Implementation of Eco-Culture Values in Economic Learning

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Abstract—This paper is the result of research that aims to formulate the values of environmental care (eco-culture) to be internalized in learning materials, especially in economics to realize the generation that has understanding, attitude, and behavior of eco-culture. The method used in this research is research and development, which refers to the system approach of Dick and Carey. Stages in this study are designed for 2 (two) years. The results in the first year of research indicate that eco-cultural values are important to be formulated and implemented in economic learning. Implementation refers to learning tools that have been developed.

Keywords—eco-culture values, economic learning, eco-culture

I. INTRODUCTION

In general, there are three basic problems, so that eco-cultural values need to be reviewed and internalized in the learning process. These problems are (1) Lack of economic actors about eco-culture so that economic practices carried out cause environmental damage, (2) economic learning materials taught in schools do not have a message of eco-culture, (3) lack of value formulations eco-cultural values as a reference in economic learning. In the long term, this problem can cause ecological degradation.

Ecological degradation (ecological, cultural crisis) is a crisis of relations between humans and culture and humans and the environment in which they shelter, live, and exploit natural resources to meet their needs [1]. In the long run, attitudes and behaviors towards the economy that tend to be exploitative will cause an ecological crisis, which is a cause of various environmental problems such as global warming, flooding in the rainy season, prolonged drought in the dry season, environmental pollution, and various others form of environmental damage. Therefore, this will cause people's welfare, socio-cultural life, and natural and environmental sustainability to decline. For this reason, environmental care needs to be developed in the world of education, to foster a generation that can maintain and improve existing environmental conditions [2].

Education aims to shape the character of students to become human beings who are noble, responsible, and know by the demands of the environment in the era of globalization. This means that the success of the educational process is not only seen from the aspect of knowledge (cognitive) but also seen from the aspects of attitude (effective) and skills (psychometrics). Three aspects (knowledge, attitudes, and skills) need to be directed at realizing quality human beings in supporting sustainable development in the economic, social and environmental sectors. The character to be achieved is reflected in the learning material in formal / school educational institutions.

Character education aims to produce high-quality human resources as envisioned in national education goals [3]. According to [4], character education aims to instill and develop the character for students, so that they have a noble character, apply and practice it in daily life both in the family, as members of society and citizens. These human resources will run and implement state programs and development actors, which are more oriented to the welfare of the community to improve the dignity of the nation [5].

The main point of character education according to [6] consists of kindness, thinking well, saying good, and behaving well. [7] suggests that character is related to moral concepts (moral knowing), moral attitude (moral feeling), and moral behavior. Based on these three components, it can be stated that good character is supported by knowledge of goodness, the desire to do good, and doing good deeds.

Also, Hungerford and Volk said that education could play a role in shaping humans to be able to think by sustainable ethics so that the goal of making citizens environmentally responsible will be more easily achieved [8]. Therefore, educational programs can contribute to people's welfare, so that the development process can be carried out sustainably.

Education is very important in the context of sustainable development because education is a means to change perceptions, attitudes, and human behavior [9]. Expected human behavior is that which can provide social benefits, economic benefits, and ensure ecological sustainability. The relationship between human economics and ecological behavior is explained by [10], that in meeting their needs, humans must pay attention to ecology by utilizing natural resources responsibly and maintaining distance from a value-free perspective.

The relationship above gives a message about environmental values that must be considered in all economic actions, such as [11] arguing that economic behavior is directed at respecting and maintaining the balance of nature and the environment, returning to nature, not destroying nature. One thing that can be done to overcome the crisis of ecological culture is to create fundamental changes in human perspective and behavior, which begin with knowledge of the importance of eco-cultural values.

Eco-cultural values should be internalized in economic learning to foster students' awareness of the importance of the preservation of natural resources and the environment so
that everyone can behave rationally and responsibly. It should be emphasized that natural and environmental resources do not only belong to present generations but also to future generations. Therefore, both generations have a concern about the preservation of natural resources and environment, so that development process can be done sustainably.

II. METHODOLOGY

The method used is based on the research and development approach of Dick and Carey [12]. Development is defined as the process of describing design specifications into physical forms [13]. Another term related to this is the design of learning. According to [14], the design of learning is the process of analyzing needs, determining what content should be mastered, determining the objectives of education, designing materials to achieve specific goals, and conducting trials and revising programs dealing with learning outcomes.

