ICEE-2

Introduction "Mangrove" Ecoliteracy for IPS Learning on Elementary School

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Abstract. Mangroves are now increasingly rare in Indonesian waters because almost all of the mangroves have been damaged. This is certainly very alarming considering that mangroves actually have a very important role for the survival of all living things. Referring to the problem, it is necessary to introduce ecoliteracy of "mangroves" as a small action aimed at inviting students to save mangrove ecosystems that have been damaged one of the ways by replanting mangrove plants around the waters, to instill students' caring attitudes towards the environment and foster a student's love for environment. The method used in this research is literature study which refers to literature review in the form of articles in journals, books, and other reliable sources related to the research title. Based on the results of the study, explaining that in social studies learning at school students not only acquire basic theories but also the need to develop social skills possessed by students specifically in maintaining and preserving mangroves.

Keyword: mangroves, ecoliteracy, ips learning

INTRODUCTION ~ Indonesia (in Anita, et al. 2016) is one of the archipelago countries which has the second longest coastline in the world after Canada (> 81,000 km). Indonesia is also known as the largest archipelago in the world, with a sea area of about 3.1 million km2 or 62% of its territorial area. Not only that, Indonesia is also famous for a variety of biodiversity that is very riveting one of them mangroves.

As we know that currently mangrove ecosystems (in Ilham, 2016) are increasingly rare to be found in Indonesian waters because only a small portion of 2% of the earth's surface and almost all of them have also been damaged, even though these ecosystems play an important role for ecology, social-economic, socio-cultural among others is to maintain the stability of the coast from abrasion, serves as conservation, education, ecotourism and as a cultural identity. In that case, ecoliteracy is needed to help protect the surrounding natural environment. Ecoliteracy itself according to Keraf (in Goddess, 2015) argues that "ecoliteracy is a condition where people already understand and live in accordance with ecological principles to organize and build a life together in realizing a sustainable society".

Ecoliteracy also needs to be introduced to students from an early age in order to increase students' sensitivity to the natural environment. Through education integrated into learning, students are expected to be able to recognize, understand, and be able to apply ecoliteracy as a guide for acting on nature. In addition, to improve ecoliteracy students can also through social studies learning in schools. Through the social studies learning, students are expected to be able to make their own intelligent decisions relating to the social

environment, the natural environment and the cultural environment.

METHOD

This type of research is qualitative where the method used in the form of a literature review in gathering data information in accordance with the research topic. In addition, the literature review referred to in this research is to unite and study data information related to research topics that should be researched and written by the author. In the study of this literature can also be obtained from the summary, the results of analysis and synthesis of articles in several journals found on matters that are relevant to the topic of the introduction of "mangrove" ecoliteracy in the learning of IPS in elementary schools.

RESULTS AND DISCUSSION

Social Studies Learning

According to Sulfemi and Lestari (in Wahyu, et al. 2019) states that Social Sciences (IPS) aims at students to be able to master knowledge, have skills, attitudes and values related to problem solving and have good decision making abilities in activities social.Social studies learning will be effective and meaningful if it can develop the potential of students to be more sensitive to the social problems that are around. In addition, to improve the welfare of the nation through social studies learning does not only come from natural resources and physical capital, but must come from intellectual, social, and trust capital (Ananda, 2017).

According to Hamid Hasan (in Yesi, 2015), the objectives of social studies include the development of intellectual abilities (understanding and thinking in scientific disciplines) and processual abilities. Another goal is to develop abilities in terms of responsibility (the ability to communicate, learn responsibility and have a positive attitude towards existing values, attitudes and norms). The final goal is to develop oneself (a willingness to develop themselves in a more positive direction). Then Vernon (1998) made it clear that "students learn best and behave more appropriately in classroom settings that meet their learning needs".

As with the opinion above, according to Sumaatmaja (in Arief, 2017) the scope of social studies includes "human life in society or humans as members of society or humans in social contexts". Therefore, there are supporting aspects including a) people, institutions and the environment, b) time, sustainability and change, c) social and cultural systems, and d) economic behavior and welfare.

Another opinion was expressed by Susanto (in Made Putra, et al. 2017) who formulated that the objectives of social studies learning in schools are as follows:

1) To develop basic knowledge in social science;
2) To develop students' abilities in terms of problem solving;
3) To develop human values;
4) To improve competency and cooperate.

