

Integrating Ecological Education in Social Science Learning at the Elementary School

A Case Study at SD Negeri Tegalrejo 2 Yogyakarta, Indonesia

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ABSTRACT

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Environmental education can be integrated with the field of study in schools with interdisciplinary, multidisciplinary and transdisciplinary approaches, one of which is through social studies learning. The integration between environmental education and social studies learning is summarised by instilling awareness as citizens responsible for fellow human beings, the state and the natural surroundings and providing a broad insight into the importance of protecting the environment, which will impact all aspects of human life. This study aimed to describe the integration of environmental education in social science learning and find the supporting and inhibiting factors. The research used in this research is qualitative. Data collection techniques in this study were observation, interviews, and documentation. The validity of the data used in this study is technical triangulation. The data analysis technique uses the Miles and Huberman methods, which consist of information gathering, presentation, concluding, and data reduction. The results of this study are the implementation of integrating environmental education in social science learning for the upper class. Integrating ecological education in social science teaching for the upper class is done through the planning, implementation, and evaluation stages. The planning carried out includes planning learning objectives, learning materials, learning methods, learning media, and assessment of learning outcomes. Implementation occurs when learning takes place with the preliminary activity, core, and closing stages. Assessment is carried out by assessing students' cognitive, affective, and psychomotor domains. The supporting factors for its implementation are the availability of facilities and

infrastructure, the teacher's understanding of linking social science learning material with environmental education, and the synergy of all school members, as well as the inhibiting factors for its implementation, namely the lack of teacher creativity in developing integrated learning indicators for environmental education in social science material and students who less active during the lesson.

Keywords

Ecological Education
Elementary School
Social Science

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Introduction

One of the efforts to preserve the environment is to provide environmental education early so that people with a caring and environmentally friendly attitude are created. Ecological education is an effort to preserve and protect the environment and ecosystems of living things that contribute to the sustainability of a balanced and harmonious life [1],[2]. Environmental education can be linked to learning. The linkages in the teaching are contained in a joint agreement between the Ministry of Environment and the Ministry of National Education. No KEP 07/MEN LH/06/2005 and No.05/VI KE/2005 June 3, 2005, so that environmental education is developed based on the basic concept of the environment, which is applied in all types and pathways of science education at all levels from elementary school to university [3]. Environmental Education Materials can be taught to students through integrated learning with other subjects [4]-[6]. At each level of formal education, from elementary, junior high, and high school to higher education, many issues are open to receiving environmental education material inserts. At the elementary level, there are science, social studies, cultural arts and skills, as well as self-development and personality, which can teach students to recognise and respond to knowledge about the environment and population, as well as add habits of thinking and scientific behaviour that are critical, creative, and independent in appreciating environmental and population issues in everyday life [7].

Learning social sciences in elementary schools is an integrated study of social sciences disciplines that are comprehensive in nature, where the material is taken from the social sciences family and is adapted to the scope of the social conditions of society [8]-[10]. Organising social studies material in elementary schools is carried out using a thematic (integrated) learning model where students are invited to think in a logical flow of thought that is general and not limited to the scientific logic of a particular discipline [11]. Integrated learning is done by combining several subjects in one theme. Students can simultaneously learn teaching material for several fields of study by actively participating in exploration or

events [12]. Learning discusses certain pieces and the main concepts related to the theme. The implementation of the integration of environmental education in social studies learning content requires the ability of teachers in the process of implementing, planning and evaluating learning [13]. However, teachers must still familiarise themselves with social studies material integrated with environmental education. Environmental education is more closely associated with science learning content, as happened at school.

Schools that receive an Adiwiyata award have succeeded in implementing environmental education. Knowledge and understanding of ecological issues, as well as teachers' professional and pedagogical abilities, influence the realisation and implementation of a positive attitude of teachers in developing integrated learning with environmental education. Teachers who are sensitive, insightful, and updated on environmental issues can develop integrated environmental activities in learning. Therefore, digging deeper into integrating ecological education into social studies learning content at school is essential.

