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Eco Green School Program in Improving Environmental Learning Culture (Case Study at SMPN 10 Malang)

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Abstract

This study aims to describe the implementation of the Eco Green School Program in improving the environmental learning culture at SMPN 10 Malang, including activities, success strategies, supporting and inhibiting factors, and efforts and solutions. This study employed a qualitative approach with a case study design. Data were collected through interviews, observations, and documentation. Informants consisted of the ASEAN Eco School Team, Adiwiyata Team Coordinator, Vice Principal for Curriculum, and Head of Eco Generation. Data were analyzed through data collection, condensation, display, and conclusion drawing and verification. Data validity was established through source triangulation, technique triangulation, and member checking. The findings show that the program was implemented through six aspects of Environmentally Friendly Behavior (PRLH). Its success was supported by socialization, education, habituation, empowerment, and cooperation or partnerships. Supporting factors included geographical conditions and support from parents and parent associations, while inhibiting factors included limited funding, time constraints, and adaptation of new school members. Efforts included optimizing resources, improving efficiency, and strengthening school culture. Sustainable implementation through involvement and habituation contributes to an environmental learning culture that is clean, healthy, green, comfortable, and environmentally conscious.

Keywords: Eco Green School Program; Environmental Learning Culture; Environmentally Friendly Behavior (PRLH)

1. Introduction

Schools play a strategic role in shaping students' character, including environmental awareness. As spaces for learning, social interaction, and daily habituation, schools can integrate environmental preservation values through policies, programs, and learning activities. The development of an environmentally oriented school culture is also important in creating a clean, healthy, comfortable, and conducive learning environment. This is consistent with Syukur et al., (2021) who explained that habituating environmentally responsible behavior through applicable learning can help internalize environmental awareness in students' daily lives.

Efforts to develop an environmentally responsible school culture are supported by *Peraturan Menteri Lingkungan Hidup Dan Kehutanan Nomor* 52 *Tahun* 2019 *Tentang Gerakan Peduli Dan Berbudaya Lingkungan Hidup Di Sekolah* (2019), The Green School Program aims to increase the knowledge, awareness, and environmental responsibility of school members. Its

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implementation is increasingly important because environmental problems require sustainable behavioral changes that should be cultivated from the educational environment.

Several studies have examined green school programs from various perspectives. Sakdiyah, (2017) for example, found that the implementation of the green school was not fully effective because environmental education had not been optimally integrated into learning, and some students remained less concerned about their school environment. In contrast, Jannati et al., (2021) found that students in schools implementing the green school program demonstrated greater environmental concern than students in schools without the program. These findings indicate that program success depends not only on the existence of policies but also on how programs are implemented and habituated within school life.

Although numerous studies have examined green school programs, studies specifically addressing the implementation of the Eco Green School Program as an effort to improve environmental learning culture comprehensively remain limited. Previous studies have mainly focused on program evaluation, students' environmental attitudes, implementation barriers, or green school management. Therefore, a study is needed to examine program implementation comprehensively, including activities, success strategies, supporting and inhibiting factors, and solutions to implementation challenges.

SMPN 10 Malang provides a relevant context for this study because the school received the ASEAN *Eco School* award in 2019 in recognition of its efforts to promote environmental awareness across various aspects of education. Based on a preliminary study, the Eco Green School Program at SMPN 10 Malang has been developed through environmental management and habituation involving school members while considering the school's environmental potential and problems. This condition demonstrates an effort to position the school environment not only as an object of environmental management but also as part of the learning process and the development of an environmentally conscious school culture.

The novelty of this study lies in examining the implementation of the Eco Green School Program as an environmentally oriented school program that integrates activities related to cleanliness, sanitation and drainage, greening, water conservation, energy conservation, waste management, and innovations related to Environmentally Friendly Behavior (PRLH). Furthermore, this study analyzes program implementation through socialization, education, habituation, empowerment, and partnerships, while identifying supporting factors, inhibiting factors, and implementation solutions. Therefore, this study aims to describe the implementation of the Eco Green School Program in improving the environmental learning culture at SMPN 10 Malang.

2. Method

2.1. Type of Research

This study employed a qualitative approach with a case study design. A qualitative approach was selected to obtain an in-depth understanding of the implementation of the Eco Green School Program in developing an environmental learning culture at SMPN 10 Malang.

