Building the Ecoliteracy Intelligent of Student Through the Citizen Project Model at FKIP UNIBBA

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Abstract

This research is motivated by the challenges faced by humans today related to the environment. Ecoliteracy intelligence needs to be developed especially for FKIP students at the University of Bale Bandung, who are prospective educators to create environmentally friendly character-based learning. This study aims to analyze: (1) the eco-literacy intelligence of FKIP Bale University Bandung students; (2) Factors that become obstacles and potential in building eco-literacy intelligence for FKIP UNIBBA students; and (3) The implementation of eco-literacy competencies through project citizens. The method used was a survey in four study programs, with respondents consisting of study program heads/secretaries, teaching staff, and students. The results of the study show that (1) In general, FKIP UNIBBA students have good eco-literacy intelligence in preserving the environment; (2) The potential effort to increase students’ eco-literacy intelligence is implemented in an integrated curriculum in each study program, especially those related to ethics and environmental awareness courses, a global perspective, PLSBS Sundanese Culture which is a special subject based on local wisdom of FKIP UNIBBA. Meanwhile, the obstacles in efforts to increase the eco-literacy intelligence of FKIP UNIBBA students are the absence of a policy to provide a special budget for the provision of environmentally friendly facilities; (3) The project citizen model is a character-based learning model to create smart and wise citizens who are built through ecological intelligence. Strategic policies to create a green and environmentally friendly campus need to be improved.

Keywords: Ecoliteracy, Intelligence, Model Project Citizen.

1. Introduction

The challenges in modern society are very complex. Intelligence that only relies on intellectual abilities alone is certainly not enough to overcome these challenges. One of the challenges facing humans today is related to the environment. The environment as a place where humans and other living things live certainly needs to be preserved as well as possible. Ecoliteracy intelligence is a form of intelligence to understand human actions towards the environment. Ecoliteracy intelligence needs to be built by the entire community because this intelligence is integrated based on intellectual, social, emotional, and naturalistic intelligence which places empathy for all living things on earth as a positive attitude towards environmental preservation. Ecoliteracy intelligence is one implementation of meaningful learning. Meaningful learning needs to be learned and felt useful in living everyday life. In developing meaningful learning, one not only learns theoretically but also can practice and internalize positive characteristics towards the environment, one of which is the character of caring for the environment.

Ecoliteracy intelligence needs to be internalized as early as possible because the challenges of an increasingly complex era require humans to innovate, but it is necessary to examine how it is beneficial for humans and the environment itself. In Nana Supriatna (2016: 109), from time to time human civilization evolved from the level of depending on nature and managing nature,

to the stage of controlling nature. This process becomes a necessity that humans continue to develop from a simple life to an increasingly complex life. The actions taken by humans are referred to by Darwin (2009) in his theory of survival of the fittest as the reality of who is strong is the one who will be able to survive in life. Humans are no longer
placed as part of nature that is subject to the provisions and laws of nature, but humans as controllers of nature or controllers of nature. This perspective must be returned to the opposite position, namely the anthropocentric perspective is abandoned by adopting a new perspective, namely ecocentric. The ecocentric perspective does not cause humans to lose their essence as humans but instead strengthens their position as friends with nature. In a friendly position, there will be an equal relationship and mutual need for one another.

Hola (2010) explains that the relationship between humans and nature is important. He can use natural resources but can also destroy them. Humans need a living environment to support their daily activities. Humans live, grow, and develop in the environment, both the natural environment and the socio-cultural environment. Environmental explorations by humans have been carried out for a long time. The opinion of Koc (2013) is that "the exploitation of the environment by humans has exhibited differences throughout recorded history. In the hunting-gathering period, humans did not have sufficient intelligence and technology to change the natural environment. In this period, humans were striving for gaining a familiarity with the environment and they were leading lives depending on the natural environment."

Ecoliteracy is an alternative approach to educating people to understand, realize, and practice the importance of living in harmony with nature and maintaining local wisdom values that are adhered to by society. Ecoliteracy intelligence needs to be built through an ecopedagogical approach. There are several unwritten laws to preserve the environment, including: (1) everything is always connected with others, (2) everything must have benefits, (3) nature knows what is best for itself, and (4) nothing comes from nothing (Foster J.B. 2005). The first view indicates that the environment is something complex, which is connected. Damage to one element has a connection with other elements that have long-term damage effects. The second view describes that nature has a reciprocal relationship with each other such as the principle of a food chain where animals, plants, and decomposing bacteria are dependent on one another. Nature knows what is best for her showing human intervention is a disturbing factor in the environmental system. Finally, this view is that nothing comes from nothing, which means that environmental damage cannot occur without a clear cause. This view believes that environmental damage is caused by the role of humans who only consume everything that comes from nature without producing or renewing nature itself.

