

Evaluation of Environmental Education Learning in the Era of the Merdeka Belajar Curriculum

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ABSTRACT

This article investigates the evaluation of Environmental Education learning in the era of the Independent Learning curriculum. The Independent Learning Curriculum, issued by the Ministry of Education and Culture of Indonesia, aims to provide freedom and autonomy to educational institutions in managing the learning process. With this policy, it is hoped that students can develop their competencies and character more optimally. This study analyzes how environmental education learning has been applied within the framework of freedom of learning and evaluates the effectiveness and challenges faced. The findings of this study show that although Merdeka Belajar has had a positive impact, such as increasing student engagement and reducing the administrative burden on teachers, there are still some challenges in its implementation, primarily related to the adjustment of learning methods and assessments.

Keywords:

Freedom of Learning;
Environmental Education;
Learning Evaluation.

INTRODUCTION

Environmental Education / *Pendidikan Lingkungan Hidup (PLH)* is important in increasing public awareness and knowledge about increasingly urgent environmental issues. In Indonesia, implementing the Independent Learning Curriculum launched by the Ministry of Education and Culture (Kemendikbud) in 2020 aims to provide freedom to schools in designing relevant and contextual learning for students. In this context, evaluating PLH learning is crucial to understanding the effectiveness of the learning methods and their impact on students' understanding of environmental issues. According to data from the Central Statistics Agency Indonesia in 2021, 60% of Indonesians do not understand environmental issues well. This shows that environmental education needs to be improved. (Azhar, Basyir, & Alfitri, Hubungan Pengetahuan Dan Etika Lingkungan Dengan Sikap Dan Perilaku Menjaga Kelestarian Lingkungan, 2016) (Alawi, Sumpena, Supiana, & Zaqiah) (Aji, 2023) (Nurziammah, 2020) (Statistik, 2021) (Santoso, Roshayanti, & Siswanto) (Rosyidatun & Supriyadi, 2021) (Adriyanto, Martono, Soesilo, & Nadiroh, 2021)

The Independent Learning Curriculum provides space for innovation in teaching methods, including PLH. This more flexible approach is expected to create a more engaging learning experience for students. For example, through environment-based projects, students can learn directly from real experiences, such as planting trees or cleaning up rivers. Research by Syafii shows that project-based learning can increase student engagement by up to 75%, which has positive implications for their understanding of the environment. However, challenges in implementing this curriculum also need to be identified so that the goals of environmental education can be achieved optimally. (Muntoif, 2020) (Mufidah, Iswara, & Hermanto, 2021) (Syafii, 2023) (Nasucha, et al., 2020)

The Independent Learning Curriculum is an educational policy that aims to provide freedom and autonomy to educational institutions in managing the learning process so that they can adapt to the local context and needs. This is expected to increase student engagement, develop competencies, and shape character. In implementing this curriculum, teachers are essential in designing innovative, creative, and contextual learning, including Environmental Education. (Lembong, Lumapow, & Rotty) (Labudasari & Rochmah, 2019) (Hanafiah, 2023)

A review of the implementation of Freedom of Learning in PLH learning is essential to understand the effectiveness and challenges faced. This study aims to evaluate PLH learning within the framework of Freedom of Learning, including learning approaches, student involvement, learning outcomes, and obstacles that arise. Understanding the findings of this study can contribute to efforts to develop more effective PLH learning in the era of the independent learning curriculum. (Aprilia, Nuro, & Naimah, 2023) (Lembong, Lumapow, & Rotty) (Yatim, Jamilah, Sahnir, & Abduh, 2023)

In this paper, the researcher explores the evaluation of PLH learning in the era of the Independent Learning Curriculum, focusing on the effectiveness of teaching methods, student involvement, and long-term impacts on environmental awareness. It is hoped that using relevant data can provide a clear picture of the current conditions and recommendations for future improvements. The evaluation will also consider various factors that affect the success of the PLH program, including support from schools, parents, and the community.

