



Building a Green Curriculum: Planning the PBLHS Movement and its Integration into Curriculum Documents

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ABSTRACT

This study aims to describe the planning stages of the Environmental Care and Culture Movement in Schools (PBLHS) and its integration into curriculum documents. The study used a qualitative case study approach at SMA Negeri 2 Wates. Data were obtained through interviews, observations, and document analysis, then data validity was tested using triangulation. The results of the study indicate that the planning includes the formation of an Adiwiyata team, the implementation of School Self-Evaluation (EDS), the preparation of the Identification of Environmental Potential and Problems (IPMLH), the preparation of the PBLHS plan, and its integration into the KOSP document, KTSP, RPP, and teaching modules including P5. The main supporting factors include adequate facilities and infrastructure, the commitment of the school community, and support from various external parties, while obstacles include limited coordination time and difficulties in integrating Environmentally Friendly Behavior (PRLH) into several subjects. These results emphasize the importance of systematic planning and the participation of all stakeholders to realize an environmentally cultured school.

Keywords: Curriculum, PBLHS, Planning

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1. INTRODUCTION

Climate change has caused serious damage to various terrestrial and marine ecosystems. The IPCC (2023) report indicates that these impacts include biodiversity loss, freshwater ecosystem damage, glacier melt, and even permafrost melting in the Arctic. Some impacts are even close to irreversible. In Indonesia, real environmental impacts can be observed through extensive deforestation of 104,032.5 hectares/year (2021-2022) (Badan Pusat Statistik, 2024), increased natural disasters (Maulana, 2024), and suboptimal waste management which is projected to produce 82 million tons of waste per year in the future (Salma, 2025). This situation indicates that education cannot be neutral about the climate crisis, but must actively foster students' ecological awareness. Integrating environmental issues through a green curriculum is a relevant strategy for instilling sustainability values, developing critical thinking skills, and encouraging environmentally friendly behavior changes from an early age.

Education for Sustainable Development (ESD) should not be seen as additional content in the curriculum, but should be a core part of the learning process (UNESCO, 2021). This is in line with the opinion pendapat (Kioupi, Vasiliki Voulvoulis, 2022) who stated that EDS requires the integration of various subjects, concepts, and skills, and should not be treated as an addition to the curriculum. Thus, the integration of EDS into core subjects can foster ecological awareness, critical thinking skills, and environmentally friendly behavior in students from an early age, which are important foundations for achieving global sustainability goals. Tilbury (2011) emphasized that education is often associated only with what happens in the classroom. However, the concept of Education for Sustainable Development (ESD) emphasizes that learning can occur in various social contexts, not only through the formal education system, but also through daily activities and professional life. In line with this, Tilbury, et al (2002:176) stated that sustainability education requires a transformation in the way of learning to be more reflective, participatory, and contextual.

At the school level, ESD integration is realized through various programs, one of which is the Environmental Care and Culture Movement in Schools (PBLHS), widely known through the Adiwiyata program. This program is not only aimed at achieving the title of environmentally friendly school but also aims to consistently instill environmental values within the school culture. Therefore, the planning stages of the PBLHS Movement and its integration into the school curriculum are important to examine.

Various previous studies have discussed the implementation of ESD and environmental education in schools. Wahyu, et al. (2024) revealed that the implementation of Education for Sustainable Development (ESD) in chemistry learning using the C-R-E-A-T-E model can increase students' multiple creativity and foster awareness of sustainability. Mucholifah & Kadeni (2024) found that the implementation of the Environmental Care and Culture Movement in Schools (PBLHS) had a significant influence on the formation of environmental care character in elementary school students. Furthermore, Mustafa & Gunansyah (2023) emphasized the importance of the planning stage, which includes the formation of the Adiwiyata Team, the preparation of the IPMLH and EDS report, and the formulation of the PBLHS Movement plan. However, this research was still limited to the initial identification and design stages without exploring their relationship with curriculum documents. Meanwhile, Maulidiawati & Rosmaya (2025) emphasized that the

implementation of PBLHS through the Adiwiyata program was effective in fostering environmental care character and building a sustainable green school culture.

