

Improving Environmental Love Attitude Through Ecoliteracy Learning at Islamic Boarding Schools

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Abstract. Schools in the Islamic boarding school environment has a lot of influence on education. This research aims to increase the attitude of loving the environment through ecoliteracy learning at Islamic boarding schools. Ecoliteracy learning is integrated into formal lessons at school. The research method used is Classroom Action Research which Kurt Lewin developed. The results of the research showed positive progress starting from cycle 1 to cycle 3. In cycle 1 it was only 39% and those who did not master the material were 61%. The results of the 2nd cycle test showed that the percentage ratio of the number of students who managed to master $\geq 70\%$ of the subject matter was 70% and those who had not mastered the subject matter was 30%. The test results show that the percentage of students who succeeded in mastering the subject material was 80% and those who did not master the material was 20%. The increase in test scores based on environmental love indicators shows that the integration of ecoliteracy-based learning can increase environmental love behavior, especially in Islamic dormitory.

Keywords: love the nature, learning, ecoliteracy, Islamic Boarding School

1 Introduction

This research aims to describe increasing environmental attitudes through ecoliteracy learning at Islamic boarding schools. In general, the function of dormitory in a faith-based school. This main function is still attached to Islamic boarding schools, although in subsequent developments Islamic boarding schools have changed. The schools who have natural environment to maintain their current existence and function apart from being religious education institutions and guardians of society's religious values and norms [1]. Islamic boarding schools in Indonesia are growing and developing very rapidly. An education that is carried out in environment schools is beneficial for students self development when they are in the community. The educational institution that existed long before Indonesia's independence. Islamic boarding schools have contributed a lot to the formation of individuals who are steeped in regional traditions and Islam [2]. So that Islamic boarding schools do not remain stagnant and are only of interest to a group of traditional people but also spread to modern urban communities, who are also interested in Islamic boarding schools.

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Apart from religious learning, ecoliteracy-based learning innovations in the Islamic school are expected to show about of natural resources and surrounding life. Ecoliteracy-based learning in textbooks shows the effectiveness of applying local wisdom to increase awareness of loving, protecting and caring for the natural environment [3][4]. This research is also based on previous research whose results show that attitudes towards environmental issues and participation are very worrying [5]. Students' ecoliteracy abilities can be improved by using project-based learning [6]. The results of this research show that students' concern for environmental cleanliness is increasingly fading. This attitude is influenced, among other things, by the interaction of friends and the environment, the student's lack of understanding and attention in managing time, as well as the students' living habits before going to an Islamic boarding school [7]. This is best compared to the current reality, so there is a need to increase ecoliteracy in learning in Islamic boarding schools.

1.1 The Essence of Islamic Boarding Schools

Islamic boarding schools are places where students from various regions live. Pesantren comes from the word "pesantrian" which is used by santri to live and study religion [8]. Santri who live in Islamic boarding schools have diverse habits, which are influenced by friends, the environment, and various cultural backgrounds [9].

1.2 Ecoliteracy

Ecoliteracy is a feeling of environmental awareness to preserve and protect the environment to save life [10,11]. McBeth et al., convey 4 essential point about of ecoliteracy: (1) ecological science; (2) commitment to nature, and feeling to nature; (3) experience and issue identification, implementation plan, and (4) habit of commitment, i.e., pro-habit of environmental [12]. Ecologi is one of knowledge about understanding the importance of material and theories of ecology, natural benefits [13].

2 Method

This research was carried out in two cycles with the aim of learning, namely collaborating to understand, identify, evaluate, assess accuracy, write and publish articles in the form of reports of observations about the environment. The research design based on Kurt Lewin's model is as follows.