Currently the implementation of social studies learning that has been listed in the 2013 curriculum in elementary schools has certainly been packaged and tested in integrative thematic learning accompanied by the development of students' skills, attitudes and knowledge. Integrative Thematic is theme-based learning that relies on aspects of life in real terms with adjusted characteristics based on age, level of thought development, and daily behavior habits.

Ecoliteracy

Ecoliteracy (in Ade, et al, 2019) is an ecological understanding to overcome environmental problems for the sake of human survival. Unlike the case, according to Sekarsari, et al (2019) who put forward ecoliteracy as an abbreviation of ecological literacy (environmental literacy). Ecoliteracy is also in the form of intelligence which is seen in cognitive aspects and becomes a complex whole supported by several intelligences (intellectual, social, emotional and spiritual intelligence). The existence of knowledge, awareness and skills that are in harmony with nature conservation will only increasingly support the achievement of the success of ecoliteration itself.

One of the most important main components of ecoliteration according to Emel (2018) is ecological intelligence because the concept is closely related to a holistic perspective or sustainability. Ecological intelligence has the main objective to develop social and environmental responsibility and to build critical thinking awareness to create cooperative learning that brings long-term behavioral change. Ecological intelligence is interconnected with the cognitive and affective areas of the brain and does not overlook individual differences.

Unlike the case, with the opinion expressed by Capra (in Ansori, et al. 2019) that ecological literacy is related to the principles of ecosystem organization that serves as a supporter of sustainable human society and to achieve that it is necessary to think systemically (systems thinking) by recognizing that the world this is an integrated unit (integrated). *Systems thinking* is the most important part to be able to understand the interdependence between ecological systems and social systems or other systems at all levels.

Mangrove

According to Martuti, et al. (2017) mangrove is one of the typical plants found in the coastal areas of Indonesian waters and has a main function as abrasion barrier. Unlike the case, with the opinion of Guntur (in Jeriels, et al. 2018) which suggests mangrove as a specific ecosystem, located in a relatively small choppy coastal area (influenced by tides of sea water and fresh water from the mainland).

Mangrove according to Bismark and Sawitri (in Yulida, et al. 2018) suggested that the most important link in maintaining

the balance of biological interactions in a waters because mangroves have a function as a place to look for various types of aquatic organisms such as zooplankton, larvae, fish, shrimp, crabs and so on.

Mangrove ecosystem according to Rahmawaty (in Dien, 2016) serves to maintain the coastline to be stable, as a protective beach from erosion (abrasion), as a storm and wave dampers, and sediment traps. Another opinion from Troy, et al. (2018) that mangroves can be categorized into hypercular plants because they have the function to naturally absorb heavy metal content. In addition, mangroves can also be referred to as biofilter (the ability to filter, bind and trap pollution in the wild) whose role is to improve water quality.

Damage to mangrove ecosystems (mangrove) has a large impact both in terms of ecological, economic, and social. Ghufran (in Suhendra, et al. 2019) argues that there are several factors causing damage to mangrove ecosystems including (a) conversion for settlements, (b) conversion for ponds, (c) wood extraction, and (d) pollution. According to Saparinto (in Danang, et al. 2019) mangroves are coastal forests that have physical, ecological (biophysical) and socio-economic functions. One of the functions of the mangrove economy is as a potential area for recreational areas (tourism), aquaculture land and foreign exchange earners with industrial raw material products.

Some of the theories above, can be conveyed that there are various ways to introduce ecoliteracy in social studies learning in schools. One of them through mangrove ecoliteracy. Ecoliteracy is very rarely done for students, especially in primary schools, remembering that in modern times the learning process is mostly done in the classroom, even if we know a lot of benefits gained by students from ecoliteracy introduced by teachers in schools, one of them students become more sensitive and responsible for the state of the environment, environmental cleanliness.Mangrove ecoliteracy is a form of small action to save the earth, students in schools are invited directly to participate in environmental activities, for example in the activities of planting mangrove plants around the sea coast and cleaning mangroves that have been damaged.Here, in addition to students being sensitive to the environment, students also get a positive value in terms of learning to socialize with their peers.

CONCLUSION

Ecoliteracy in children needs to be applied early. Mangrove ecoliteracy in social studies learning also requires a process and evaluation at the end of the activity so that students understand the aims and objectives while being able to see the extent of their sensitivity to the surrounding environment.

REFERENCES

Ade S, Andi. R, Ernawati. (2019). Relationship Between Ecoliteracy and Willingness To Pay Biology Students to Bring School Lunch. Journal of Biological Education Research. vol. 3 (1), p. 11-17.