Based on the study, it appears that previous research has focused more on the implementation and evaluation stages of PBLHS activities, and has not fully linked the results of the Identification of Environmental Potential and Problems (IPMLH) with the integration of environmental values in school curriculum documents. Therefore, this study is present to fill this gap by comprehensively reviewing the PBLHS planning stages which include the formation of the Adiwiyata Team, the implementation of IPMLH, the preparation of the PBLHS Movement plan, and the integration of the results into the KOSP, KTSP, RPP, teaching modules, and P5 documents as an effort to strengthen environmentally based sustainable education.

The novelty of this research lies in the comprehensive mapping from the initial planning process to the integration of PBLHS into school curriculum documents, which has not previously been discussed systematically in the context of senior high schools through a case study at SMA Negeri 2 Wates, Kulon Progo which has become a national Adiwiyata school with a focus on the planning stages and their integration into the KOSP, KTSP, RPP, and teaching modules and P5 documents.

2. METHOD

This study applies a qualitative approach with a case study to examine the planning for the implementation of the Environmental Care and Culture Movement in Schools (PBLHS) at SMA Negeri 2 Wates, Yogyakarta. According to Sugiyono (2015), qualitative research aims to obtain in-depth data from phenomena occurring in the field through inductive analysis and a focus on understanding meaning. Meanwhile, Creswell (2013) emphasizes that this approach allows researchers to understand how individuals or groups interpret social experiences and practices in real contexts. Data sources for this study include the principal, vice principal for curriculum, Adiwiyata chairperson, teachers, Adiwiyata cadres, school committee members, as well as planning and curriculum documents related to the PBLHS Movement. Data were collected through in-depth interviews, observations, and document studies (VanderStoep & Johnston, 2008; Flick, 2018). Data validity was tested using triangulation techniques, namely the procedure of comparing and verifying data from various sources or methods to increase the reliability and validity of the findings of Sidiq & Choiri (2019). The research instruments consisted of interview guides, observation guides, and checklists, designed to assess the planning steps, structure, and involvement of various parties (Mulyatiningsih, 2011) in the PBLHS Movement. Data analysis was conducted inductively using the interactive model of Miles, Huberman, & Saldana, (2014), which includes the stages of collection, reduction, presentation, and drawing conclusions, so that a comprehensive picture of the PBLHS Movement planning process and its integration into the curriculum documents at SMA Negeri 2 Wates was obtained.

3. RESULTS AND DISCUSSION

3.1. Formation of the School Adiwiyata Team

SMA Negeri 2 Wates has a school Adiwiyata team formed through a teacher council meeting based on Ministerial Regulations 52 and 53 of the Ministry of Environment and Forestry of the Republic of Indonesia in 2019. The school's quality assurance team is also included in the Adiwiyata team. The Adiwiyata team consists of the principal, teachers, employees, the school committee, and the Yogyakarta Special Region Environment and Forestry Agency. The team was established through a Principal's Decree concerning the SMA Negeri 2 Wates Adiwiyata Team.

3.2. Implementation of Identification of Environmental Potential and Problems in Schools (IPMLH)

Kalimat SMA Negeri 2 Wates implemented the Environmental Potential and Problem Identification (IPMLH) process, beginning with a School Self-Evaluation (EDS). Only standards relevant to the PBLHS Movement were selected as the basis for planning, encompassing management, processes, facilities and infrastructure, financing, and educational assessment. The IPMLH was developed for a four-year period, while the annual work program is a derivative of the IPMLH.

The Adiwiyata team identified environmental potential at the school, local, and global levels, including the number of students of 540 and educational staff of 60, the availability of organic waste, the abundance of rainwater in Kulon Progo, vacant land owned by the Veteran Foundation that can be managed by the school, clean water supply from the PDAM, the many coconut trees in the vicinity, the location of the school near the long southern coastline (between the mouths of the Progo River and Bogowonto), the abundance of sunlight, and the school's ability to coordinate with various agencies to address environmental issues. This shows that planning is not only document-based, but also considers the local and global context so that the relevance of the PBLHS Movement can be achieved at various levels.

Meanwhile, environmental problems faced include low student awareness of the environment, pollution due to the location of the school on the roadside, reduced biodiversity due to development in Kulon Progo, the presence of garbage in schools, frequent waterlogging because the school is located under the road, limited green space, water waste, rapid regulatory changes, less than optimal use of sunlight, coastal abrasion around the school, opening of industries and land that increase regional temperatures, and increased carbon emissions in the Kulon Progo area.