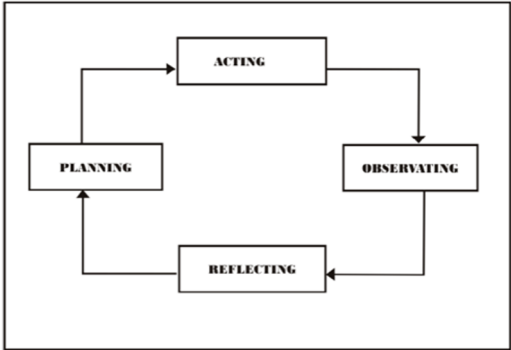


Fig. 1. Classroom Action Research Cycle (Adaptation of Kurt Lewin's Model)

Based on the picture above, the activities of each cycle are described in more detail as follows.

a. Planning

This stage is the initial stage before carrying out the actions that have been formulated. This stage aims to prepare everything that supports the research. The following are things that are done at the planning stage.

- 1) Prepare learning devices.
- 2) Develop learning scenarios and select problems that will be used in implementing problem-based learning.
- 3) Prepare observation sheets that are used to record student learning activities by observers.
- 4) Prepare observation sheets that are used to record student learning activities by observers.

B. Acting

The activities carried out at this stage are based on an action plan that has been prepared by the problem-based learning syntax which includes the following things.

- 1) Presenting problems (explaining learning objectives, describing the material, providing problems related to the material being studied).
- 2) Organizing students (dividing students into small groups of 3 children per group, dividing worksheets for each group).
- 3) Guiding students (directing students when studying and during group discussions).
- 4) Sharing information between students (directing information appropriate to the problem and providing feedback to students)
- 5) Presenting solutions to problems (directing students in making reports on group discussion results, Managing the presentation of discussion results)
- 6) Analysis and review (clarifying the problem being solved, reviewing the solution to the problem being solved)

c. Observation

Activities at the observation stage are carried out simultaneously with the action implementation stage. This activity is carried out by an observer who will observe the progress of learning using a problem-based learning model by recording the activities carried out by the teacher and students during the learning activity. Observations were carried out based on an observation sheet that had previously been prepared by the researcher.

An observer will hold on to the observation sheet and student attendance sheet. From these observations, the results or impacts of implementing the problem-based learning model will be obtained which will later be used as a benchmark for the success of the actions taken.

d. Reflecting

At this stage, analysis, assessment and consideration of the results or impacts of the actions implemented during implementation will be carried out. The results of this research is about the studies considerations, the conclusions is obtained from the level of effectiveness of the learning plan and the problems or obstacles faced during the learning process with implementation the program of PBL (problem based learning) model. Reflection is carried out by observers and teachers, so that later a basis will be obtained for making improvements to the plan in the next cycle if students' activity and learning outcomes have not improved. However, when students' activeness and learning outcomes have reached predetermined indicators of success, the cycle will be stopped.

Place and time of research this classroom action research was conducted at Al Asyari Kwanyar Vocational School, Madura, East Java. Timing refers to the school academic calendar and the Indonesian language subject schedule.

3 Research Result

According to Capra [14] that ecoliteracy contains ecological principles and living by these principles, namely developer and make a life with humanity on future of living to create natural science. Ecoliteracy learning shows three aspects, namely knowledge, concern (care) and attitude (behavior) [15]. In accordance with UNESCO's direction, we must be able to protect and preserve the natural environment, especially the surrounding nature [10]. In this research, ecoliteracy-based learning was carried out until maximum results were obtained, namely three meetings (3 learning cycles).