Method

A. Data Collection Techniques

Data collection techniques are a way of obtaining the necessary data. In this research, the techniques used include observation and interviews. Observation is a method of observing human behaviour, work processes, and natural phenomena, and then the data obtained is compared and processed. This research was conducted by following the environment at SD Negeri Tegalrejo 2 Yogyakarta; then, the researchers made observations of school documents related to environmental education. Observations will be conducted from November 2022 to May 2023. Observations will be made with the 4th-grade, 5th-grade, and 6th-grade teachers about integrating ecological education into social science learning [14].

Interviews are used as a data collection technique when the researcher wants to conduct a preliminary study to find problems that must be studied, but also when the researcher wants to know things from respondents in more depth. An interview is a meeting of two people to exchange information and ideas through question and answer to construct meaning in a topic. This study interviewed the 4th-grade, 5th-grade, and 6th-grade teachers [14].

Documentation is collecting data by viewing or analysing documents from the subject or other people related to the topic. Documents taken can be pictures, writing, observation report notes, institutional records, books, and data related to environmental education in social studies learning content. Existing documents support the ongoing research to be more complete [15]. It used photo documentation of policies integrating ecological education into social science teaching.

B. Data Analysis Techniques

Data analysis is inductive; the data obtained is developed into a hypothesis to look for more data repeatedly to conclude whether the idea is accepted or rejected based on the data obtained. The data intended for organising this study were obtained from interviews, observation, and documentation. The data analysis technique used in this research is qualitative data analysis, according to Miles and Huberman, often called the interactive data analysis method. They revealed that the activities in qualitative data analysis were carried out interactively and continued continuously until complete, so the data was saturated. There are three activities in qualitative data analysis: data reduction, data display, and conclusion or verification. In qualitative research, the researcher uses descriptive data analysis techniques to analyse the data of his research results obtained from searching and systematically compiling the data from observations, interviews and documentation [16].

Results and Discussion

The results of this study will describe the integration of environmental education in social studies learning content. This discussion is adapted to the results of the data obtained through observation, interviews and documentation. Observations, interviews, and documentation were conducted to learn about integrating environmental education into social studies learning content. Then, the data obtained from the three methods were reduced and processed using technical triangulation.

A. Integrating Environmental Education in Social Science Learning

Learning in the classroom is required to be student-centred, with the teacher only acting as a facilitator, meaning that the teacher must continue to improve and develop planning, implementation, and assessment of learning so that the integration process can run in a pleasant manner that has an impact on the acceptance of student material. The integration of environmental education in elementary schools is carried out by planning, implementing and evaluating learning in intra-curricular, extra-curricular and school programs [17]. Thus, students can apply an attitude of caring for the environment daily.

1. Planning

Implementation of lesson plans carried out by the teacher is the coordination between the teaching components with the availability of facilities and student characteristics. Planning the integration of environmental education in social studies learning content includes several features, namely objectives, teaching materials, methods, media, and evaluation [18].

a. Learning Objectives

The concept of environmental education in elementary schools is interpreted in an integrated manner in learning, meaning that it is taught according to the competencies of certain subjects. Therefore, teachers must understand the objectives of each topic so that in integrating environmental education, they stay consistent with the material to be taught.

b. Teaching Materials

The activities of integrating environmental education into social studies learning content are adapted to the learning materials and curriculum that apply in schools. The 4th-grade, 5th-grade, and 6th-grade teachers use thematic and student worksheets as essential references in obtaining material. Furthermore, the teacher develops the material by looking for other sources from the library and the internet, such as pictures or videos. See Fig. 1 for the learning material examples.



Fig. 1. Teaching Materials

c. Learning Methods

The learning strategy used is determined by students and facilitated by the teacher so that it will produce an active response. The learning method as a way of conveying material is one of the most critical components, methods and strategies of the entire teaching and learning activities so that students are interested and happy with the material and that the material presented is easy to digest and practice. Lecture methods, student teams, question and answer, discussion, and field trips integrate environmental education in social science learning content. See Fig. 2 for the learning situation.