Ecoliteracy intelligence needs to be implemented by all levels of society and needs to be applied to students at all levels, as well as to students as educated people. Students can have the potential to continue the ideals of the nation because students are agents of change or agents of change. It is in the hands of the students and the younger generation to determine where the nation will go. So, a change is needed in teaching style and in the learning process which not only conveys the material to students but how the material being taught has a role so that students can think critically, logically, reflectively, metacognitively, and creatively, and the course has eco-literacy intelligence. In Galih Dani and Ruli Setiyadi (2018), Kates, et al (2005) argue that long-term education will able to create humans who are educated, care about the environment, think about the survival of other humans, and are responsible. Education is an effective means of raising awareness of environmental preservation. The community believes that the formal education system is responsible for the sustainability of environmental education. In the United States ecoliteracy is related to environmental education as revealed by

McBeth & Volk (2010) as follows "when we approach the discussion of environmental literacy in the United States, it is helpful to provide a context by stepping back to look at the development of environmental education."

Problems such as floods are frequent disasters in various regions in Indonesia, especially in Bandung Regency. One of the main causes of flooding is the large number of people who litter. Another problem is the low level of public awareness of public facilities, such as the large number of dirty public bathrooms in educational environments such as schools or campuses, resulting in discomfort in the environment. Students who belong to the younger generation act as role models for the general public in preserving the environment. However, the peak of the problem is when students are less sensitive to environmental issues. This can be proven through the use of plastic materials that are difficult to decompose and the lack of interest in using environmentally friendly products. There are also problems in the form of limited knowledge of students in classifying and managing waste. In order to increase the role of students in bringing about environmental change, especially inviting the general public, it requires student intelligence through the project citizen model.

The project citizen model is an innovative problem-based learning model through contextual practical learning and is designed to help students understand the theory and skills of citizenship so that they are able to participate in government and society through learning experiences that emphasize the process of practice, discovery, problem solving, and giving. opportunities for students to learn contextually (Depdiknas, 2003; Budimansyah, 2009). Doing the project citizen model during classroom learning is considered as a solution for educators at universities because this model does not only emphasize the cognitive field, but the affective and psychomotor fields can also be achieved with the project citizen model. The project citizen model was adapted by "We the People... Project Citizen" which is a program designed to develop students' interests and abilities (Budimansyah, 2009). With the project citizen
model, it can provide direct experience to students. So that students can have 21st century skills or 21st century skills that are more critical in thinking and solving problems, develop their creativity, train their ability to communicate with others, and have the ability to work together to be able to compete. This is necessary because students will later go directly to the community so that knowledge alone is not enough but equipped with solid attitudes and skills in solving problems that exist in society. In Desy Nurhidayah (2021: 27) Project citizen itself was first used in 1992 in California which was later developed by the Center For Civic Education (CCE) and the National Conference of the State Legislative Body in 1995. According to Budimansyah (2009: 1), project citizen is one of the problem-based instructional treatments to develop the knowledge, skills, and character of democratic citizenship which enables and encourages participation in government and civil society (civil society).

Based on the background of the problems previously described, the researchers formulated the problems that arose regarding building student ecoliteracy intelligence through the project citizen model at the Faculty of Teacher Training and Education, Bale University, Bandung, namely; (1) How is the ecoliteracy intelligence of the students of the Faculty of Teacher Training and Education, Bale University, Bandung? ; (2) Factors that become obstacles and potential in building ecoliteracy intelligence for students of the Faculty of Teacher Training and Education, Bale University, Bandung? ; and (3) How is the implementation of ecoliteracy competence through project citizen in students of the Faculty of Teacher Training and Education, Bale University, Bandung?.