The case study design enabled the researchers to examine the phenomenon intensively and comprehensively within its natural context while maintaining the uniqueness of the research setting Ulfatin, (2013) This approach was used to explore the implementation of the program, including its activities, strategies, supporting and inhibiting factors, and solutions. Data were collected through interviews, observations, and documentation to obtain comprehensive information about the phenomenon under study.

2.1.2 Researcher Presence

The researcher served as the key instrument in this study, requiring direct involvement in the field to understand events, interactions, and the actual conditions related to the research focus (Ulfatin, 2013). The researcher's presence was essential to examine phenomena firsthand and verify the consistency between information provided by informants and actual field conditions. Data were collected through interviews with selected research participants, direct observations, and documentation of supporting evidence.

2.1.3 Place of Research

This study was conducted at SMPN 10 Malang, located in Buring, Kedungkandang District, Malang City, East Java, Indonesia. The school was selected as the research site because it received the ASEAN Eco School award, reflecting its commitment to environmental programs and practices. In addition, its accessible location near a main road facilitated the researcher's access to the research site.

2.1.4 Instruments

In this qualitative study, data were obtained through interviews, observations, and documentation. Informants served as the primary sources of information related to the research focus, while data triangulation from various sources was used to enhance the accuracy and comprehensiveness of the findings (Ulfatin, 2013). The key informant was a member of the ASEAN Eco School Team, selected based on their knowledge, experience, active involvement, and availability to provide relevant information. Other informants included the Adiwiyata Team coordinator, the vice principal for curriculum, and the Eco Generation leader. Data focused on the implementation of the Eco Green School Program, including its activities, success strategies, supporting factors, utilization of supporting factors, inhibiting factors, and solutions to implementation challenges. In addition to interviews, relevant school documents and field observations were used to provide a comprehensive understanding of the program and its contribution to developing an environmental learning culture.

2.1.5 Data Collection

Data were collected using three techniques: semi-structured interviews, direct observations, and documentation. First, semi-structured interviews were conducted with selected informants using an interview guide based on the research focus, while additional questions were asked to explore emerging issues and obtain more in-depth information (Ulfatin, 2013). Second, direct observations were conducted in the natural school setting to examine the implementation of the Eco Green School Program and the development of an

environmental learning culture. Observations focused on school members' environmental practices, including maintaining cleanliness, caring for plants, conserving water and energy, managing waste, and utilizing the school environment as a learning resource. Third, documentation was used to collect and analyze relevant written records, photographs, program documents, facilities, and evidence of environmental activities related to the six PRLH aspects, including the *Segar Kagemi* innovation. These three techniques were used complementarily to verify information, strengthen data credibility, and provide a comprehensive description of the Eco Green School Program, including its activities, success strategies, supporting factors, utilization of supporting factors, inhibiting factors, and solutions to implementation challenges. In addition to interviews, relevant school documents and field observations were used to provide a comprehensive understanding of the program and its contribution to developing an environmental learning culture.

2.1 6 Data Analysis

Data analysis was conducted before, during, and after fieldwork using the interactive model proposed by Miles et al., (2014), consisting of four stages: data collection, data condensation, data display, and conclusion drawing/verification. Data were collected through interviews, observations, and documentation related to the implementation of the Eco Green School Program and its contribution to environmental learning culture at SMPN 10 Malang. The collected data were then condensed by selecting, focusing, simplifying, coding, and categorizing information according to six research focuses: program activities, implementation strategies, supporting factors, utilization of supporting factors, inhibiting factors, and solutions to implementation challenges. The condensed data were displayed in narrative descriptions and charts, integrating findings from interviews, observations, and documentation to identify patterns and relationships among the findings. Finally, conclusions were drawn by interpreting and comparing data from multiple sources. The conclusions were continuously verified throughout the research process to ensure consistency, credibility, and accuracy. This analysis enabled the researcher to obtain a comprehensive understanding of how the Eco Green School Program contributes to the development of an environmental learning culture.