Fig. 2. Student Teams Method Implementation

d. Instructional Media

Learning media used by 4th-grade, 5th-grade, and 6th-grade teachers in social studies thematic learning integrated with environmental education follow the theme or according to the material to be taught, such as using pictures, videos, LCD projectors, and items in the environment. Schools can also be used to maximise learning. See Fig. 3 for the instructional media in the classroom.



Fig. 3. Instructional Media

e. Evaluation

Social studies learning assessments conducted by 4th-grade, 5th-grade, and 6th-grade teachers to assess students' abilities in understanding social studies content

integrated with environmental education are categorised into three competencies, namely attitude (affective), knowledge (cognitive), and skills (psychomotor) assessment.

2. Implementation

Implementation of the integration of environmental education in social studies learning content is carried out every day using three stages of activity, namely preliminary activities, core activities, and closing activities. Implementing learning in the classroom begins with the initial exercises; the teacher prepares students to receive material by checking and asking whether the students are in good health and can carry out teaching and learning activities, followed by checking the completeness of student learning, such as books and stationery. Another essential action is praying before the lesson to reinforce religious character to new students. The teacher discusses the introduction related to the material to be presented.

The next activity is the core activity, a process for conveying the subject matter. The learning methods and models that have been designed are applied during the learning process. Everything that has been made in the learning implementation plan is adjusted to the abilities and conditions of students and is based on sources that are considered the most complete and efficient.

The closing activity is the last carried out during teaching and learning activities. Learning ends with exercises to see students' abilities after participating in the learning process, covering the breadth of student material in cognitive, affective, and psychomotor aspects. An activity that is no less important at the end of the lesson is that the teacher invites students to pray together.

3. Evaluation

The assessment stage for environmental education is implemented at a school. The teacher integrates the achievement of ecological education indicators in cognitive, affective and psychomotor assessment. On the affective part, it measures students' interest in environmental activities and their ability to apply an attitude of love for the environment in their daily lives. Implementing a philosophy of love for the domain is also associated with values such as student independence in caring for the environment and student creativity in managing waste in the school environment. Assessment focuses on affective aspects of learning activities so that awareness and knowledge about the domain will be embedded in student character.

B. Supporting Factors and Inhibiting Factors in Integrating Environmental Education in Social Science Learning

The successful integration of environmental education into social studies learning content must be distinct from the existence of supporting factors. This aligns with the school's mission: "Develop the knowledge of school residents through environmental education."

The first supporting factor is the availability of adequate facilities and infrastructure. All classrooms have LCD projectors as learning media, making it easier for teachers to convey material through pictures or videos to students during the learning process. The second supporting factor is the teacher's understanding of the relationship between social studies material and environmental education, which develops indicators and then writes them into lesson plans. The third supporting factor is the synergy of all school members, namely the principal, teachers, staff, and students.

Meanwhile, the inhibiting factor for integrating environmental education in social studies learning content is the need for teacher creativity in developing learning indicators before compiling lesson plans combined with the material. There are still some students who need to be more active in learning.

Conclusion

The conclusion that can be drawn from this study is that 4th-grade, 5th-grade, and 6th-grade teachers have integrated environmental education into social studies material as indicated by the steps that have been taken, namely planning, implementing, and evaluating. Planning is done by determining learning objectives, teaching materials, learning models, learning media, and learning outcomes assessment. Implementation is conducted by conducting preliminary, core and closing activities supporting integrating environmental education into social studies learning content. Finally, evaluation activities are carried out by assessing the cognitivstudents' cognitive, affective, and psychomotor aspects factors for the integration of environmental education in social studies learning content, the availability of adequate facilities and infrastructure, the teacher's understanding of connecting social studies material with environmental education, and the synergy of all school members, namely the principal, teachers, staff, and students. Meanwhile, the inhibiting factor for integrating ecological education in social studies learning content is the teacher's difficulties in developing blended learning indicators for environmental education in social studies material and students who are less active during learning.

Conflict of Interest

The authors stated that there was no conflict of interest in the study.

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