The stages of research and development are designed for two years, but the study in this article only contains the results of research in the first year. In general, the description of the research stages are as follows: (1) Need analysis of economic materials to be developed; (2) Identification of the economic materials to be developed; (3) Development process; (4) Phase of Compilation and production of eco-cultural economic materials, consisting of syllabus, learning implementation plan, module/ material, and student activity sheet; (5) Product trials and revisions, including assessment or responses of instructional design experts, economic practitioners/ teachers, limited trials, and field trials. Those stages are presented in Figure 1.

![Fig. 1. Research and Development Stage](image)

III. DISCUSSION

Eco-cultural values are implemented in economic learning through the development of eco-cultural values and topic formulation.

A. Eco-cultural Values

The term eco-culture consists of two words, namely 'eco' and 'culture.' The word 'Eco or Okios' means a house, habitat or environment that is related to ecology. Whereas 'culture' means culture which in this case is related to human ecology. From that term, Candise Gossen defines that eco-culture means the revival of the character of knowledge about eco-culture in the younger generation to be integrated into people's lives. Also, according to [15], eco-culture or ecology-culture is related to how families are proactive in changing daily routines as a result of environmental changes, both in global and local environments. Eco-cultural values that will be internalized in economic learning can be seen in Table 1.

### TABLE 1. ECO-CULTURAL VALUES

| Fundamental Value | Practical Value (Character of Eco-Culture) |
|-------------------|------------------------------------------|
| 1. Religious       | 1. Be grateful for the natural resources as a gift from God Almighty |
| 2. Mutual respect  | 2. Throw garbage in its place; therefore, it does not contaminate land, sea, and air. |
| 3. Do not impose the will on others | 3. Do not use chemicals to catch fish |
| 4. Afection        | 4. Do not cut trees in forest excessively (illegal logging) |
| 5. Respect each other | 5. Planting trees/ reforestation |
| 6. Honest          | 6. Planting mangrove trees to avoid erosion |
| 7. Social Concern  | 7. Do not burn the forest |
| 8. Love your country | 8. Use clean water as needed |
| 9. Togetherness    | 9. Do not burn garbage for it can pollute the air |
| 10. Mutual cooperation | 10. Consume local products |
| 11. Responsible     | 11. Do not damage protected forest areas and conservation |
| 12. Sincere and big-hearted | 12. Together with clean drains from garbage |
| 13. Kinship         | 13. The need for water catchment areas for the common interest |
| 14. Creativity      | 14. Clean house yard from garbage/ foliage |
| 15. Independence    | 15. Turn off electronic appliances when not in use |

Source, Developed by the researchers, 2017

Environmental values (eco-culture) are important to be internalized in economic learning at school. This is an effort to prepare and empower students as a generation that will be responsible for a sustainable future [16]. Also, this can be the beginning of the development of the character of knowledge about eco-culture in the younger generation, which will be implemented in daily economic activities. Therefore, when students have graduated from formal/ school educational institutions, they already have knowledge and understanding of management and environmental values, so that economic attitudes and behaviors can contribute to realizing sustainable development.

The results of research which were conducted by [9] illustrate that there is a relationship between eco-cultural attitude, eco-cultural behavior, and paradigm of education for sustainable development. This research emphasizes the importance of eco-cultural attitude and eco-cultural behavior as an effort to realize sustainable development. Eco-cultural attitude and eco-cultural behavior can be realized in the form of concrete actions related to human economic activities in everyday life. Therefore, natural resources and environment
can be managed to meet the needs of the current generations and remain sustainable for future generations. In the implementation, eco-cultural attitude and eco-cultural economic behavior can be internalized in economic learning at a formal education institution.

B. Topic Formulation

After eco-cultural values are formulated, the topic of economic learning materials that will be developed is identified. The materials formulated to become a learning supplement. The material formulation is presented in Table 2.