Based on the background that has been described, the formulation of the problem in this study is as follows:

1. What is the effectiveness of the learning methods applied in environmental education in the era of the Independent Learning Curriculum?
2. How involved are students in environmental education learning?
3. What is the role of schools and parents in supporting Environmental Education?
4. What is the long-term impact of environmental education on student behavior in protecting the environment?

The formulation of this problem must be answered so that the evaluation can provide comprehensive and applicable results. By understanding the effectiveness of the methods, schools and educators can make the necessary improvements and innovations in PLH learning. In addition, student involvement in the learning process is also an important indicator in assessing the success of environmental education. According to research by Mulyadiprana et al., Students actively involved in environmental activities tend to be more aware of environmental issues around them. Factors that affect the success of environmental education also need to be studied in depth. Support from schools, parents, communities, and government policies is an essential element that can influence the implementation of the PLH program. Data from the National Education Survey (SNP) by the Ministry of Education and Culture (Kemendikbud) in 2022 shows that only 40% of parents support school environmental education activities, which can hinder achieving the expected educational goals. Therefore, it is essential to identify and analyze factors that support or hinder the implementation of environmental education.

(Mulyadiprana, Rahman, Hamdu, & Yulianto, 2023) (Supadmini, Wijaya, & Larashanti, 2020) ((Kemendikbud), 2022)

METHOD

The research method used to evaluate PLH learning is a qualitative approach with a case study design. This research was carried out in several elementary and secondary schools that implemented the Independent Learning Curriculum in the DKI Jakarta area and its surroundings. The selection of the research location is based on the diversity of school characteristics in terms of type, size, and socioeconomic background of students. The data collected included in-depth interviews with teachers, students, and parents and direct observation of PLH learning activities carried out in schools. The interviews were conducted using a pre-prepared guide, which included questions about the learning methods applied, the level of student involvement, and the challenges faced in implementing environmental education. Furthermore, observations are made to see firsthand the interaction between teachers and students in the context of PLH learning and assess the classroom's learning atmosphere.

The data obtained from interviews and observations were then analyzed using thematic analysis techniques, which allowed researchers to identify patterns and themes that emerged from the data. In addition, this research also involves collecting secondary data from documents and reports related to the implementation of environmental education in schools, which are the object of research. This secondary data provides a broader context regarding the environmental education policy implemented in Indonesia and the results of relevant previous evaluations. Thus, this study is expected to provide a comprehensive overview of environmental education in the era of the Independent Learning Curriculum. (Neuman, 2006) (Azhar, Basyir, & Alfitri, Hubungan Pengetahuan dan Etika Lingkungan Dengan Sikap dan Perilaku Menjaga Kelestarian Lingkungan, 2016) (Nasucha, et al., 2020)

RESULTS AND DISCUSSION

1. The effectiveness of PLH learning methods in the era of independent learning curriculum

One of the main challenges in environmental education is the lack of interest and understanding of students in environmental issues. According to a survey conducted by the Ministry of Environment and Forestry in 2021, only 30% of students stated that they understood the importance of taking care of the environment. This shows the need for a more exciting and relevant approach to PLH learning. (Kehutanan, 2021)

Innovative learning methods, such as Project-Based Learning, can be a solution to increase the effectiveness of PLH in the era of the Independent Learning Curriculum. By involving students in authentic projects related to the environment, they can learn while contributing directly to society. For example, students can participate in tree-planting programs in their school or community. This activity improves students' understanding of environmental issues and builds a sense of responsibility for the environment.

In addition, using technology in PLH learning is also an essential factor in increasing the effectiveness of teaching methods. Using digital applications and platforms can facilitate more interactive and engaging learning. For example, apps that provide information about biodiversity and environmental issues can help students understand more complex concepts. Data from the World Economic Forum shows that using technology in education can increase student motivation and engagement by up to 50%. (Forum, 2020)

Thus, it is important to explore various learning methods that can be applied in environmental education in the era of the Independent Learning Curriculum. Evaluation of the effectiveness of these methods needs to be carried out to find the approach that best suits the characteristics of students and the local context.