2. Literature Review

Ecoliteracy Intelligence

According to Capra in Habibi Sultan (2019) a book entitled The Hidden Connection develops a conceptual framework that integrates biological, cognitive, and social life dimensions associated with the concept of eco-literacy as an effort to foster environmental awareness. Capra (2002) emphasized that being ecologically literate or aware, or eco literate, means we have to build and reorganize our society with a sustainable ecological community/ecosystem model, which includes ecological principles that are desirable and can truly be implemented as basic principles. in various aspects of life, including the educational community, business community, and political community, meaning that the human community must develop a pattern of life and development in line with the patterns and principles that apply in a sustainable nature. According to Stone and Barlow (2005: 5), eco-literacy competence is a reciprocal approach between humans and their environment that is oriented towards environmentally friendly behavior (green behavior). Furthermore, Stone and Barlow (2005: 9) in Supriatna (2013) explain that to realize eco-literacy competence, students need environmental education, which does not only emphasize aspects of knowledge but meaningful learning that integrates knowledge, attitudes and skills. Thus the intelligence of students about green behavior will be formed after going through the educational process. For this reason, all subjects and courses in tertiary institutions need to make environmental education (environmental education) to build the intelligence of environmentally friendly students.

In Tati Setiawati (2016) in line with the opinion above, Orr suggests the description of someone who has ecological intelligence characterized by 'The ecologically literate person knows necessary to comprehend interrelatedness and attitude of care or stewardship. Such a person would also have the practical competence required to act based on knowledge and feeling'. The purpose of Orr's statement is that someone who is ecologically intelligent knows the importance of understanding the interrelationships or interrelationships between one group and other components and being concerned about a job. This means that someone who is ecologically literate knows how to relate and behave with the ecosystem. The sustainability of human life in the future will depend on ecological intelligence. For students to have ecological intelligence, a competency is needed which is an indicator of the achievement of planting an understanding of ecological intelligence in students. Palmer & Neal (1994, pp. 21-27) explains that ecological competence in education can be achieved by developing sensitivity, awareness, understanding, critical thinking, solving problems related to environmental problems, and formation of environmental ethics. Supporting this, the Center for Ecoliteracy has developed a set of “core competencies” to help young people develop and live in sustainable societies. This competency relates to knowledge (learning to know), attitude (learning to be), action (learning to do), and relationships with humans and the natural world (learning to live together).

So many benefits are obtained by having eco-literacy. Goleman (2012: 16-17) reveals that people who understand eco-literacy are as follows: 1) Ecoliterate people recognize that they are members of a web of diverse relationships within their communities and beyond, 2) Ecoliterate people tend to be more aware of that system exist on various levels of scale,, 3) Ecoliterate people collectively practice away from the life that fulfills the needs of the present generation while simultaneously supporting nature's inherent ability to sustain life into the future. Goleman argues that with eco-literacy people can realize relationships in a community, care more about the system, and practice to meet their needs in the present and learn to survive in the future. 3R activities as a step to increase ecoliteracy in tackling waste, the more the population increases, the more waste is produced. Apart from the increased production of goods, people's consumption patterns also contribute greatly to the various types of waste. Most of the people in us still view waste has no benefits. The approach used by our society towards waste still relies on the final approach
where waste is collected, transported, and disposed of in landfills. Some of our people think that waste is useless and has no benefits. This is because the understanding and awareness of society are still very minimal. There are several actions to deal with waste in the environment, namely recycling (recycle), reusing (reuse), and reducing (reduce). These activities are often known as 3R activities, namely Reuse, Reduce and Recycle.

**Model Project Citizen**

The Project Citizen model was first used in California in 1992 and then developed into a national program by the Center for Civic Education (CCE) and the National Conference of State Legislatures in 1995. Project Citizen is a problem-based instructional treatment to develop the knowledge, skills, and characteristics of democratic citizenship that enable and encourage participation in government and civil society. Budimansyah (2009) suggests that the instructional strategy used in the project citizen model departs from the inquiry learning model, learning discovery learning, problem-solving learning, and research-oriented learning which are packaged in the project model.

The steps in implementing the project citizen model are: (1) Identifying public policy problems in society, namely several activities carried out by the teacher with students such as discussing goals, looking for problems, what students know about problems in society and giving assignments homework on problems that exist in the community which they consider important according to students’ abilities, (2) Choosing a problem to be studied by the class, namely choosing a problem to be studied, students should first review the knowledge they already have about the problem in the community, such as studying the problems that have been collected, holding elections democratically about the problems they will study by selecting one of the problems that have been written on the blackboard, conducting further research on the selected problems to be studied by gathering information, (3) Gathering and information related to the problem that has been selected, namely identifying sources of information, reviewing to obtain and documenting information and gathering information, (4) Developing class portfolios. The advantages and advantages of learning using Project Citizen are as follows: 1) Allows students to connect with real-world events and problems, 2) Enables students to integrate various related concepts and ideas, 3) Encourages students to use knowledge and skills from various disciplines, encourages students to learn to work with colleagues in a group, 4) Allows students to evaluate their progress through self-assessment. The weaknesses of Project Citizen are as follows: 1) The time used for implementing the Project Citizen model requires an ideal time of 4-6 weeks, 2) Requires costs, and 3) Requires teacher/lecturer readiness.

