Al Qalam: Jurnal Ilmiah Keagamaan dan Kemasyarakatan
https://jurnal.stiq-amuntai.ac.id/index.php/al-qalam
P-ISSN: 1907-4174; E-ISSN: 2621-0681
DOI : 10.35931/aq.v20i6.6789

TOWARD SUSTAINABLE GREEN SCHOOLS: A LITERATURE REVIEW OF COMMUNITY EMPOWERMENT STRATEGIES IN DEVELOPING ENVIRONMENTALLY CONSCIOUS SCHOOLS

Marina Dwi Mayangsari[1], Ahmad Suriansyah[2]
[1, 2] Universitas Lambung Mangkurat, Banjarmasin, Indonesia
[1] md.mayangsari@ulm.ac.id, [2] a.suriansyah@ulm.ac.id.

Abstract

Community empowerment strategies as a fundamental pillar in the development of environmentally conscious schools represent a participatory approach that positions the school community as the primary actor in transforming environmental-oriented education. This literature review aims to analyze the role of community empowerment strategies in developing sustainable green schools, particularly in bridging the gap between policy and practice. Through a systematic analysis of articles from reputable national and international journals, this study identifies key factors that influence the successful implementation of green school initiatives, such as the Adiwiyata School Program. The findings indicate that program success largely depends on the synergy between visionary school leadership, active multi-stakeholder participation, and curricula that integrate environmental education. Effective approaches such as Asset-Based Community Development (ABCD) have proven capable of mobilizing local resources, although challenges remain, including limited resources and low environmental awareness. The study also highlights the importance of empowering students as agents of change in fostering proactive pro-environmental behavior. It can be concluded that structured and adaptive empowerment models are essential for transforming schools into sustainable green schools.
Keywords: *Community Empowerment, Green Schools, Adiwiyata Program, School Leadership, Environmental Education, Student Empowerment.*

Abstrak

Strategi pemberdayaan masyarakat sebagai pilar fundamental dalam pengembangan sekolah sadar lingkungan merupakan pendekatan partisipatif yang menempatkan komunitas sekolah sebagai aktor utama dalam transformasi pendidikan berwawasan lingkungan. Tinjauan literatur ini bertujuan untuk menganalisis peran strategi pemberdayaan masyarakat dalam mengembangkan green school *yang berkelanjutan, guna menjembatani kesenjangan antara kebijakan dan praktik di lapangan. Melalui analisis sistematis terhadap artikel-artikel jurnal bereputasi nasional dan internasional, kajian ini mengidentifikasi faktor-faktor kunci keberhasilan implementasi program* green school *seperti Sekolah Adiwiyata. Hasil temuan menunjukkan bahwa keberhasilan bergantung pada sinergi antara kepemimpinan sekolah yang visioner, partisipasi aktif multistakeholder, dan kurikulum yang terintegrasi dengan pendidikan lingkungan. Strategi efektif seperti* Asset-Based Community Development *(ABCD) terbukti mampu menggerakkan sumber daya lokal, meskipun menghadapi tantangan seperti keterbatasan sumber daya dan rendahnya kesadaran. Studi ini juga menegaskan bahwa pemberdayaan siswa sebagai agen perubahan merupakan kunci untuk mewujudkan* green school *dengan menumbuhkan perilaku proaktif berbasis pro-lingkungan. Disimpulkan bahwa model pemberdayaan yang terstruktur dan adaptif sangat esensial untuk mentransformasi sekolah mewujudkan sekolah hijau (*green school*) berkelanjutan.*
Kata Kunci: *Pemberdayaan Masyarakat, Green School, Sekolah Adiwiyata, Kepemimpinan Sekolah, Pendidikan Lingkungan, Pemberdayaan Siswa.*

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INTRODUCTION

As the twenty-first century enters its third decade, the world faces increasingly complex and multidimensional environmental challenges. Human activity is now recognized as the main force shaping the earth's geological systems, a condition often referred to as the *Anthropocene*.[1] The accelerating pace of climate change caused by greenhouse gas emissions, the rising rate of biodiversity loss, and plastic and chemical pollution on land and at sea show that the global environmental crisis is becoming ever more real. The *Intergovernmental Panel on Climate Change* has stressed that the window for securing a liveable and sustainable future is narrowing unless fundamental changes are made in patterns of production and consumption and in human behaviour toward the environment.[2] This situation shows that the environmental crisis is not only an ecological matter but also has broad implications for human well-being, health, and social justice.