TABLE II. THE TOPIC OF LEARNING MATERIAL OF ECO-CULTURAL ECONOMICS

| Competence standard                                      | Basic competence                                                                 | Learning materials                                                                 |
|---------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Understand the basic concepts of economics               | Describe the understanding and scope of economics                                 | - Definition of economics,                                                        |
|                                                         |                                                                                  | - The scope of economics,                                                         |
|                                                         |                                                                                  | - Method of economics,                                                            |
| Economic problems and their solutions                    |                                                                                  | - Human needs and desires,                                                        |
|                                                         |                                                                                  | - Scarcity and choice,                                                            |
|                                                         |                                                                                  | - Human needs vs. the availability of resources.                                   |
| Describe the economic behavior of humans in their        |                                                                                  | - Moral basics of economy,                                                        |
| environment                                             |                                                                                  | - Impacts which are caused by human behavior in the environment.                  |
| Understand the basic values of environmental economics   | Explain the definition of environmental economics and green economy               | - Environmental economics and green economy,                                       |
|                                                         |                                                                                  | - Humans and their environment                                                    |
|                                                         | Explain the concept of environmentally sound economic development (sustainable  | - The scope of sustainable development (environmentally friendly),                 |
|                                                         | development)                                                                     | - Dependence and independence of development                                       |
| Describe environmentally sound human ethics              |                                                                                  | - Human ethics towards the environment                                             |
|                                                         |                                                                                  | - The principles of human ethics towards the environment                           |
|                                                         |                                                                                  | - Knowledge, attitude and human behavior that is environmentally sound            |
| Describe eco-cultural knowledge and attitude in the      |                                                                                  | - Circular Flow Diagram in eco-cultural economic activities                        |
| economic activities of consumers and producers           |                                                                                  | - Eco-cultural behavior of consumers and producers                                 |
| Application of environmental economics in economic       | Identify eco-cultural behavior                                                   | - Meaning and values of eco-culture in economic life                              |
| activities                                              |                                                                                  | - A form of eco-cultural behavior                                                 |
| Describe Eco-cultural Behavior in the Utilization of     |                                                                                  | - Eco-cultural understanding, attitude, and behavior in the utilization of forest  |
| Natural Resources                                        |                                                                                  | resources                                                                         |
|                                                         |                                                                                  | - Eco-cultural understanding, attitude, and behavior in the utilization of marine  |
|                                                         |                                                                                  | and coastal resources                                                              |
|                                                         |                                                                                  | - Eco-cultural understanding, attitude, and behavior in the utilization of electrical energy |
| Describe eco-cultural behavior in household life         |                                                                                  | - Eco-cultural understanding, attitude, and behavior in waste management           |
|                                                         |                                                                                  | - Eco-cultural understanding, attitude, and behavior in utilizing house yard       |
|                                                         |                                                                                  | - Eco-cultural understanding, attitude, and behavior in the utilization of clean  |
|                                                         |                                                                                  | water                                                                              |
|                                                         |                                                                                  | - Eco-cultural understanding, attitude, and behavior in the use of fuel            |
|                                                         |                                                                                  | - Eco-cultural understanding, attitude, and behavior in the school environment.     |
| Environmentally Sound Global Economy                     | Explain the importance of environmentally sound and equitable development of the  | - The concept of environmentally sound industry                                   |
|                                                         | industry.                                                                         | - How to create an environmentally sound industrial area                           |
|                                                         |                                                                                  | - An environmentally sound industry network                                        |

Source: Developed by the researchers, 2017

The formulation of eco-culture values and the topic of economic learning materials that have been developed will be used in the teaching and learning process in the trial stage in the second year. In the implementation, they become a learning supplement for both teachers and for students. Implementation of eco-cultural values needs to involve the participation of all components of education within the school environment. According to [17], the participation of all components of education aims to realize the sustainability of both ecological aspect (ecological sustainability), social aspect (social sustainability), and economic aspects (economic sustainability).

Awareness of the importance of eco-culture values starts from the desire to make changes to conventional behaviors related to ecological issues, so as to achieve sustainable natural resources and environment. Changes in human behavior associated with the importance of eco-culture values can be preceded by providing an understanding of the importance of the existence of human, with the emphasis that humans are part of the ecosystem [18].

The emergence of eco-cultural paradigm is based on the economic behavior of human that tend to cause environmental damage or pollution. Economic habit or behavior of a human in managing natural resources and the environment tend to be anthropocentric, resulting in the emergence of various environmental problems [19]. Such behavior or habit is a manifestation of knowledge and way of thinking from past educational experiences, which tended to ignore the sustainability of natural and environmental resources, socio-cultural resources, and economic resources.

IV. CONCLUSION

Environmental values (eco-culture) are important to be implemented in economic learning to realize generations that
aware of the preservation of the environment. This requires a long process, but the real action of this can provide a picture of the result achieved, namely human beings that have environmental awareness. This must start with understanding, attitudes, and behaviors that are formed through the educational process.

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