Based on the results of interviews with teachers, it is known that educators have tried to implement a more varied and innovative learning approach in PLH learning to implement the Independent Learning Curriculum. One of the widely applied methods is project-based learning. Through project-based learning, students are actively involved in designing, implementing, and evaluating projects related to environmental issues. This provides opportunities for students to develop critical thinking skills, creativity, collaboration, and communication, essential competencies in the era of the Independent Learning Curriculum. (Mahanal, Darmawan, Corebima, & Zubaidah, 2010) (Nasucha, et al., 2020) (Mahanal, Darmawan, Corebima, & Zubaidah, 2010)

In addition, several schools have also integrated environmental education into other subjects, such as Science, Social Studies, and Indonesian Language. Thus, students can learn environmental concepts in a broader and meaningful context. Nature-based learning methods and hands-on experiences are also options for some teachers, as they invite students to conduct observations, experiments, and field activities related to the surrounding environment. (Suari, 2018)

However, the implementation of these innovative learning methods still faces several challenges. Some teachers still find it difficult to develop lesson plans to facilitate meaningful project activities and student learning experiences. In addition, constraints related to the availability of resources, both in terms of infrastructure and financial support, are also an inhibiting factor in applying more varied learning methods. (Lembong, Lumapow, & Rotty) (Jayawardana, Noviyanti, Hidayanto, & Gita, 2022) (Fakhrudin, 2023)

In addition, in today's digital era, the use of technology in education is becoming increasingly important, including in Environmental Education. Technology can facilitate more interactive and engaging learning, increasing students' learning motivation. In the Independent Learning Curriculum context, technology provides flexibility for teachers to design learning experiences that suit the needs and characteristics of students. One example of using technology in Environmental Education learning is a mobile-based application that provides information on biodiversity, climate change, and other environmental issues. The app allows students to access real-time information and interact with learning content. According to a report by the Pew Research Center in 2021, 83% of

students stated that they were more interested in learning when using technology in the learning process. (Center, 2021)

In addition, technology allows students to conduct more in-depth research and observations of the environment. For example, drones can monitor forest conditions or map applications to study land use changes. Data from National Geographic in 2020 shows that environmental monitoring technology can improve data accuracy by up to 40%, which is certainly invaluable in environmental education and research. (Geographic, 2020)

In the era of the Independent Learning Curriculum, the effectiveness of the learning method of environmental education is highly dependent on the approach used by educators. Project-based learning methods and the use of technology are two strategies that show great potential in improving students' understanding of environmental issues. However, resource limitations and technology access gaps must be addressed to achieve optimal results. Environmental education must continue to adapt to the development of the times and the needs of students. Therefore, further research on the effectiveness of various PLH learning methods must be conducted to find the most suitable approach. In addition, training teachers and providing adequate resources are crucial to improving the quality of environmental education in Indonesia.

By applying innovative methods and utilizing technology, it is hoped that environmental education can be more effective and relevant for students. This will increase environmental awareness among the younger generation and contribute to broader environmental conservation efforts in society.

2. The active role of students in PLH learning

Environmental Education is crucial in shaping students' awareness and concern for the environment. In the global context, environmental issues such as climate change, pollution, and biodiversity decline are increasingly urgent to pay attention to. According to a report from The United Nations Educational, Scientific and Cultural Organization (UNESCO), effective education can increase environmental awareness and encourage positive action among the younger generation. By involving students in an active learning process, they become recipients of information and agents of change that can influence the surrounding community. (UNESCO, 2020)