2.1.7 Data Validation

Data trustworthiness was ensured through four criteria: credibility, transferability, dependability, and confirmability (Ulfatin, 2013). Credibility was established through source and technique triangulation, member checking, persistent observation, and adequate supporting references. Source triangulation involved comparing information from the ASEAN Eco School Team, Adiwiyata Team coordinator, vice principal for curriculum, and Eco Generation leader. Technique triangulation was conducted by comparing interview, observation, and documentation data to verify the consistency of findings regarding the implementation of the Eco Green School Program. Member checking was also conducted by confirming interview results with the respective informants.

Transferability was addressed by providing detailed, systematic, and contextual descriptions of the research setting, program activities, implementation strategies, supporting and inhibiting factors, and solutions, enabling readers to assess the applicability of the findings to similar contexts. Dependability was ensured by systematically documenting the research

process, including data collection, coding, analysis, and conclusion drawing, as well as discussing the research process and findings with the academic supervisor. Confirmability was established by tracing the relationship between raw data, analysis, and findings through interview transcripts, observation records, and relevant documentation. These procedures ensured that the findings were consistent, traceable, and grounded in empirical evidence.

2.1.8 Procedures

According to Ulfatin (2013), the research process consists of three stages: preparation, implementation, and reporting. The preparation stage involved identifying the research focus, conducting a preliminary study of the Eco Green School Program at SMPN 10 Malang, reviewing relevant literature, developing research instruments, selecting data sources and informants, obtaining research permission, and coordinating with the school. The implementation stage involved collecting data through interviews, direct observations, and documentation. Interviews explored program activities, implementation strategies, supporting and inhibiting factors, the utilization of supporting factors, and solutions to implementation challenges. Observations examined program activities, school conditions, facilities, and environmental practices, while documentation provided supporting evidence. Field notes were also maintained throughout the process. The reporting stage involved systematically analyzing and presenting the findings according to the research focus, relating them to relevant theories and previous studies, and formulating conclusions, implications, and recommendations. The final report was reviewed and refined in consultation with the academic supervisor.

3. Results and Discussion

3.1 Result

3.1.1 Forms of Activities for the Eco Green School Program at SMPN 10 Malang

Eco Green School Program at SMPN 10 Malang is implemented through six integrated PRLH aspects: (1) cleanliness, sanitation, and drainage; (2) planting and maintaining trees and plants; (3) water conservation; (4) energy conservation; (5) waste management; and (6) PRLH-related innovation. These activities are implemented as an integrated program to foster an environmental culture among school community members.

The cleanliness, sanitation, and drainage aspect is implemented through daily and routine activities, including classroom cleaning duties, *Jumat Bersih* activities, community clean-ups, and the provision of sanitation facilities. The school maintains clean toilets, handwashing facilities, and drainage systems, while Eco Generation students contribute to the maintenance of biopore infiltration holes. These facilities also support organic waste decomposition and water management.

The planting and maintenance of trees and plants aspect is implemented through the cultivation of shade trees, ornamental plants, medicinal plants (TOGA), and productive plants. Students, teachers, and educational staff participate in watering, fertilizing, weeding, and

simple pest control. These activities create a green and comfortable learning environment while serving as contextual learning resources.

The water conservation aspect is implemented through a mini *water treatment* model that processes river water into clean, usable water. This innovation also serves as an educational medium for students to learn about water treatment and environmental conservation and contributed to the school's recognition through the ASEAN Eco School Award.

The energy conservation aspect emphasizes electricity efficiency and environmental education. The school also develops a miniature methane gas system to demonstrate the utilization of organic waste, particularly chicken manure, as an alternative energy source. This innovation provides students with practical knowledge of renewable energy and environmentally friendly energy use.

The waste management aspect applies the 3R (Reduce, Reuse, Recycle) approach and appropriate technology. Activities include using biopore holes for organic waste decomposition, processing waste into biogas, promoting a zero-waste lifestyle through the "*Sekolah Cantik Tanpa Plastik*" declaration, and habituating students to collect waste before lessons begin. These practices contribute to maintaining a clean and comfortable learning environment.

The PRLH-related innovation aspect is reflected in several student-oriented environmental innovations, including *Water Mas* (Water Treatment for Society), a miniature methane gas processing system, and the school focuses on innovation *SEGAR KAGEMI* (*Semua Bugar dengan Kantin Gemar Makan Ikan*), which promotes a healthy school canteen. Overall, these integrated activities demonstrate that the Eco Green School Program extends beyond environmental management by functioning as a contextual learning medium and a means of developing environmentally responsible behavior among the school community.