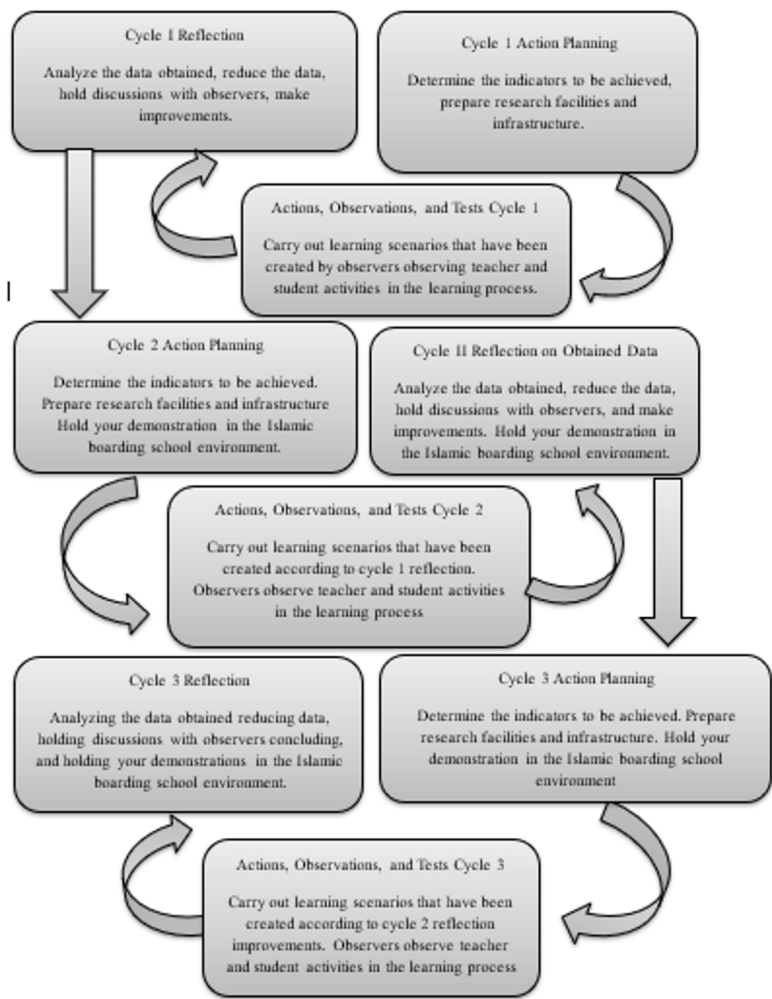


Fig. 2. Learning Cycles

3.1 Cycle 1

Students and the teacher make a class agreement before learning begins. Students are asked to read a sample text of an observation report about the environment. Students identify the information observation result about the environment. They will evaluate the information and characteristics contained in the text of the observation report about the environment. They are identify important parts in the text of reports on observations about the environment. The learner are given worksheets, and write down the results of identification, evaluation, and important parts in observe results. The students are create charts, text, infographics, images or videos. Students with slow abilities are given more explanations by friends or teachers. Students and teachers discuss important information, characteristics, and parts of the text of observation reports about the environment. Students get feedback from the teacher about important details, characteristics, and sections in the text of the observation report about the environment. Students are prepared for assignments. Students collect the results of identifying information, characteristics, evaluations, and the text of the observation report in a worksheet. At this meeting, the teacher only focused on identifying environmental problems in the text, without relating them to the surrounding environment.

3.2 Cycle 2

Students and teachers make a class agreement before learning begins. Ask permission if you want to hold or borrow someone else's property. Raise your hand before asking or expressing an opinion. Respect the person who is speaking by listening to him. Each student is allowed to create charts, text, and infographics in the form of groups to provide responses or feedback in polite language. Students are asked to read a sample text of an observation report that was identified at the previous meeting. Students look for various information related to observation reports in electronic media. Students assess the accuracy and quality of the based on observation result paper based on the information they have obtained. Students compare several observation reports with the same theme. images, or videos. Students with slow abilities are given more explanations by friends or teachers. Students present the results of the accuracy, quality, and comparison assessments in front of other friends. Students express opinions about the results of different groups. Students get feedback from the teacher regarding the accuracy, quality, and comparison of the text of the observation report. The learner will prepared for assignments. Students collect the results of accuracy, quality, and comparison assessments. The focus of learning in this lesson is that students compare the information content of the text with information obtained directly from the community.