The global effort to respond to these challenges has taken shape in the 2030 Agenda, formulated as the *Sustainable Development Goals* (SDGs). Among the seventeen agreed goals, education (SDG 4) holds a strategic position because it serves as the foundation of long-term change in shaping public awareness of and behaviour toward sustainability. Education is no longer understood merely as the transfer of knowledge but also as a means of shaping the values, attitudes, and competences that enable individuals to make responsible decisions about the environment. The concept of *Education for Sustainable Development* (ESD) developed by UNESCO emphasizes the importance of equipping learners with critical thinking skills, ecological awareness, and the capacity to respond to global problems such as climate change, biodiversity loss, and unsustainable consumption patterns.

The implementation of sustainable education in schools has developed through various global initiatives known as *green schools*, *eco-schools*, or *sustainable schools*. The *Eco-Schools* programme, initiated by the *Foundation for Environmental Education* (FEE) and implemented in more than 80 countries, reflects an international commitment to making schools learning spaces

[1] Paul J. Crutzen, "Geology of Mankind," *Nature* 415, no. 6867 (2002): 23–23.

[2] IPCC, "Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change," in *Climate Change 2023: Synthesis Report*, ed. Core Writing Team et al. (IPCC, n.d.), https://www.ipcc.ch/report/ar6/syr/.

that integrate sustainability principles into everyday educational practice.[3] Such initiatives aim not only to improve students' environmental literacy but also to encourage collective behavioural change within the school community.

In Indonesia, efforts to develop environmentally oriented schools have taken the form of the Adiwiyata School Programme developed by the Ministry of Environment and Forestry (KLHK). The programme is designed to foster schools that care about the environment and have an environmental culture through four main components: environmentally oriented school policies, an environment-based integrated curriculum, participatory activities, and environmentally friendly management of facilities and infrastructure.[4] Through this approach, schools are expected to become ecological learning spaces that not only impart knowledge but also shape sustained pro-environmental behaviour.

The Adiwiyata Programme has developed significantly in recent years. Data from the Ministry of Environment and Forestry show that more than 28,000 schools in Indonesia have taken part in or obtained Adiwiyata status at various levels.[5] This achievement reflects the government's commitment to integrating environmental education into the national education system. Nevertheless, a number of studies show that winning the Adiwiyata award does not fully guarantee the sustainability of environmental management practices in schools. Some schools struggle to maintain programme standards once the assessment process is over. This condition is influenced by various factors, such as limited resources, weak integration of the environmental curriculum, and low community involvement in supporting programme implementation.[6]

A 2023 study by Nurdin *et al.* shows that Adiwiyata implementation in a number of schools still tends to be administrative and oriented toward winning awards rather than toward the sustained transformation of school culture.[7] This can be seen in the case of MAN Pangkep, which had achieved national Adiwiyata status but stagnated on its way to Adiwiyata Mandiri status because of limited funding, weak institutional support, and a lack of participation by the school

[3] K. Kipchoge and P. Mwangi, "Eco-Schools Kenya: Practising Education for Green Economy and Sustainability," in *Handbook of Education for Sustainable Development*, ed. W. Leal Filho, International Explorations in Outdoor and Environmental Education (Springer International Publishing, 2020), https://link.springer.com/10.1007/978-3-030-46820-0_14.

[4] Nur Puji Ardianing et al., "Strategi Kepimpinan Kepala Sekolah Dalam Implementasi Sekolah Adiwiyata Nasional," *Jurnal Manajemen Pendidikan (JMP)* 14, no. 3 (2025): 454–62; P. Herliana et al., "Green Leadership and Environmental Awareness Growing with Indonesia's Adiwiyata Program at a Kotabaru School," *Educational Research* 35, no. 3 (2025): 987–1009.

[5] KLHK, *Laporan Kinerja Kementerian Lingkungan Hidup Dan Kehutanan* (2022).