**3. Methods**

The method used in this study is the survey method. This method was carried out to determine the eco-literacy intelligence of students at the Faculty of Teacher Training and Education at Bale Bandung University through the project citizen model. In Anisa Noverita (2019) the term survey is often used to refer to an activity of observation and examination to gather information about the existence of a phenomenon. A survey research design is a procedure in which the researcher administers a survey on a sample or the entire population to describe attitudes, opinions, behaviors, or special characteristics of the population (Cresswell, 2015: 752). Survey research is a research activity that collects data at a certain time. In this regard, there are three important objectives of survey research, namely (a) to describe the natural conditions that lived at that time; (b) to identify measurably the current situation to be compared; (c) to determine the relationship of something that exists between specific events. The reason the authors use survey techniques in this study is that surveys can provide accurate, reliable, and valid data from a large number of subjects and cover a broad scope.

The population in this study were students of the Faculty of Teacher Training and Education, Bale University, Bandung. Based on data from the Indonesian and Regional Language Literature education study programs there are 139 people, Social Studies Education study programs have 95 people, Geography education study programs have 104 people, English Education study programs have 128 people. Sampling in this study used a stratified random sampling technique. Data collection techniques in research using questionnaires, interviews, observations, literature studies, and documentary studies. The data analysis technique used by researchers is descriptive statistical analysis. Descriptive statistical analysis was performed to describe the data for each research variable. This analysis is mainly to see a general description of the ability of respondents in each research variable.

**4. Results and Discussion**

Based on observations on the research that has been carried out, it can be concluded that there are essential findings and results from this study. The research results and essential findings are the most important thing for the purpose of conducting this research. The results and findings obtained are described in detail as follows:

[1] Intelligence Ecoliteracy of Students of the Faculty of Teacher Training and Education, Bale University, Bandung
Based on the results of the study, the implementation of Ecoliteracy intelligence for students of the Faculty of Teacher Training and Education at Bale Bandung University was carried out in the following steps:

a. Integrating eco-literacy intelligence into several courses by analyzing CPL and CPMK, analyzing material content as an indicator development which is expected to be oriented towards building student eco-literacy intelligence which contains cognitive, affective, and psychomotor aspects,

b. Analyzing objectives to build student eco-literacy intelligence to be achieved,

c. Conduct objective analysis of social problems faced by students related to the subjects to be discussed,

d. Lecturers develop evaluation tools in the learning process related to eco-literacy material,

e. Make a learning concept map oriented towards improving aspects of eco-literacy

f. Make lesson plans

g. Establish a model of project citizen in learning

Before integrating eco-literacy material, lecturers in learning need to improve eco-literacy competence from the aspects of knowledge, attitudes, and skills of students.

a. Knowledge competency in processing information and making decisions related to environmental issues, so students must develop knowledge and understanding of: How students think critically about phenomena that take place in the natural environment, students need to see the impact of human activities on the environment, students are taught about issues environment such as the greenhouse effect, acid rain, air pollution, the need for local, national and global legislative control to protect and manage the environment so that policies are oriented towards environmental sustainability, interrelationships between the environment, individuals, groups, communities and nations, teach students that life between humans depends on the natural environment, so there is a need for a sensitive attitude towards the environment, the need for students to see past results that the environment has been influenced by past human decisions and actions, the importance of planning, design and planning curriculum considerations.

b. Competency skills, including the need to communicate about the environment and eco-literacy material, skills in problem-solving, personal and social skills of students, where students must first know social values, and information technology skills, to know global phenomena, students need to master technology to be more sensitive to global phenomena that occur.

c. Attitude competence, including developing a positive attitude towards the environment so that they can appreciate and understand their role in protecting the environment in the future, and encouraging the development of student's personal attitudes and qualities towards the environment, will contribute to the appreciation of students’ concern for the environment and other living things to always maintain environmental sustainability, freedom of thought regarding environmental issues, respecting the beliefs and opinions of others, respecting evidence and rational thinking, tolerance and having an open mindset or accepting the opinions of others.