3.3 Cycle 3

Students and teachers make a class agreement before learning begins. Students are asked to read a sample text of an observation report that was identified at the previous meeting. Students in groups try to observe the environment around them (beach, garden, school park, mangrove forest). Students modify existing observation reports according to the experiments that have been carried out. Students are allowed to create charts, text, infographics, images or videos. Students with slow abilities are given more explanation by friends or teachers. Students present their observation reports in front of the class. Students take turns expressing their opinions on the results of other groups' presentations. Students receive feedback from the teacher regarding the written on paper about the experience gained. Students are prepared for an assignment (designing an observation report).

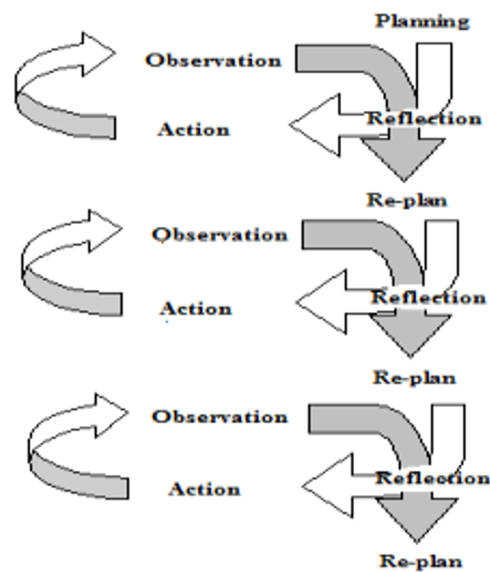


Fig. 3. Classroom Action Research Flow

3.4 Test

In cycle 1, the test used is in the form of an essay, which consists of 1 question item which is guided by 6 indicators.

Table 1. Environmental Education Indicators (Adapted from Mc.Bride)

Indicators	Problem	Solution
Environmental sensitivity		
Play a role in overcoming environmental problems		
Play a role in protecting and improving the environment		
Helping communities solve environmental problems		
Helping society evaluate environmental problems		
Responsible for environmental problems in society		

The following are the results of tests carried out by researchers in cycle 1.

Table 2. Cycle 1 Test Results

No	Material Mastery	Frequency	Percentage (%)
1	86-100	2	7,59
2	69-85	12	32,44
3	54-68	13	41
4	45-53	4	15.2
5	0-44	2	4.79

The test results show that the percentage ratio of the number of students who succeeded in mastering the lesson material in cycle 1 was only 39% and those who did not master the material was 61%.

3.5 Reflection

Learning activities that need to be improved in cycle 1 are: (1) Forming heterogeneous groups, to provide information to each other, (2) demonstrating good behavior towards the natural environment, and (3) having internal discussions between students.

3.6 Cycle 2 Test

Table 3. Cycle 2 Test Results

No	Material Mastery	Frequency	Percentage (%)
1	86-100	4	7.80
2	69-85	13	35
3	54-68	10	30
4	45-53	4	10.2
5	0-44	0	0

3.7 Reflection

At this stage, observation results can be obtained through observation, interviews, and tests. Between the data obtained from the planned learning design and the research success indicators that have been determined there are still several discrepancies, namely as follows (1) Teachers have not been optimal in controlling and giving warnings to inactive students, 2) not all students have given their responses in the discussion, (3) the final activity was in the form of a summary of the lesson material, only 2 groups were involved, (4) student learning activities had not yet achieved indicators of success, the test results showed only 4 indicators with very good qualifications (SB) and indicators that were implemented with good qualifications (B) from the 10 indicators listed in the observation guide.