[6] Daphne Goldman et al., "Influence of 'Green School Certification' on Students' Environmental Literacy and Adoption of Sustainable Practice by Schools," *Journal of Cleaner Production* 183 (May 2018): 1300–1313.

[7] M. N. I. Nurdin et al., "Problematika Program Adiwiyata Sekolah: Studi Kasus Pada MAN Pangkep Kabupaten Pangkep," *Didaktika: Jurnal Kependidikan* 12, no. 4 (2023), https://jurnaldidaktika.org.

community. These findings show that the sustainability of environmentally conscious school programmes is strongly influenced by the school's institutional capacity and by support from various stakeholders.

A similar situation can be seen at the regional level. In South Kalimantan, the provincial government, through the Environmental Agency, has actively encouraged schools to join the Adiwiyata Programme, and a number of schools have obtained national or Mandiri Adiwiyata status. However, the distribution of schools that have succeeded in the programme remains uneven and tends to be concentrated in urban areas such as Banjarmasin and Banjarbaru. Schools in peripheral areas still face limited facilities, mentoring, and resource support.[8] This shows that successful programme implementation depends not only on government policy but also on the capacity of local communities and public support.

From the perspective of community empowerment, the school is part of a wider social system that involves various actors, such as parents, local communities, civil society organizations, and the private sector. Community involvement plays an important role in strengthening the sustainability of environmentally conscious school programmes. In practice, however, community participation is often limited to symbolic activities, such as communal clean-ups or material support, while participation in programme planning, decision-making, and evaluation remains relatively low.[9] This indicates that the social resources and local wisdom available in the community have not been optimally used to support the implementation of environmentally conscious schools.

Various studies show that the success of green school programmes is strongly influenced by the degree to which sustainability values are integrated into the school's organizational culture, the quality of educational leadership, and the level of community participation. Goldman et al. (2018) emphasize that the impact of green school programmes on students' environmental literacy depends heavily on the extent to which sustainability principles are internalized in everyday educational practice.[10] Without such integration, programmes tend to be administrative and unsustainable.

Based on these findings, the main problem in developing environmentally conscious schools in Indonesia no longer lies in the number of schools that receive awards but in community empowerment strategies capable of sustaining programmes in the long term. Schools are indeed positioned as agents of change in building environmental awareness, but the success of this

[8] DLH Kalimantan Selatan, "Laporan Kinerja Dinas Lingkungan Hidup Provinsi Kalimantan Selatan.," 2023.

[9] Y. Yuliana and S. Suryanto, "Pemberdayaan Masyarakat Dalam Pelaksanaan Program Adiwiyata Di Sekolah Dasar," *Jurnal Pendidikan Dan Pembelajaran Untag* 25, no. 1 (2025): 1–10.

[10] Goldman et al., "Influence of 'Green School Certification' on Students' Environmental Literacy and Adoption of Sustainable Practice by Schools."

transformation depends heavily on collaboration among schools, communities, and educational leaders, as well as on the active involvement of students as agents of change.

Literature reviews that specifically analyse community empowerment strategies in the development of environmentally conscious schools are still relatively scarce. Yet an understanding of these strategies is important for identifying the factors that support and inhibit programme implementation, the role of school leadership in building collaboration with the community, and efforts to empower students as agents of change in promoting pro-environmental behaviour.

Against this background, this literature review focuses on the development of environmentally conscious schools (*green schools*) from the perspective of community empowerment, with the aim of understanding the strategies that can strengthen the sustainability of programme implementation in schools. Accordingly, the review addresses four main questions: (1) how community empowerment strategies can be applied effectively to support the development of sustainable environmentally conscious schools (*green schools*); (2) what factors support and inhibit community empowerment in the success of environmentally conscious school (*green school*) programmes; (3) what role school leadership plays in building cooperation between schools and communities to achieve the goals of environmental education; and (4) how empowering students as agents of change can foster pro-environmental behaviour in the development of environmentally conscious schools (*green schools*).