3.3. Implementation Preparation of the PBLHS Movement plan

The development of the PBLHS Movement plan at SMA Negeri 2 Wates began with a review of the EDS summary, which served as the basis for the IPMLH (Natural Environment Management Plan). The IPMLH encompasses six aspects of PRLH within the school environment and two aspects within the community: waste management and tree maintenance, including biodiversity conservation. Globally, the focus is on biodiversity conservation and global warming mitigation. Urgent issues, such as trash in the gutters, are identified and addressed through routine biweekly activities.

The PBLHS Movement program planning is carried out on two time scales: an annual (RKAS) to address urgent issues and activities that require annual updates, and a four-year (RKJM) for programs requiring greater resources. Funding comes from the BOS (School Operational Assistance), the Regional Budget (APBD), school committees, and external donations, including from the Kulon Progo Regency Environmental Agency, the Yogyakarta Special Region Environmental and Forestry Agency, and Wanagama. The involvement of external networks, such as the provision of tree seedlings, helps strengthen program planning, while the support of school committees is crucial, particularly in terms of funding tailored to their capabilities

3.4. Integration of the PBLHS Movement Plan into one KTSP And RPP Document

The PBLHS Movement planning at SMA Negeri 2 Wates has been thoroughly integrated into curriculum documents, including the KTSP (School Based Learning) curriculum (KTSP), KOSP (School Based Learning), RPP (Lesson Plan), and teaching modules. At the beginning of each academic year, the school holds a workshop to develop these documents, ensuring all materials incorporate the PBLHS Movement. The school's vision, mission, and goals also reflect this integration.

Integration is not limited to curriculum documents but is also reflected in extracurricular activities, classroom learning, and the development of environmentally friendly behaviors (PRLH). The Pancasila Student Profile Strengthening Program (P5) and intersubject collaboration support the implementation of this plan. School canteens are also strictly regulated to reduce plastic use and promote healthy snacks without plastic packaging.

The entire school community is involved in planning the PBLHS Movement to ensure it becomes a shared responsibility, aligned with the goals of both the school community and the surrounding community. The school committee also plays a role in developing the RKAS (Work Plan and Budget) and the public curriculum review process as part of its support for the movement's implementation.

Factors supporting the planning of the PBLHS Movement at SMA Negeri 2 Wates include the availability of adequate facilities and infrastructure and the high level of commitment from the school community. Furthermore, support from various parties, such as the school committee, parents, relevant agencies, and teachers active in environmental organizations, also strengthens the planning process. Meanwhile, the main obstacle in planning is time management. The large number of programs that must be implemented limits time management, which can be overcome by setting priorities in scheduling activities. For subjects that are difficult to integrate with PRLH aspects, the solution is implemented through planning in a simple lesson plan (RPP), which involves checking the classroom environment and making class agreements

3.5. DISCUSSION

Planning is a crucial initial step in any program. At SMA Negeri 2 Wates, the planning of the PBLHS Movement is carried out through several stages, namely: the formation of the Adiwiyata Team, the implementation of the Identification of Environmental Potential and Problems (IPMLH), the preparation of the PBLHS Movement plan, and the integration of the plan into the KTSP document and lesson plans. This is in line with Siswanto (2018) view that

planning aims to establish desired goals and achievements and involves optimal resource management. In the educational context, planning also plays a role in establishing an organizational structure that supports change, student learning achievement, and the school's capacity to manage transformation (Díez et al, 2020). The formation of the Adiwiyata Team was carried out through a teacher council meeting guided by Ministerial Regulations 52 and 53 of 2019 from the Indonesian Ministry of Environment and Forestry. This team includes the principal, teachers, employees, outsourcing parties, the school committee, and the DIY Environment and Forestry Center, and is determined through a Principal's Decree. The team structure is designed to ensure program sustainability, even if management changes occur due to transfers or adjustments to school needs. Since participating in the district-level Adiwiyata School candidate program, the Adiwiyata Team at SMA Negeri 2 Wates has continued to develop and become a candidate for an Independent Adiwiyata School. The involvement of the entire school community is a crucial aspect in carrying out each team member's duties. Although students are not directly involved in team formation, they still play an active role as Adiwiyata cadres in the PBLHS Movement. This aligns with the findings of Loughry et al. (Aranzabal, Epelde, & Artetxe, 2022) that good team building is a crucial factor in creating effective collaboration on long-term projects. Effective teams foster positive interdependence among members and individual accountability, ensuring each member has clear responsibilities in achieving shared goals. This emphasizes the importance of integrating strategic and operational planning for the PBLHS Movement to be sustainable and foster a culture of environmental stewardship within schools.