3.1.2 Strategies for the Success of the Eco Green School Program at SMPN 10 Malang

The findings indicate that the success of the Eco Green School Program at SMPN 10 Malang is supported by five strategies: socialization, education, habituation, empowerment, and stakeholder collaboration or partnerships. Socialization is conducted during new student orientation (MPLS) and report-card distribution to introduce environmental programs and promote environmentally responsible behavior. Activities include socialization on PBLHS, biopore sanitation, waste collection, water and methane-gas treatment, infiltration wells, and environmental innovations.

Education is implemented by integrating environmental values into learning activities through school literacy, digital literacy, and environmental awareness activities. Habituation is developed through routine practices such as collecting and sorting waste before lessons to foster environmentally responsible behavior. Empowerment is facilitated through the Eco Generation extracurricular program, which engages students as role models and promoters of environmental activities for new students and school visitors. Stakeholder collaboration and partnerships involve school community participation and cooperation with external institutions, including PDAM, PT Sinar Sosro, and educational institutions, to strengthen the implementation and sustainability of the program.

3.1.3 Supporting Factors for the Implementation of the Eco Green School Program at SMPN 10 Malang

Eco Green School Program at SMPN 10 Malang is supported by internal and external factors. The main internal factor is the school's favorable geographical conditions, including its extensive land and proximity to a river. The available land is utilized for environmental learning facilities, such as a greenhouse, waste bank, school forest, and other green areas, while the nearby river serves as a potential water source for plant irrigation. External support comes from parental and school-community involvement, as well as partnerships with external institutions. These forms of support contribute to the program through active participation, resource provision, and financial assistance, thereby strengthening the implementation and sustainability of the Eco Green School Program.

3.1.4 Efforts to Utilize Supporting Factors in the Implementation of the Eco Green School Program at SMPN 10 Malang

Supporting factors of the Eco Green School Program at SMPN 10 Malang are utilized through five strategies: optimizing school land, managing natural water resources, selecting suitable plant species, utilizing the surrounding environment as a learning resource, and developing synergistic collaboration. School land is optimized through the development of green spaces, a greenhouse, a school forest, and other greening areas, while available water resources are managed through water treatment facilities to support school needs. Plant species are selected according to local environmental conditions. The school environment is also integrated into learning activities through observation, practice, and environmental projects across subjects. In addition, the school establishes collaboration with parents, the school committee, government agencies, private organizations, communities, and other partners to obtain financial, infrastructural, educational, and mentoring support. These efforts transform the school environment into both a managed ecological space and a learning resource, strengthening students' participation in environmental activities and fostering an environmental learning culture.

3.1.5 Inhibiting Factors in the Implementation of the Eco Green School Program at SMPN 10 Malang

Eco Green School Program at SMPN 10 Malang faces several inhibiting factors, including limited funding, time constraints due to overlapping schedules and activities, and the adaptation of newly joined school members. These new members, including students, teachers, and educational staff, require time to become familiar with the school's environmental programs, practices, and culture.

3.1.6 Solutions to the Inhibiting Factors in the Implementation of the Eco Green School Program at SMPN 10 Malang

Solutions to the challenges in implementing the Eco Green School Program at SMPN 10 Malang involve three main strategies: resource optimization, implementation efficiency, and

strengthening environmental culture. Resource optimization is achieved by utilizing available facilities and resources and engaging parents and the school committee to support program needs. Implementation efficiency is pursued by integrating environmental activities into classroom learning, allowing the program to be implemented without requiring substantial additional time or funding. Meanwhile, environmental culture is strengthened through continuous socialization, role modeling, reminders, and habituation for new and existing school members.

These strategies enable the school to sustain the Eco Green School Program despite limited time and funding and the ongoing adaptation of new school members. Resource optimization supports program implementation, integration into learning improves efficiency, and continuous habituation strengthens environmentally responsible behavior as part of the school culture.