Based on the learning results in cycle 2, improvements are needed. This is intended so that implementation in cycle III provides better results. These improvements are as follows: (1) Student distribution is carried out based on test results evenly, (2) Teachers need to maximize control of students in carrying out demonstrations and giving warnings to students who are not active; (3) For the next lesson, students who get low scores are appointed as group leaders. In addition, teachers must pay special attention to students with low scores in carrying out demonstrations, (4) all groups must be involved in concluding the material at the end of lesson activities. The results of the 2nd cycle test showed that the percentage ratio of the number of students who managed to master $\geq 70\%$ of the subject matter was 70% and those who had not mastered the subject matter was 30%.

3.8 Cycle 3 Test

Table 4. Cycle 3 Test Results

No	Material Mastery	Frequency	Percentage (%)
1	86-100	4	17.90
2	69-85	12	35.10
3	54-68	10	10.8
4	45-53	2	8.1
5	0-44	0	0

The test results show that the percentage of students who succeeded in mastering the subject material was 80% and those who did not master the material was 20%.

3.9 Reflection

Data obtained from observations, interviews, and evaluations were then analyzed together with collaborators. After analysis, it was found that (1) the learning process using the demonstration method had gone according to plan, although there were still 2 students who had not been active in demonstration activities for environmental love, and (2) the learning indicators had been achieved well.

4 Discussion

The results of this research show that there is a change in environmental behavior that is better than before. This can be seen in the increase in test results which are guided by environmental love indicators in learning practices. The final test results show that the percentage of students who succeeded in mastering the subject material was 80% and those who did not master the material was 20%. The application of ecoliteracy learning in the curriculum is an innovation that differentiates it from other similar research.

Research in 2023 natural environment learning can be applied in learning and its evaluation. This research analyzes community competence which is centered on the ability to recognize potential and utilize the environment (ecoliteracy). The research results show that there is still a lot of potential that can be used as a basis for efforts to develop ecoliteracy learning models for the community [11]. This research shows that ecoliteracy is the result of learning innovation, but has not been implemented in the curriculum.

Research in 2021 about the developing electron based modul. The module is developed using LMS Media. This is about the research are ecoliteracy-based electronic modules for class 9. Ecoliteracy in the content is found from themes, learning objectives, materials, exercises and cases study .The explanation on the book is found from text, images, audio and video [16]. They will focus and than produce an ecoliteracy module that is only limited to grade 9.

Research in 2021 "Examining the Effects of Ecoliteracy on Knowledge, Attitudes, and Behavior through Adiwiyata Environmental Education for Indonesian Students". The research looks at the influence of student character built with the concept of ecoliteracy. The results of the research show that there is a relationship between knowledge and attitudes towards student behavior both inside and outside school as well as significant differences between Adiwiyata-based schools and non-adiwiyata schools in terms of students' knowledge, attitudes, and behavior [17]. This research looks at the differences in the characteristics of adiwiyata schools and non-adiwiyata schools.

In 2023 "Implementation of Ecoliteracy through the Peat Corner Column on the Online News Site Basajan.net". This research describes the implementation of ecoliteracy in mass media. The results of this research found that the Gambut Corner developed by the editors of basajan.net became a means for implementing environmental journalism to advocate for the preservation of peat hydrological areas, especially in the South West region of Aceh [18]. This research shows the benefits of ecoliteracy in the lives of coastal communities by utilizing peatlands.

Research in 2023 "Development of Environmental Literacy Modules through School Programs in Elementary Schools". The results of the material expert analysis show that the developed literacy environment has succeeded in eliminating certain criteria in the fields of substance, education, language, and design [19]. This research aims to evaluate the characteristics and effectiveness of environment-based literacy learning.

5 Conclusion

The "Kurt Lewin" Classroom Action Research Model was taken, adapted, and developed by the focus of this research, namely increasing environmental attitudes through

ecoliteracy-based learning. The environmental context in this research is the school environment in Islamic boarding schools.

Acknowledgements

I would like to thank you for funding for this research. This work was supported by LPPM Trunojoyo University; SMK Al Asyari Kwanyar Bangkalan; and MA Maarif Saronggi Sumenep.

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