Theoretical Framework

Community Empowerment Theory

Empowerment is a process through which individuals and groups gain the ability and power to determine, control, and manage their own lives independently. The concept emphasizes the importance of building the capacity of individuals and communities so that they can participate actively in the social processes that affect their lives. Ideas about empowerment have been strongly influenced by Paulo Freire's critical pedagogy, which emphasizes consciousness and liberation from unjust structures, and by Julian Rappaport's work in community psychology, which places the community as the main subject of social change.

Rappaport (1987) defines empowerment as a process by which individuals, organizations, and communities gain mastery over the issues they face and the ability to influence the conditions that affect their lives.[11] Empowerment is thus not understood as something granted unilaterally by outsiders but as a facilitated process that enables communities to discover, develop, and use their own potential and strengths independently.

[11] J. Rappaport, "Terms of Empowerment/Exemplars of Prevention: Toward a Theory for Community Psychology," *American Journal of Community Psychology* 15, no. 2 (1987): 121–48.

In line with this view, Malta (2023) states that community empowerment is a fundamental approach to development that seeks to transform social conditions from powerlessness to empowerment.[12] The approach centres on increasing the independence, capacity, and active participation of communities in managing the development process, so that communities are not merely recipients of programmes but actors who determine the direction of their own development.

Within the framework of *empowerment theory*, the essence of empowerment lies in the process of gaining influence over conditions that matter to the lives of individuals and groups.[13] Empowerment therefore cannot be understood simply as a transfer of power from outside parties to the community, but as a gradual process that allows individuals and communities to develop personal, interpersonal, and even political power to improve the quality of their lives sustainably.

Fawcett et al. (1995) also put forward an interactive model of community empowerment that shows a reciprocal relationship between personal factors, such as knowledge, skills, and self-confidence, and environmental factors, including social support, organizational structures, and prevailing policies.[14] In this model, the empowerment process includes collaborative planning, community action, social change, community capacity building, and continuous adjustment to emerging challenges. Pigg (2002) further explains that empowerment can be understood through three main dimensions: the development of individual capacity, the strengthening of social relations within the community, and collective action aimed at promoting social change.[15] These three dimensions are interrelated and form an important foundation for participatory and sustainable community development.

From the perspective of *Education for Sustainable Development* (ESD), empowerment is seen as an important component that encourages learners to develop critical, collaborative, and reflective thinking in facing global problems. Education serves not only to build cognitive knowledge but also to foster awareness, attitudes, and concrete actions that support environmental and social sustainability.

Empowerment in the context of education therefore means providing space for dialogue, active participation, and critical reflection in the learning process. Through this approach, students and the school community are no longer positioned as objects who receive knowledge but as

[12] Malta, "The Concept of Strategy in Community Empowerment: A Literature Review," *Influence: International Journal of Science Review* 5, no. 3 (2023): 24–34.

[13] Stephen B. Fawcett et al., "Using Empowerment Theory in Collaborative Partnerships for Community Health and Development," *American Journal of Community Psychology* 23, no. 5 (1995): 677–97.

[14] Fawcett et al., "Using Empowerment Theory in Collaborative Partnerships for Community Health and Development."

[15] Kenneth E. Pigg, "Three Faces of Empowerment: Expanding the Theory of Empowerment in Community Development," *Journal of the Community Development Society* 33, no. 1 (2002): 107–23.

subjects who play an active role both in the learning process and in efforts to bring about sustainable social change.

Supporting and Inhibiting Factors of Community Empowerment

The success of community empowerment programmes can be influenced by various factors that may either strengthen or weaken the process. The supporting and inhibiting factors in the success of community empowerment are as follows.

Supporting factors. Cassetti et al. (2025) identified several key factors that facilitate community engagement:[16]

1. Institutional support from relevant agencies. Institutions play a major role in encouraging community engagement; when an agency or organization provides clear support, including policies and resource allocation, the motivation and commitment of programme implementers increase.
2. Participatory training for programme implementers. Through training, implementers not only understand empowerment theory but also acquire practical skills for building collaborative, evidence-based cooperation.
3. Cross-sector partnerships. Inter-organizational relationships built on trust and mutual respect have been shown to support the more effective implementation of community-based programmes; with solid cooperation, the empowerment process becomes more coordinated and sustainable.