The IPMLH at SMA Negeri 2 Wates began with a School Self-Evaluation (EDS), which selected Adiwiyata-related standards as the focus of the PBLHS Movement planning. Priority standards covered management, processes, facilities and infrastructure, financing, and educational assessment. The EDS results provided baseline data on the school's strengths, weaknesses, potential, and environmental issues. The EDS implementation aligns with the principles of self-evaluation, which emphasize systematic and transparent reflection to improve learning, professionalism, and organizational performance (Chapman & Sammons, 2013). The data obtained is then used as a basis for compiling the work plan and program of the PBLHS Movement (Kementerian Pendidikan Nasional dan Kementerian Agama, 2010). This evaluation is also crucial for identifying opportunities and resources that can support the fulfillment of educational standards and the implementation of Environmentally Friendly Behavior (PRLH) (Ibrahim, & Winingsih, 2023). Furthermore, this approach allows schools to adapt the PBLHS Movement program to local characteristics, available resources, and student needs.

The IPMLH is designed for a four-year period, with an annual work program detailing the long-term plan. The school has a variety of potentials that can be utilized, including a student population of 540 and a staff of 60, the availability of organic waste, abundant rainfall in the Kulon Progo area, and the presence of vacant land owned by the Veterans Foundation that can be managed by the school. Furthermore, the school has access to clean water from the Regional Water Company (PDAM), is surrounded by many coconut trees, is located close to the long southern coastline between the Progo River estuary and Bogowonto, receives

abundant sunlight, and has the ability to coordinate with various agencies to address environmental issues in and around the school.

Despite its abundant potential, SMA Negeri 2 Wates faces various environmental challenges. Some of these issues include low student environmental awareness, the school's location on a roadside, making it vulnerable to pollution, and increasing development in Kulon Progo, which has resulted in a decline in biodiversity. Furthermore, the school also faces issues such as piling up trash, the building's location below the road, making it prone to flooding during the rainy season, limited land area resulting in minimal green open space, water waste, rapid regulatory changes, and suboptimal use of sunlight. Other external factors, such as high abrasion on the beach near the school, industrial and land clearings that increase local temperatures, and increasing global carbon emissions in the Kulon Progo region, also pose challenges. To address these issues, the school uses an environmental problem mapping approach or eco mapping. According to Anggraini (2023), eco mapping is a framework that helps prioritize environmental issues and design integrated management action plans. This method presents data visually in a simple format, making it easy to understand for people of all ages, from children to adults. Furthermore, eco mapping enables schools to collect, analyze, and evaluate environmental conditions and behavior systematically, so that improvement measures can be planned more precisely.

The development of the PBLHS Movement plan at SMA Negeri 2 Wates began with a summary of the School Self-Evaluation (EDS) results, which then served as the basis for developing the IPMLH. This IPMLH covers six environmental aspects at the school level, while at the community level it focuses on two main aspects: waste management and tree maintenance, including efforts to preserve biodiversity. At the global level, priority is given to biodiversity preservation and the school's contribution to reducing global warming. Urgent issues, such as garbage accumulation in gutters, are identified and scheduled for handling through routine activities, for example, biweekly gutter inspections. The PBLHS Movement program planning is carried out over two timeframes: an annual program for urgent issues and activities requiring regular updates (RKAS), and a four-year program for activities requiring greater resource allocation (RKJM). This is in accordance with the principles put forward by Qarasyi et al. (2021) that the school regularly holds work meetings to design school work programs, both RKJM, RKAT, and RKAS, based on education quality reports and the results of the School Self-Evaluation along with recommendations obtained from the EDS.

Funding for the PBLHS Movement at SMA Negeri 2 Wates comes from various sources, including National School Operational Assistance (BOS) funds allocated for character development, Regional School Operational Assistance (BOS) for facilities and infrastructure, support from the school committee, and external assistance such as from the Kulon Progo Regency Environmental Agency, the Yogyakarta Province Environmental and Forestry Agency, and Wanagama. Collaborative networks with external parties also strengthen program planning, such as the provision of tree seedlings for planting activities. The role of the school committee is crucial, especially in terms of funding, which is adjusted to the committee's capabilities. This condition aligns with that described by Masjhur & Karnati (2022) Public schools generally receive funding from the central government, local governments, and community support. Specifically, funding sources include the School

Operational Assistance (BOS) from the central government, allocations from local governments, both provincial and district/city, as well as community donations and grants.

