintain its sustainability and nature is very often threatened by its sustainability because of the actions of irresponsible people. From the several definitions of conservation above, it can be seen that the notion of conservation is an effort to maintain, manage and protect something on an ongoing basis to avoid its extinction and damage by making its use efficient (Soeryani, M Ahmad, R, and Munir, R., 1987).

While related to the understanding of the term ecoliteracy, this terminology comes from a combination of two words, namely ecology and literacy. The combination of words itself comes from the activity or movement of ecological literacy, which involves awareness of the importance of understanding the nature of surrounding and maintaining harmonious relations with the natural environment . Therefore, according to Wikipedia, the term ecoliteracy is translated from English-Ecological literacy is the ability to understand the natural systems that make life possible on earth. Being ecoliterate means understanding the principles of ecological community organization and using those

principles to create sustainable human communities.

Thus, ecoliteracy is an attempt to understand how important it is to preserve the environment, as Fritjof Capra said, ecoliteracy or environmental literacy is the ability to have high awareness of the importance of the environment and all its contents which must be used wisely.

Deforestation that has occurred to this day, from the forests of Sumatra to the forests of Papua, is one of the causes of ecological disasters, we are indeed able to dodge when ecological disasters such as floods and landslides occur under the pretext of high rainfall, but we can prevent these ecological disasters. if we put forward an understanding of environmental awareness and through ecological literacy.

Concept of Environmental Management and Preservation

The environment is everything that is around humans that affect the development of human life either directly or indirectly. The environment is a physical unit that includes natural resources that support the fulfillment of human needs. Meanwhile, according to Law no. 23 of 1997, the living environment is a unitary space with all objects and the unity of living things including humans and their behavior that sustains the life and welfare of humans and other living creatures (Sugianto, 2012).

The environment is the space occupied by a living thing along with living and non-living things. The existence of the environment is very important for human life. If there is environmental damage, human life will also be disrupted. Globalization and reform have had a major impact on environmental policies. The existence of globalization and reformation changes the values and mindset of making environmental policies (Sugandi, 2005)

Given the importance of the environment for human life, both central and regional governments issue policies concerning environmental management. In addition, community participation in maintaining and preserving the environment is very much needed because it is the community who are directly dealing with environmental problems. With development programs that are environmentally sound, it is hoped that in addition to the development itself, it is hoped that the environment will not experience a decline in quality (Sugiyanto, 2012).
In geography, the spatial dimension describes and compares the patterns in which environmental factors are located. Population distribution and availability of natural resources, for example, are variables that can be used in spatial analysis. Social injustice (spatial justice) is often the cause of spatial inequality, but the gap between geographical areas can also be the result of natural factors or environmental conditions (Sugandhy & Hakim, 2007).

Geography as a scientific discipline examines how the environment arises from natural processes, how society produces, regulates, and preserves the use and utilization of the environment. Included in this is the problem of how the community itself is influenced by the environment in which they are located. Thus, geography aims to study nature and humans and their interactions. The main focus of

geography is space and place with all its processes, both short and long term. The contribution of geography that focuses on space and the environment as the main idea in his study (Sugandi, 2005).

Studying geography from a spatial perspective can involve looking at two different geographic areas and environmental conditions (e.g. between Indonesia and America) in relation to certain variables (e.g. climate conditions). To identify the factors that can explain the hydrometeorological disasters in the two regions, spatial analysis can be used to identify the spatial conditions of the region, namely Indonesia (the Archipelago) and the Americas (Continent). Environmental factors in it will greatly influence the carrying capacity, capacity and resilience of the region. Because it is important all efforts to preserve the harmony of human relations and the environment. And, the perspective of geography supports the ecoliteracy movement as a unified idea to make the environment and natural environment sustainable and well-maintained. This is the important task of geography for the benefit of human life (Downs, Heffron, and Gallagher, 2012).