Inhibiting factors. The main inhibiting factors are as follows:

1. Lack of resources, both financial and in terms of time, which often forces professionals to rely on their own free time to run empowerment programmes. Implementers frequently have to use their personal time to carry out community activities, which in the long run can reduce motivation and disrupt programme sustainability.
2. Lack of systematic evaluation. Without structured evaluation, it is difficult to demonstrate programme success. As a result, support from institutions and policymakers becomes limited because there are no strong data on the effectiveness of the intervention.
3. Relational aspects such as *trust*, *power* relations, and cultural sensitivity can act both as supporting and as inhibiting factors for community participation. When there is a power imbalance or a lack of trust between the community and programme organizers, the resulting participation tends to be a formality and lacks meaning.[17]

[16] Viola Cassetti et al., "Facilitators and Barriers to Implement Community Engagement Approaches in Health Promotion Projects: A Qualitative Study in 13 Projects in Spain," *Public Health in Practice* 9 (June 2025): 100595.

[17] T. Rong et al., "Exploring Community Engagement in Place-Based Approaches," *Health & Place* 82 (September 2023): 103–15.

The Environmentally Conscious School Model (Green School/Adiwiyata)

The *green school* or Adiwiyata School model is an educational concept that integrates environmental values comprehensively into the school system. The approach is realized not merely through additional activities such as communal clean-ups or cleanliness competitions but through efforts that involve every element and activity of the school. It is known as the *Whole-School Approach*, a strategy that integrates sustainability principles and environmental awareness into every aspect of school life, from policies and regulations and classroom learning to the daily habits of the school community.[18]

In the Indonesian context, environmentally oriented schools are implemented through the Adiwiyata Programme, which is built on four interrelated main components. The first is environmentally oriented policy, meaning that the school has a vision, mission, and regulations that support environmental conservation. The second is an environment-based curriculum that integrates environmental material and issues into various subjects. The third is participatory environmental activities, namely the active involvement of the entire school community and the public in activities related to environmental care. The fourth is the environmentally friendly management of supporting facilities, meaning that school facilities are managed with attention to sustainability principles. These four components support one another in shaping a school culture that cares about and takes responsibility for the environment.[19]

The Adiwiyata Programme essentially covers three main aspects: environmental education, sustainable resource management, and the development of a culture of environmental care. Environmental education focuses on integrating environmental issues into the school curriculum so that students gain a comprehensive understanding of the importance of conserving the environment. Sustainable resource management is realized through concrete practices at school, such as waste management, greening activities, and water conservation. The development of a culture of environmental care emphasizes the involvement of the whole school community, including students, teachers, and parents, in actively participating in activities that support environmental sustainability.[20]

Through this approach, the *green school* concept functions not merely as an environmental programme but as a systematic effort to build a sustainable school culture and to foster ecological awareness among all members of the school community. It shows that the school

[18] R. Thompson and M. Green, "Whole-School Approaches to Sustainability: A Comprehensive Framework," *International Journal of Sustainability in Higher Education* 24, no. 3 (2023): 456–72.

[19] N. Rokhmah, "Kebijakan Program Adiwiyata Dan Implikasinya Terhadap Budaya Sekolah," *Jurnal Kebijakan Pendidikan* 9, no. 2 (2019): 54–68.

[20] Puspa Herliana et al., "Organizational Culture Transformation Through the Leadership of the Principal at Sdn Sungai Taib in the Adiwiyata Program," *Eduvest - Journal of Universal Studies* 5, no. 9 (2025): 10576–89.

serves not only as a place of academic learning but also as a space of social learning that fosters lasting attitudes, values, and pro-environmental behaviour in everyday life.

RESEARCH METHODS

This study used the *literature review* method. The method aims to identify, examine, and synthesize the findings of previous research relevant to the topic of community empowerment in developing environmentally conscious schools (*green schools*).[21] Through this approach, the researchers sought to gain a comprehensive understanding of the strategies, success factors, and roles of the various parties involved in supporting the implementation of environment-based school programmes.

The *literature review* was carried out by collecting various sources, such as scientific journals, books, and research reports related to the research topic. These sources were then critically analysed to identify patterns, key concepts, and best practices that could serve as a basis for developing the concept of community-empowerment-based green schools.