3.2 Discussion

3.2.1 Forms of Activities for the Eco Green School Program at SMPN 10 Malang

The Eco Green School Program at SMPN 10 Malang focuses on sustaining six aspects of Environmentally Friendly Behavior (PRLH): (1) cleanliness, sanitation, and drainage; (2) tree and plant cultivation and maintenance; (3) water conservation; (4) energy conservation; (5) waste management; and (6) PRLH-related innovation. These aspects align with the scope of PRLH stipulated in Minister of Environment and Forestry Regulation No. 52 of 2019 on the School Environmental Care and Culture Movement (PBLHS), which emphasizes conscious, voluntary, collaborative, and sustainable environmental practices.

The six aspects are implemented in an integrated manner through school activities and learning, indicating that the program addresses not only physical environmental management but also the development of environmentally responsible behavior. This approach supports the objectives of PBLHS in fostering responsible environmental behavior and improving the quality of the school environment and its surroundings. A clean environment and adequate sanitation facilities further contribute to a healthy, comfortable, and conducive learning environment, consistent with previous research linking Adiwiyata school environmental management to improved learning conditions (Shufiatuddin, 2023).

3.2.2 Strategies for the Success of the Eco Green School Program at SMPN 10 Malang

The successful implementation of the Eco Green School Program at SMPN 10 Malang is supported by five complementary strategies: socialization, education, habituation, empowerment, and stakeholder collaboration or partnerships. These strategies are implemented to optimize school resources, strengthen environmental awareness, and ensure program sustainability. Socialization serves as the initial strategy for introducing environmental values, programs, and practices, particularly to new school members. It aims to develop environmental awareness and moral knowing among students and parents. This finding is consistent withKarmilasari et al., (2020), who emphasized socialization as an initial step in introducing school programs that promote environmentally responsible character.

Education is implemented by integrating environmental values into learning through school and digital literacy, environmental activities, and teaching materials. This approach

strengthens students' environmental literacy and enables environmental values to be incorporated across subjects without altering the existing learning content. The finding supports Nurwidodo et al., (2020), who reported that the implementation of the Adiwiyata program positively contributes to students' environmental literacy.

Habituation is developed through routine practices, including collecting and sorting waste before lessons, environmental clean-up activities, and morning *Imtaq* activities. These practices continuously reinforce environmentally responsible behavior and establish a supportive school climate. Teachers and educational staff also serve as role models in demonstrating environmentally responsible practices.

Empowerment is realized through the Eco Generation extracurricular program, which involves students in promoting, demonstrating, and supporting Eco Green School activities. This finding is consistent with Ardianing et al., (2025), who highlighted the importance of empowering environmental teams to develop innovations, organize supporting activities, and monitor program implementation. Continuous monitoring also strengthens students' discipline and supports program sustainability. Stakeholder collaboration and partnerships involve school members, parents, communities, government agencies, private organizations, and educational institutions. At SMPN 10 Malang, partnerships with PDAM, PT Sinar Sosro, and a fresh fish distributor in Sendang Biru support environmental activities through resources, education, and joint programs. This finding is consistent with Karmilasari et al., (2020), who emphasized that environmental programs require shared responsibility and active participation among stakeholders. Overall, the integration of these five strategies demonstrates that the sustainability of the Eco Green School Program depends on systematic, collaborative, and continuous efforts involving the school community and external partners.

3.2.3 Supporting Factors for the Implementation of the Eco Green School Program at SMPN 10 Malang

Eco Green School Program at SMPN 10 Malang is supported by internal and external factors. The main internal factor is the school's favorable geographical conditions, while external factors include parental involvement and partnerships with external stakeholders.

The school's extensive land provides opportunities for developing environmental learning facilities, including a greenhouse, waste bank, school forest, and other green spaces. Its proximity to a river also provides a potential water source for irrigating plants within the school environment. These geographical advantages enable the school to optimize its environmental potential as a sustainable learning resource. This finding is consistent with Rahmawati et al., (2024), who stated that schools committed to developing environmentally responsible generations can maximize their environmental potential by integrating it into learning resources and school curricula. Such utilization can also encourage students and other school members to recognize the positive impacts of environmentally responsible actions.