The Concept of Ecoliteracy in Efforts to Save the Environment

The United States Center of Ecoliteracy has developed four core ecoliteracy competencies (Setiawati, 2016, in Tapung, 2021), namely knowledge, skills, attitudes, and human relations with nature. Basically, all of these competencies are to improve all areas of learning for students, both knowledge, attitudes, skills, and human relations with nature. In knowledge competence there are several indicators, such as understanding basic ecological principles, being able to think based on existing problems, analyzing the impact of technology and human behavior, thinking about long-term impacts that will be obtained, and thinking deeply and critically about a problem.

As for attitude competence, the indicators are the emergence of a sense of empathy and care for the environment, instilling an attitude of respect for the environment and its contents, and holding firm to be fair, not taking the rights of others for personal gain. Indicators for competency skills, such as creating tools needed by the community, utilizing existing resources by paying attention to ecological principles, and using existing energy as well as possible. Competence in human relations with nature, the indicators include impressive and admiring experiences of nature, respect for nature and all its components, always being grateful for beautiful environmental conditions, and feeling close to nature and committed to protecting it (Scolimowsky, 2004; Soemarwoto, 2001).

Ecoliteracy becomes important as a basis in developing environmental-based education. Ecoliteracy is a space to build collective awareness to play an active role in protecting and caring for planet Earth, which from a global perspective is very small. In this case, nature is no longer seen as an environment in se, but as a space that gives meaning to life (lebensraum). Humans have become an inseparable part of their environment (Skolimowski, 2004). Throughout their life, all humans become an inherent part of their

environment. Humans will never be able to separate themselves from their environment, and always need the environment for their survival. On the other hand, it is a moral imperative, humans need to explore all things related to the environment and understand the needs of nature, in order to be able to continue to survive comfortably with the environment.

Implementation of Ecoliteracy Learning the Framework of Geography

In the end, the scientific endeavor from the ecoliteracy perspective in the special study of geography must be able to move the awareness of the parties, especially human learners to understand their duties and responsibilities in dealing with their natural environment. In this dimension, the crucial point of ecological damage is returned to human subjective behavior to maintain and preserve it (Anwar, 2010). At this point there needs to be an implementation of ecological learning, in this case, according to the topic of this study, an ecoliteracy perspective that must be translated into education and learning at the education unit level at all levels, especially at the secondary school level which has a special subject of learning geography (Wulandari, 2016) In developing the geography learning framework, a number of factors that directly or indirectly affect the shape of the geography learning framework are considered. In theory, Glaser divides the four parts of the learning framework from which each subject becomes different from one another. The four parts are aspects of Instructional Objectives, Entering Behavior, Instructional Procedures, and Performance Assessment (Rusman, 2010). Instructional Objectives, namely the learning objectives to be achieved. Entering Behavior, which describes the level and potential of students before instruction begins. Instructional Procedures are learning procedures that are in accordance with the learning objectives and subject matter to be delivered to students. This procedure includes the use of learning media, learning models, learning approaches, learning strategies, and learning methods that are oriented towards activating students in learning activities, and Performance Assessment, which is an assessment of student performance after the learning process (Glazer, 2001).

Instructional Objectives in learning geography as explained above are so that students have an understanding of spatial, environmental and regional patterns, as well as processes related to geospheric phenomena in national and global contexts (Prihanta, 2013). In the aspect of skills, students are expected to be skilled in obtaining data and information, applying geographic knowledge in everyday life, and communicating it for the benefit of the progress of the Indonesian nation. In the aspect of attitude, they can display caring behavior towards the environment and utilize natural resources wisely and have tolerance for the nation's cultural diversity (Soemarwoto, 2001). How are the details of the objectives of learning geography, we can review them in the Core Competencies and Basic Competencies of geography subjects as described previously?

Entering Behavior describes the level of development of students before learning begins. Aspects of entering

behavior include students' prior knowledge before learning, intellectual ability, motivation, and social and cultural background (Rimbano, Dheo and Mutiara Rahma, 2019). Entering behavior in the Geography learning framework is a child at the senior secondary education level, namely SMA/MA with general characteristics that have psychological maturity that has been able to understand, apply, analyze and evaluate factual, conceptual, procedural, and metacognitive knowledge. In the motor aspect, students at the SMA/MA level have been able to process, reason, present, and create in the concrete and abstract realms.