Ananda, R. (2017). Improving Social Studies Learning Using the Cooperative Student Student Team Achievement Division (STAD) TYPE Elementary School Students. Journal of Basicedu, vol.1 (2), 91-100.

Anita, D.M, Ellyke, Rahayu, S.P, &Khoiron. (2016). Study of Potential Mangrove Development on the Puger Coast of Jember Regency, East Java, Indonesia. Proceedings of the 2016 National Marine Seminar. Madura: Trunojoyo University.

Ansori, Dinno. M, Galih, D.S.R. (2019). Cec (Ecoliteracy Center of Cibeber) Center for Reduce, Reuse, and Recycle Activities in an Effort to Realize the Cibise Village Ciseupan Area as the Bestari Region (Clean, Healthy, Orderly, and Sustainable). Journal of Community Service (Abdimas). vol. 2 (2), p. 90-102.

Arief, R.H. (2017). The Effectiveness of the Traditional Gobag Sodor Game For Learning Ips Class IV Elementary School. Journal of Basic Education (JBPD). vol. 1 (1), p. 33-39.

Danang U.S, Frida P, Siti R. (2019). Mangrove Tourism Conditions in PasarBanggi Village, Rembang Regency. Journal of Maquares. vol. 8 (3), p. 221-225.

Dien, H. M. A., Rembet, J.W.N.U., &Wantasen, A. (2016). Profile of Mangrove Ecosystem in BAHOI Village, North Minahasa Regency. Platax Scientific Journal, vol. 3 (2), pp.112-119.

Dewi, A.M. (2015). Increasing Ecoliteracy of Students in Utilizing Rubber Gardens as IPS Learning Resources. Journal of Social Sciences Education. vol.24 (2), p. 223-224.

EmelOkur, B. (2018). "Development of an Ecoliteracy Scale Intended for Adults and Testing an Alternative Model by Structural Equation Modeling". International Electronic Journal of Environmental Education, vol. 8 (2), pp. 15-34.

Ilham, Majid. (2016). Mangrove Forest Conservation in Coastal City of Ternate Integrated with School Curriculum. Journal of Bioeducation. vol.4 (2), p. 488-496.

Jeriels M, Erny P, Satyawan. P, and Ronggo. S. (2018). Spatial distribution of environmental conditions Mangrove Forests on the coast of Kupang City Beach. Journal of Natural Resources and Environmental Management. vol. 9 (2), p. 467-482.

Jones, Vernon. F with LouisesS.Jones. (1998). Comprehensive: Classroom Management. USA: A Viacom Company.

Made P, I Wayan D, Ni KomangAyu M.D. (2017). The Influence of Reinforcement-Based Numbered Head Together Learning Model Against Mastery of Ips Knowledge Competence in Class V. International Journal of Elementary Education. vol. 1 (2), p. 145-152.

Martuti N.K.T., Soesilowati, E., and Na'am, M.F. (2017). Empowerment of Coastal Communities through the Creation of Mangrove Batik. Abdimas, vol. 21 (1), p. 65-74.

Sekarsari, S. P., Muhammad Japar& Riana, B. (2019). "Increasing ecoliteracy and student creativity in waste utilization". International Journal of Evaluation and Research in Education (IJERE), vol. 8 (2), pp. 255-264.

Suhendra P, Subariyanto, Ernawati S.K. (2019). Vegetation Diversity Profile of Mangrove Ecosystems in Tamuku Village, North Luwu Regency. Journal of Agricultural Technology Education. vol. 5, p. S104-S114.

Troy, H.S, Joshian, N.W.S, Sandra, O. T, Desy M, Robert B, Wilmy P. (2018). Lead Heavy Metal (Pb) Analysis of Mangrove Roots in Bahowo Village and TalawaanBajo Village, Tongkaina District. Journal of Coastal and Tropical Seas. vol. 2 (1), p. 9-18.

Wahyu, B.S., and Nova, M. (2019). The Role of Learning Model of Value Clarification Technique Assisted by Audio Visual Media to Improve Learning Outcomes. Journal of Education, vol. 20 (1), p. 53-68.

YesiBudiarti. (2015). Development of Creativity Ability in Social Studies Learning. UM Metro Economic Education Journal. vol. 3 (1), p. 61-72.

Yulida, Q.A, Agil Al. I, Then Japa. (2018). Plankton Community in Mangrove Habitat Waters in GiliSulat, East Lombok. Proceedings of the National Seminar on Biology Education. p. 32-40.