[2] Factors that Become Constraints and Potential in Building Ecoliteracy Intelligence of Students of the Faculty of Teaching and Education, Bale University, Bandung.

In building eco-literacy intelligence, we need to arouse students' critical awareness in environmental education which can be done through controversial issues, literary media, various environmental injustices, the rights of other living things, and so on. Some of the contributions that can be explored from this critical pedagogy include the following: 1) Forming students' attitudes and concerns with various phenomena in the field context which are detrimental to the environment. 2) Forming an understanding to always reposition human relations with their environment, form a good self-concept, and build environmental ethics and morals. 3) Participate more actively in community life earlier so that it continuously builds a better understanding of the environment and helps to become an environmental activist. With the implementation of critical pedagogy, thinking grows and develops to criticize various environmental problems, by realizing students have sensitivity and concern for environmental preservation. This is what will become a provision for students in life in the future, to be able to realize various equitable lives, especially in terms of balance and environmental preservation. This is relevant to the ecopedagogy movement that developed from the critical pedagogical ideas of Paulo Freire (1968) which globally is a shared awareness to create a society that is concerned with environmental balance and preservation. The eco-literacy center has developed a set of core competencies to help young people develop and live in sustainable societies. This competency relates to knowledge (learning to know), attitude (learning to be), action (learning to do), and relationships with humans and the natural world (learning to live together).

The potential to increase student eco-literacy intelligence is implemented in an integrated curriculum in each study program, especially those related to ethics and environmental awareness courses, a global perspective, PLSBS Sundanese Culture which is a special course based on local wisdom FKIP Unibba. This course contains CPL and CPMK related to environmental preservation and learning based on local wisdom. For example, the Ethics and Environmental Concern Course contains CPL, namely: working together and having social sensitivity
and concern for society and the environment, showing a responsible attitude towards work in their field of expertise independently, upholding human values in carrying out tasks based on religion, morals, and ethics. While the CPMK is: being able to describe the concept of environmental ethics, being able to describe approaches to environmental ethics, and being able to analyze various strategies to prevent environmental pollution. The Ethics and Environmental Concern course discusses the notion of environmental ethics, the basics of environmental ethics theory, anthropocentrism, biocentrism, ecocentrism, natural rights, ecofeminism, environmental ethical principles, the relationship/connection of environmental ethics with environmental politics, principles of sustainable development, good environmental management, the role of environmental ethics in environmental management, the role of knowledge and technology in environmental management, socio-cultural values in environmental ethics, human relations with nature (traditional wisdom) and preservation of traditional social, cultural and economic values for support environmentally sound development. The eco-literacy material is integrated into the course and of course, this has the potential to build eco-literacy intelligence itself. So that students are not only intelligent theoretically but also practiced in the surrounding environment.

Meanwhile, the obstacle in efforts to increase the eco-literacy intelligence of FKIP UNIBBA students is that there is no policy to provide a special budget for the provision of environmentally friendly facilities. The environment of FKIP Bale University Bandung is a green area at the Sunda level of Bandung Regency. However, the problem related to the environment is that in the Baleendah area floods often occur. This of course needs to be minimized by building eco-literacy intelligence starting from the small things by applying the 3R concept (reduce, reuse, recycle), building eco-literacy intelligence through the Citarum Harum program, instilling a caring and ethical character towards the environment, and of course through the application of an interesting learning model that is internalized in the learning process on campus, one of which is through the process citizen model. The other obstacle is related to the budget for the provision of eco-pedagogy-based facilities and infrastructure that has not been comprehensively optimal within Bale Bandung University, for example, to build a green campus, a university must have four main requirements, namely green knowledge (green cognitive), green attitude (green affective), green skills (green psychomotor), and green environment (green environment).

[3] Implementation of Ecological Competence through Project Citizen for Students of the Teaching and Education Faculty, Bale University, Bandung.