Instructional Procedures used in learning geography are in accordance with applicable regulations, namely using a scientific approach or science process in developing environmental education-based curriculum (Abdullah & Halim, 2010; Adam, 2014)) which consists of five main steps, namely:

Observing is an active learning activity for students to gain learning experiences from their environment through the senses of sight, smell, listener, taste and touch when observing an object. Observation activities can be done through environmental observations, observing pictures, videos, data tables and graphs, analyzing maps, reading books, listening, listening, and looking for various information available in mass media and internet networks.

Ask. Students' activities are directed to express what they want to know both with regard to an object, event, a certain process. In questioning activities, students ask questions to the teacher, resource persons, or to other students. Questions can be asked orally and in writing. The question must be able to arouse the motivation of students to keep learning active and fun. The form can be in the form of a question sentence and or the formulation of a hypothesis.

Experimenting/Exploring. Activities in the form of collecting data through trial activities and exploring more deeply about a problem that is being faced. Collecting activities can be done by reading books, collecting secondary data, field observations, trials (experiments), interviews, distributing questionnaires, and others. The data obtained have properties that can be analyzed and concluded.

Associating is the activity of students in comparing the data they have obtained with existing theories so that conclusions can be drawn and or the discovery of important principles and concepts. Associating activities can be in the form of analyzing data, creating categories, determining relationships between data/categories, and concluding from the results of data analysis. The discovery of important principles and concepts is expected to add to the cognitive schema of students, broaden their experience and knowledge.

Communicating is the activity of students to convey their findings after going through the process of observing, asking, testing, and associating as described above. Communicating activities are aimed at other people, both verbally and in writing, who can be assisted by technological devices, both conventional and Information and Communication Technology.

Performance Assessments, namely performance assessment is the process of measuring performance during and at the end of learning. In the 2013 curriculum, the aspects that

are assessed are not only the cognitive and skill domains, but also aspects of social attitudes and aspects of spiritual attitudes. Thus, the approach he uses is class-based assessment.

These are the steps for deepening the knowledge of geography in order to mobilize the spirit of ecoliteracy for efforts to save the environment. Through the schemes and tactical and strategic steps above, it is certain that learning geography will become important in a sustainable environmental management system. Thus, students starting from their homes, at school or in public spaces or in the service of their duties will always be able to build a harmonious relationship with nature. Ecoliteracy has the same spirit as the science of geography in an effort to preserve the environment.

CONCLUSION

Support for the ecoliteracy perspective is important as a basis for developing environmental-based education, especially in the framework of developing instructional learning of geography in secondary school education units. Ecoliteracy is a space to build collective awareness to play an active role in protecting and caring for planet Earth, which from a global perspective is very small. In this case, nature is no longer seen as an environment in se, but as a space that gives meaning to life (lebensraum). Humans have become an inseparable part of their environment. Throughout their life, all humans become an inherent part of their environment. Humans will never be able to separate themselves from their environment, and always need the environment for their survival. On this side, there is a demand that humans are obliged to care for and preserve the surrounding natural environment (Supardi, 2003). On the other hand, it is a moral imperative, humans need to explore all things related to the environment and understand the needs of nature, in order to be able to continue to survive comfortably with the environment.

With efforts to start saving and preserving the natural environment which is increasingly threatened by humans, it is important to implement this choice of awareness and socialization of ecological awareness or ecoliteracy in schools, homes, or in any sector related to the utilization of natural resources from natural processing. If we implement it with conditions in Indonesia, the most important step we take is to maximize students' understanding of geography in accordance with the level of education. The competencies (core competencies and basic competencies) that must be mastered are listed in the 2013 curriculum. Thus, at the secondary school level, to increase geoliteracy/geography literacy in students is to optimize the learning process in schools. Because students who are already literate in geography are expected to have a sense of love for the Indonesian homeland, then they will defend the sovereignty of the Republic of Indonesia until death.**

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