External support is reflected in the involvement of parents and school-community groups, as well as partnerships with external institutions. Such collaboration provides both participatory and financial support for program implementation. This finding is consistent with Kuncoro (2025), who emphasized that active participation from parents and the community in environmental activities can create a supportive school environment. Activities such as cleanliness competitions and tree planting provide concrete forms of parental involvement and contribute to the sustainability of the Eco Green School Program.

3.2.4 Efforts to Utilize Supporting Factors in the Implementation of the Eco Green School Program at SMPN 10 Malang

SMPN 10 Malang optimizes its internal and external supporting factors to strengthen the effectiveness and sustainability of the Eco Green School Program. Internally, the school utilizes its geographical conditions and environmental resources by developing green open spaces, school gardens, medicinal plant areas, productive crops, and environmentally friendly drainage systems. The availability of water and the school's proximity to a river also support contextual learning on water management and conservation, as well as plant irrigation. The extensive school area further provides opportunities for environmental observation and the development of vegetation suited to local conditions. This finding is consistent with Rahmawati et al., (2024), who emphasized that the school environment can serve as a medium for developing students' environmental awareness. Thus, the utilization of land, water resources, and environmental conditions supports both environmental learning and the development of an environmentally responsible school culture.

Externally, the school maximizes parental involvement through environmental activities, provision of facilities and materials, and the reinforcement of environmentally responsible practices at home. Parent associations also facilitate program socialization, evaluation, and community participation, creating continuity between environmental education at school and in the family.

The school also strengthens the program through partnerships with government agencies, private organizations, local communities, and other educational institutions. These partnerships provide training, technical assistance, facilities, resources, and opportunities for sharing knowledge and best practices. This finding supports Amilia et al., (2026), who highlighted the strategic role of parents in providing resources, participating in greening activities, and fostering environmental practices at home. Overall, the optimal utilization of internal resources and external partnerships enhances the effectiveness, continuity, and broader impact of the Eco Green School Program.

3.2.5 Inhibiting Factors in the Implementation of the Eco Green School Program at SMPN 10 Malang

The implementation of the Eco Green School Program at SMPN 10 Malang is not without challenges. The findings identify three main inhibiting factors: limited funding, time constraints due to overlapping school activities, and the adaptation of newly joined school members, including students, teachers, and educational staff, to the school's environmental culture and practices. Limited funding restricts the school's ability to provide the resources and facilities required to support program activities. This finding is consistent with Kuncoro (2025), who noted that inadequate funding can hinder the implementation and effectiveness of environmental programs. Therefore, financial limitations may prevent the program from being implemented optimally and may affect the achievement of its objectives.

Time constraints also present a significant challenge. Overlapping schedules and competing academic and administrative activities require school members to divide their time and attention among various responsibilities. This finding supports Retnasari et al., (2021),

who identified limited time resulting from multiple tasks and activities as a common obstacle to the implementation of school environmental programs. Another challenge concerns the adaptation of new school members. Newly enrolled students and newly appointed teachers and educational staff may not yet fully understand the school's environmental programs, values, and practices. As noted by Firdainty (2024), effective coordination and understanding among new students and teachers are necessary to ensure the optimal implementation of environmental programs. Thus, continuous orientation and socialization are essential to facilitate their adaptation and participation in the Eco Green School Program.

3.2.6 Solutions to the Inhibiting Factors in the Implementation of the Eco Green School Program at SMPN 10 Malang

The school addresses the implementation challenges through resource optimization, program integration, and strengthening environmental culture. To overcome budget constraints, SMPN 10 Malang maximizes school resources, encourages voluntary contributions and donations from parents, and develops partnerships with government agencies, private sectors, local communities, and educational institutions. Priority scales are also applied to ensure that available resources are allocated to activities with the greatest environmental impact. This approach is consistent with Aprilia et al., (2024) ,who emphasized the importance of school community participation and external partnerships in supporting the sustainability of environmental programs.

Time constraints are addressed by integrating Eco Green School Program activities into classroom learning and routine school activities, such as class duties, Clean Friday, and waste-picking activities before lessons. This strategy minimizes the need for additional time allocation while ensuring that environmental values are continuously practiced. The finding supports Didil et al., (2023), who highlighted curriculum integration and routine environmental activities as effective strategies for addressing time limitations.