Statistics show that about 60% of students in Indonesia feel poorly educated about critical environmental issues. This shows an urgent need to strengthen the Environmental Education curriculum in schools. By providing students with the opportunity to engage in practical activities such as waste management projects or tree planting, they can learn firsthand about the impact of their actions on the environment. Case examples, for example, based on a report from the Yogyakarta Education Office in 2022 at the State Junior High School (SMP) 1 Yogyakarta, show that a tree planting program involving students managed to plant more than 1,000 trees in a year, which significantly contributed to the greening of the area. Student involvement in PLH can also improve their understanding of the importance of sustainability. This reinforces a study conducted by the University of Education Indonesia, which found that students actively involved in environmental programs have a better understanding of the concept of sustainability than those who only

passively receive information. This shows that learning that involves active participation can strengthen students' understanding and commitment to environmental issues. (Kehutanan, 2021) (Yogyakarta, 2022) (Indonesia, 2023)

The results of observations in several DKI Jakarta schools show that student involvement in PLH learning in the era of the Independent Learning Curriculum has increased compared to teacher-centered learning practices. Through a project-based learning approach, students can explore environmental issues relevant to their lives, formulate questions, design solutions, and present their work. This aligns with Fariroh's research findings, which show that project-based learning can encourage students to be more active in understanding the subject matter and applying it in solving real problems in the surrounding environment. In addition, learning by involving observation and outdoor activities can also spark students' enthusiasm and curiosity about environmental issues. (Sutrio, Kosim, Harjono, Hikmawati, & Verawati, 2021) (Sukrah, 2019) (Muntoif, 2020) (Sutrio, Kosim, Harjono, Hikmawati, & Verawati, 2021)

However, challenges are still encountered in optimizing student participation, especially in students with diverse motivations and abilities. Teachers must continue to pursue strategies to encourage the active involvement of all students in PLH learning to achieve the expected goals.

3. The role of schools and parents in supporting PLH

Schools are responsible for educating the younger generation on the importance of the environment. Schools can provide basic knowledge about ecosystems, climate change, and other environmental issues through an integrated curriculum. According to data from UNESCO, about 90% of children worldwide are enrolled in school, which shows great potential for spreading environmental awareness. Schools act as places of learning and agents of change that can shape students' behavior and attitudes toward the environment. (UNESCO, 2020)

In addition, extracurricular activities such as environmental clubs can be a forum for students to be directly involved in environmental conservation activities. For example, in some schools in Indonesia, greening and environmental hygiene programs involving students have increased their awareness and sense of responsibility for the environment. Data from the Ministry of Environment and Forestry (MoEF) shows that students' participation in environmental activities can increase their understanding of sustainability by up to 60%. (Kehutanan, 2021)

Furthermore, schools can also establish partnerships with environmental organizations to hold seminars, workshops, and field activities. For example, the "Adiwiyata School" program in Indonesia awards schools that successfully implement the principles of environmental education. The program improves the quality of education and creates a cleaner and healthier school environment. However, the challenge schools face in implementing environmental education is the lack of resources and teacher training. According to the Ministry of Education and Culture research, only about 30% of teachers feel ready to teach environmental materials effectively. Therefore, adequate training and support are needed to increase the capacity of teachers to teach environmental issues. Thus, the role of schools in environmental education is very crucial. Through a good curriculum, extracurricular activities, and partnerships with environmental organizations,

schools can be pioneers in creating a generation that cares about and is responsible for the environment. (Kehutanan, 2021) ((Kemendikbud), 2022)

In addition to school, the role of parents is equally important in supporting their children's environmental education. The home environment is the first place children learn about values and behaviors. According to a survey conducted by Green Kids, 75% of children involved in environmental activities at home show greater interest in environmental issues at school. This suggests that parental involvement in environmental education can reinforce learning gained in schools. Parents can support environmental education by providing concrete examples in daily life. For example, parents can teach their children about the importance of caring for the environment by implementing recycling practices, energy conservation, and eco-friendly products. Data from the World Wildlife Fund in 2020 showed that families active in eco-friendly activities tend to have more environmentally conscious children. In addition, parents can also play a role in conveying information about environmental issues to their children. By discussing the latest environmental news and developments, parents can raise children's awareness of the challenges facing our planet. This is the result of research (Lingkungan., 2021) (Fund, 2020) Masykuroh, Yetti, and Nurani in 2022, which found that children who talked about environmental issues with their parents tended to be more active in environmental conservation activities. (Masykuroh, Yetti, & Nurani, 2022)