Based on the results of research on students of the Faculty of Teacher Training and Education, Bale University, Bandung, using a questionnaire instrument, the results are as follows:

**Table 1: Questionnaire instrument**

<table>
<thead>
<tr>
<th>No.</th>
<th>Aspects</th>
<th>Indicators</th>
<th>Data Collection Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Understanding (Head) Learning to know</td>
<td>Learning to know environmental issues and problems from the perspective of ecological balance and sustainability. Understand ecological principles. Critical thinking, creative problem-solving, and applying knowledge to new situations. Assessing the impact or effect of human actions and applying technology to the environment Takes into account the long-term consequences of making an Evaluation</td>
<td>Test decision</td>
</tr>
<tr>
<td>2</td>
<td>Attitude of the Heart (emotional) (learning to be)</td>
<td>Perspectives. Work with and value others who have different backgrounds, motivations, and intentions. Committed to equality, fairness, inclusivity, and respect for all people.</td>
<td>Attitude Questionnaire</td>
</tr>
<tr>
<td>3</td>
<td>Hands skills (active) (learning to do)</td>
<td>Making and using tools, objects, and procedures needed by a sustainable community. Turning faith into practical and effective action, and applying ecological knowledge to ecological design practice. Assess and adjust energy usage and data sources</td>
<td>Performance observation/assessment</td>
</tr>
<tr>
<td>4</td>
<td>Spirit (connectional) (learning to live)</td>
<td>Experiencing admiration for the natural surroundings. Admire the earth and all its creatures. Appreciate the natural</td>
<td>Observation</td>
</tr>
</tbody>
</table>
Based on the results of tests, questionnaires, and observations, it was found that students of the Faculty of Teacher Training and Education at Bale Bandung University have good eco-literacy intelligence, can do the questions well, have skills in managing waste properly, as well as in implementing an attitude of caring for the environment based on existing indicators. The results of interviews with students, educators, and study programs at the Faculty of Teacher Training and Education also showed very good results. They can plan, implement, and evaluate properly how this eco-literacy intelligence must be improved. The project citizen model is an alternative to solving problems related to the environment because this model is an innovative problem-based learning model through contextual practical learning and is designed to help students understand theory and skills about citizenship so they can participate in government and society through learning experiences that emphasize the process of practice, discovery, problem solving and providing opportunities for students to learn. Practice-based, problem-based, and discovery-based learning is very important to implement because this learning will provide meaning to students so that the things obtained during lectures can be applied in everyday life.

5. Conclusion

Ecoliteracy intelligence of students at the Faculty of Teacher Training and Education, Bale University, Bandung is built through the following steps: integrating eco-literacy intelligence into several courses by analyzing CPL and CPMK, analyzing material content as the development of indicators which are expected to be oriented towards building student eco-literacy intelligence in which contains cognitive, affective, and psychomotor aspects, conducts objective analysis to build student eco-literacy intelligence to be achieved, conducts an objective analysis of social problems faced by students related to the subjects to be discussed, lecturers develop evaluation tools in the learning process related to eco-literacy material, making learning concept maps oriented towards improving aspects of eco-literacy, making lesson plans, establishing project citizen models in learning.

The potential to increase student eco-literacy intelligence is implemented in an integrated curriculum in each study program, especially those related to ethics and environmental awareness courses, a global perspective, PLSBS Sundanese Culture which is a special course based on local wisdom FKIP Unibba. The course contains CLP and CPMK related to environmental preservation and learning based on local wisdom. The constraints related to the budget for the provision of eco-pedagogy-based facilities and infrastructure have not been comprehensively optimal within Bale Bandung University, for example, to build a green campus, a university must have four main requirements, namely green knowledge (green cognitive), attitude green (green affective), green skills (green psychomotor), and green environment (green environment).

Implementation of eco-literacy competencies through project citizens for students of the Faculty of Teacher Training and Education, Bale University, Bandung, namely by observing the following aspects: Understanding (Head) learning to know, attitude (heart, emotional) learning to be, skills (hands, active) learning to do, and skills (hands, active) learning to do. Based on the results of tests, questionnaires, and observations, it was found that
students of the Teaching and Education Faculty of Bale Bandung University have good eco-literacy intelligence, can do the questions well, have skills to manage waste properly, as well as in implementing an attitude of caring for the environment based on existing indicators. The results of interviews with students, educators, and study programs at the Faculty of Teacher Training and Education also showed very good results. The project citizen model is an alternative to solving problems related to the environment because this model is an innovative problem-based learning model through contextual practical learning and is designed to help students understand theory and skills about citizenship so they can participate in government and society through learning experiences that emphasize the process of practice, discovery, problem-solving and providing opportunities for students to learn.

References