To facilitate the adaptation of new school members, the school strengthens its environmental culture through early socialization, orientation, mentoring, and continuous habituation. Teachers, existing students, and members of Eco Generation serve as role models in demonstrating environmentally responsible behavior. New school members are also actively involved in environmental activities to foster a sense of belonging, responsibility, and commitment to the program. This finding is in line with Murtiningsih et al., (2023), who emphasized habituation, environmental-based curricula, and the involvement of the entire school community as important strategies for sustaining school environmental programs. Overall, these strategies enable the Eco Green School Program to remain sustainable despite limitations in funding, time, and adaptation among new school members.

4. Conclusion

Eco Green School Program at SMPN 10 Malang is implemented sustainably through six aspects of Environmentally Friendly Behavior (PRLH): cleanliness, sanitation and drainage; tree and plant cultivation and maintenance; water conservation; energy conservation; waste management; and PRLH-related innovation, particularly *SEGAR KAGEMI (Semua Bugar dengan Kantin Gemar Makan Ikan)*. These activities are integrated into daily school routines and

learning processes, involving students, teachers, and educational staff, thereby fostering a clean, healthy, green, and environmentally conscious learning environment.

The successful implementation of the program is supported by five interrelated strategies: socialization, education, habituation, empowerment, and collaboration or partnership. Socialization provides an initial understanding of environmental values and programs, while education integrates environmental values into learning activities. Habituation encourages environmentally responsible practices in daily school life, and empowerment optimizes the potential of school members through the ASEAN Eco School Team and Eco Generation. Meanwhile, collaboration with stakeholders and external partners strengthens program implementation and sustainability.

The supporting factors consist of internal and external factors. Internally, the school's extensive geographical conditions and environmental resources, including greenhouses, open green spaces, a school forest, a waste bank, and water resources, provide opportunities for environmental activities and contextual learning. Externally, parental involvement and partnerships with various organizations provide participatory, financial, and material support. These factors are utilized through the optimization of school land, management of natural water resources, selection of suitable plants, use of the school environment as a learning resource, and development of synergistic collaboration. Consequently, the school environment functions not only as a setting for program implementation but also as a medium for learning and habituating environmentally responsible behavior.

Nevertheless, the implementation of the Eco Green School Program faces several challenges, including limited funding, time constraints, and the adaptation of new school members to the established environmental culture. These obstacles may affect the consistency of program implementation and the development of environmental learning culture. To address these challenges, the school optimizes available resources and community participation, integrates environmental activities into learning and routine school activities, and strengthens the school culture through continuous socialization, mentoring, and habituation. Overall, the implementation of the Eco Green School Program demonstrates that sustained environmental practices, supported by strategic implementation, resource optimization, stakeholder collaboration, and effective management of constraints, contribute to strengthening an environmentally responsible learning culture at SMPN 10 Malang.

References

Amilia, Norbayati, Puspita, I., Muftia, Agustina, D., Mahmudah, & Suhaimi. (2026). Peran Orang Tua Sebagai Mitra Strategis Sekolah. *Jurnal Ilmiah Nusantara*. https://ejurnal.kampusakademik.co.id/index.php/jinu/article/view/9407?

Aprilia, M., Yuliatin, Basariah, & Mustari, M. (2024). Implementasi Program Sekolah Adiwiyata dalam Membentuk Karakter Peduli Lingkungan di SMPN 1 Labuapi. *Jurnal Ilmiah Ilmu Pendidikan*. http://jiip.stkipyapisdompu.ac.id/jiip/index.php/JIIP/

Ardianing, N. P., Nurkolis, & Kusumaningsih, W. (2025). Strategi Kepemimpinan Kepala Sekolah Implementasi Sekolah Adiwiyata Nasional. *Jurnal Manajemen Pendidikan*, *14*. file:///C:/Users/WINDOWS 11/Downloads/25582-81405-1-PB.pdf

Didil, O., Soeprapto, W., & Mariana, D. (2023). Studi Deskriptif Implementasi Nilai Peduli Lingkungan di SDN 14 Singkawang. *Jurnal Pendidikan Tambusai*. https://jptam.org/index.php/jptam/article/view/12294

Firdainty, N. E. (2024). Implementasi Program Adiwiyata dalam Menanamkan Karakter Peduli Lingkungan Pada Siswa SMPN 1 Jetis, Bantul, Yogyakarta. *Jurnal Student UNY*. https://journal.student.uny.ac.id/social-studies/article/view/21704

Jannati, S., Susungko, P., & Kusuma, M. (2021). Implementasi Program Green School Terhadap Sikap Peduli Lingkungan. *Jurnal Pendidikan MIPA Pancaskati*, *5*(2).