However, the challenge for parents is a lack of knowledge and understanding of environmental issues. Many parents feel they do not have enough information to educate their children. Therefore, training programs for parents on environmental education are essential to implement. The Ministry of Environment and Forestry has initiated several initiatives to train parents to educate children about the environment (MoEF, 2021). Thus, the role of parents in supporting environmental education is significant. Through good examples, discussions on environmental issues, and increased knowledge, parents can help shape a more environmentally conscious and responsible generation.

This study reveals that the support factor from schools and parents is an essential element in the successful implementation of environmental education in the era of the Independent Learning Curriculum. Several schools that are the object of research have developed special programs related to environmental education, such as environmentalist clubs, nature-based learning, and cooperation with related institutions. The school's commitment to providing funds, infrastructure, and support for teachers to develop innovative learning is essential in optimizing the implementation of the Independent Learning Curriculum, especially in environmental education.

In addition, the active participation of students' parents and even the involvement of surrounding communities, such as non-governmental organizations, local governments, and youth organizations, also contributed significantly. Through close cooperation between schools, parents, and communities, Environmental Education programs can be designed and implemented more comprehensively to increase student participation in safeguarding and preserving the environment. (Purwanti, Nilakusmawati, & Asih, 2018)

4. The long-term impact of PLH on student behavior in protecting the environment

This study also revealed that the effective implementation of environmental education in the era of the Independent Learning Curriculum can positively impact changing student behavior in protecting the environment. Through learning that emphasizes the development of environmental awareness, knowledge, and skills, students can better understand the importance of preserving the environment.

The results of interviews with several teachers showed that students actively involved in environmental education tended to show more pro-environmental behaviors, such as throwing garbage in its place, saving water and energy use, and participating in hygiene and greening programs in schools. This behavior is not only shown in the school environment but also begins to be applied in the daily life of students in the community and community environment. (Nasucha, et al., 2020) (Jannah, et al., 2022)

These findings align with the research of Shay-Margalit and Rubin, who stated that environmental education implemented comprehensively and sustainably can shape the character of caring for the environment in students who will be part of their future lifestyles. Environmental Education has a positive effect on the environment. Environmental education must be given to children from an early age so that they understand and do not damage the environment. In this case, PLH affects several aspects, including (1) cognitive aspects, environmental education has a function to increase understanding of environmental problems, as well as being able to improve memory, application, analysis, and evaluation; (2) the affective aspect, environmental education functions to increase acceptance, assessment, organization and personality characteristics in arranging life in harmony with nature; (3) psychomotor aspects, environmental education plays a role in imitating, manipulating in interacting with the surrounding environment to improve the culture of loving the environment; and (4) the aspect of interest, environmental education functions to increase interest in children. Therefore, implementing the Independent Learning Curriculum that focuses on strengthening Environmental Education needs to be encouraged to have a sustainable positive impact on environmental conservation. (Shay-Margalit, 2016) (Duerden & Witt., 2010) (Liefländer & Bogner, 2014)

CONCLUSION

Based on the research results, it can be concluded that implementing environmental education in the era of the Independent Learning Curriculum has shown several positive developments. Schools have tried implementing more innovative learning methods like project-based learning, cross-subject integration, and nature-based learning activities. This has an impact on increasing the active involvement of students in the learning process. However, several challenges still need to be faced, primarily related to the development of teacher competence, the availability of resources, and the optimization of the role of parents and communities in supporting environmental education in schools. Therefore, more comprehensive and sustainable efforts are needed from various stakeholders to realize effective environmental education in the era of the Independent Learning Curriculum.

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