The PBLHS Movement planning at SMA Negeri 2 Wates has been comprehensively implemented in the KTSP (Curriculum, Curriculum Plan) and RPP (Lesson Plan). At the beginning of each school year, the school holds a workshop to prepare documents such as the KOSP (Curriculum Plan), KTSP (Curriculum Plan), and RPP (Lesson Plan), all of which must incorporate the PBLHS Movement. Furthermore, every extracurricular activity must also incorporate aspects of the PBLHS Movement, both in its implementation and through the rules applicable to extracurricular participants. The school's vision, mission, and objectives reflect the integration of the PBLHS Movement. The vision of SMA Negeri 2 Wates, "To Create Religious, Character-Based, Superior, Cultured, and Environmentally-Caring People," demonstrates that the value of "Caring for the Environment" has become part of the PBLHS Movement. This vision serves as a guideline for achieving shared goals related to environmental awareness, namely building a culture of environmental awareness among school residents and graduates, and fostering a healthy lifestyle throughout the school community. This aligns with the opinion of Patmawati, Ma'arif, Toyibah, & Rasmanah (2023) that an educational vision is a statement of the ideal goals an institution wishes to achieve in the future. This vision reflects expectations for facing potential challenges and opportunities. Therefore, formulating an educational institution's vision requires an understanding of potential future developments.

The integration of the PBLHS Movement at SMA Negeri 2 Wates is also implemented through extracurricular activities, the learning process, and daily habits related to Environmentally Friendly Behavior (PRLH). The P5 program and cross-subject collaboration also support the implementation of this movement. The school cafeteria is strictly managed to reduce plastic use and encourage the serving of healthy snacks without plastic packaging. The entire school community is involved in the planning of the PBLHS Movement because this movement is collective and targets not only the school community, but also the surrounding community, thus fostering a shared responsibility in protecting the environment. The school committee plays an active role, particularly in the preparation of the RKAS and the implementation of public testing of the curriculum.

Several aspects of PRLH that are the focus of daily learning and practice include cleanliness, sanitation and drainage management, waste management, tree or plant planting and maintenance, water and energy conservation, and innovations related to PRLH implementation. This aligns with the findings of Ibrahim & Winingsih (2023) who emphasized the importance of maintaining cleanliness, sanitation, drainage, and waste management through the principles of Reuse, Reduce, Recycle (3R), as well as resource conservation and innovation related to PRLH. Teachers are directed to incorporate PRLH elements into lesson plans and teaching modules, so that the subject matter supports the achievement of the PBLHS Movement's objectives. Yuliana, et al (2021) emphasize that planning the learning process includes determining initial steps before implementation, arranging media, time, classroom management, and assessment, including integrating PRLH aspects into the subject matter. The implementation of the PBLHS Movement emphasizes collaboration among all school members as movement owners, in line with targets that include both the school

community and the surrounding community. Deswary (2012) explains that improving the quality of educational institutions begins with the development of a strategic plan that involves all stakeholders or empowered parties. The school's strategic plan serves to optimally utilize all available resources, direct the school towards long-term goals, and bridge current conditions with desired future achievements.

4. CONCLUSION

The planning of the PBLHS Movement at SMA Negeri 2 Wates was carried out through various activities that reflect a systematic effort to cultivate environmentally friendly behavior. This finding has practical implications that schools need to actively involve all school members and external stakeholders to ensure the sustainability of the culture of environmental care. These activities include the formation of a school Adiwiyata team, the implementation of the Identification of Potential and Environmental Problems in Schools (IPMLH), the preparation of a structured PBLHS Movement plan and its integration into the KTSP (School Curriculum), KOSP (School Planning), RPP (Lesson Plans), and teaching modules, including P5. There are several supporting factors for the PBLHS Movement planning at both schools and several inhibiting factors that can be overcome with various solutions. Thus, the integration of PBLHS into the curriculum documents becomes the foundation for instilling environmentally friendly behavior in students from an early age.

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