Karmilasari, V., Putri, D. S., & Faedlulloh, D. (2020). Strategi Program Eco-School dalam Menghadirkan Karakter Peduli Lingkungan. *Jurnal Ilmiah Adminitrasi Publik Dan Pembangunan*, *11*. https://jurnaladministratio.fisip.unila.ac.id/index.php/administratio/article/view/165/89

Kuncoro, M. R. E. (2025). *Manajemen Mutu Lembaga dalam Mengembangkan Sekolah Adiwiyata di SMP Negeri 1 Ngawi* [Institut Agama Islam Negeri Ponorogo]. file:///C:/Users/WINDOWS 11/Downloads/502230052_Muhammad Rizal Eko Kuncoro_Manajemen Pendidikan Islam.pdf

Miles, M. B., Huberman, A., & Saldana, J. (2014). *Qualitatitve Data Analysis*. Sage.

Murtiningsih, I., Fatimah, S., Harsan, T., Sumardi, M. S. S., & Hanifah, A. (2023). Implementasi Karakter Peduli Lingkungan di Sekolah Adiwiyata. *Jurnal Bhineka Tunggal Ika*. https://jbti.ejournal.unsri.ac.id/index.php/jbti/article/view/54

Nurwidodo, N., Amin, M., Ibrohim, I., & Sueb, S. (2020). The Role of Eco-School Program (Adiwiyata) Towards Environmental Literacy of High School Students. *European Journal of Educational Research*, *9*(3). https://www.eu-jer.com/the-role-of-eco-school-program-adiwiyata-towards-environmental-literacy-of-high-school-students

Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor 52 Tahun 2019 tentang Gerakan Peduli dan Berbudaya Lingkungan Hidup di Sekolah, (2019). https://peraturan.bpk.go.id/Details/297090/permen-lhk-no-52-tahun-2019

Rahmawati, E., Nulhakim, L., Setiawan, S., & Pribadi, R. (2024). Pemanfaatan Lingkungan Sekolah Adiwiyata Sebagai Sarana Penguatan Karakter Peduli Lingkungan. *Jurnal Ilmiah Pendidikan Citra Bakti*.

Retnasari, L., Hidayah, Y., Witanto, C. A., & Suryaningsih, A. (2021). Implementasi Program Adiwiyata Ditinjau dari Aspek Kegiatan Berbasis Partisipatif di SDN Serayu. *Jurnal Pendidikan Guru Sekolah Dasar*. https://www.researchgate.net/publication/350639215_Implementasi_program_adiwiyata_ditinjau_dari_aspek_kegiatan_berbasis_partisipatif_di_sd_n_serayu/fulltext/60943154299bf1ad8d8161df/implementasi-program-adiwiyata-ditinjau-dari-aspek-kegiatan-berbasis-PARTISIPATIF-DI-SD-N-SERAYU.pdf?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uIn19

Sakdiyah, S. (2017). *Evaluasi Program Adiwiyata dalam Upaya Menciptakan Sekolah Peduli dan Berbudaya Lingkungan di SD Negeri Srondol Wetan 02*. Universitas Negeri Semarang.

Shufiatuddin, S. R. A. (2023). Manajemen Sekolah Adiwiyata dalam Membangun Budaya dan Lingkungan Belajar Kondusif Peserta Didik. *Jurnal Manajemen Pendidikan Islam*. https://urj.uin-malang.ac.id/index.php/uajmpi/article/view/

Syukur, M., Darman, & Manda. (2021). Penerapan Model Green School dalam Rangka Membentuk Gaya Hidup Berkelanjutan di SMA Negeri 5 Kota Makassar. *Jurnal Pengabdian Kepada Masyarakat*, *20*(1).

Ulfatin, N. (2013). *Metode Penelitian Kualitatif di Bidang Pendidikan*. MNC Publishing.