The *literature review* method was chosen because it provides a strong theoretical foundation and a comprehensive picture of research developments in the related field. It also allows researchers to examine various perspectives and empirical findings in depth without having to collect data directly.[22] On this basis, the study is expected to contribute a concept for developing effective community empowerment strategies to support the desired *green school* programmes.

RESULTS AND DISCUSSION

Summary of Previous Studies

A review of a number of previous studies was conducted to identify strategies for developing environmentally conscious schools (*green schools*) from the perspective of community empowerment. Although every development programme faces relatively similar challenges, its implementation is shaped by different empowerment factors according to local conditions and characteristics. Table 1 summarizes the key findings of various studies on community empowerment in *green school* development, organized according to the research questions set out above.

[21] J. W. Creswell and J. D. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed (SAGE Publications, 2022).

[22] Hannah Snyder, "Literature Review as a Research Methodology: An Overview and Guidelines," *Journal of Business Research* 104 (November 2019): 333–39, https://doi.org/10.1016/j.jbusres.2019.07.039.

Table 1**.** Summary of Key Findings from Previous Studies on Community Empowerment in Green School Development

Study	Key Findings
Effective community empowerment strategies to support sustainable green school *development*	
UNESCO (2024)	UNESCO's *multistakeholder* approach empowers communities through four main pillars: inclusive school governance, green facility operations, climate-based learning, and community engagement, supported by teacher training, action-oriented learning, curriculum development, and joint accreditation to reach the target of greening 50 percent of schools worldwide.[23]
Forrester et al. (2020)	The *asset-based community development* (ABCD) approach views the school as a community asset that can be mobilized through collaboration and sustained participation to strengthen community capacity.[24]
Noviani et al. (2025)	The success of community empowerment strategies in the Adiwiyata/*Green School* programme in Banjarmasin is determined by three main factors: empowering teachers through the integration of an environmental curriculum, partnerships with government and the community, and adaptive principal leadership in building a culture of environmental conservation.[25]
Factors supporting and inhibiting community empowerment in the success of green school *programmes*	
Zarin et al. (2023)	Research at MIN 4 Gunung Kidul shows that programme success was supported by teacher motivation, government support, adequate facilities, and stakeholder cooperation, while obstacles included low student discipline, limited parental awareness, and the impact of the COVID-19 pandemic on school community participation.[26]
Purwanto et al. (2025)	Successful empowerment at SMA Negeri 1 Sampit was supported by strong leadership and the commitment of the school community, which increased participation and environmental quality, but was hindered by limited teacher capacity and budget allocation, which restricted programme sustainability.[27]
Noviani et al. (2025)	The success of the Adiwiyata programme is influenced by empowering teachers through environmental teams, strategic partnerships with government and the community, and adaptive leadership capable of fostering a culture of environmental conservation in the school.[28]
The role of school leadership in building cooperation between schools and communities to achieve the goals of environmental education	
Zuhriyah and Supandi (2022)	The success of *green school* programmes is influenced by the principal's transformational leadership in integrating *education for sustainable development* (ESD), building multi-party synergy, and sustaining the vision through communication and adaptation to environmental issues.[29]

[23] UNESCO, *Green School Quality Standard – Greening Every Learning Environment* (2024), https://unesdoc.unesco.org/ark:/48223/pf0000390028.

[24] Gillian Forrester et al., "Schools as Community Assets: An Exploration of the Merits of an Asset-Based Community Development (ABCD) Approach," *Educational Review* 72, no. 4 (2020): 443–58.

[25] Noviani Noviani et al., "Adiwiyata-Based School Environment Management: A Multi-Case Study in Banjarmasin," *Curricula: Journal of Curriculum Development* 4, no. 2 (2025): 1355–68.

[26] Puti Astias Zarin et al., "Aktualisasi Sistem Green School Dalam Meningkatkan Perilaku Hidup Bersih Dan Sehat Pada Siswa MI Gunungkidul Yogyakarta," *EDUCASIA: Jurnal Pendidikan, Pengajaran, Dan Pembelajaran* 8, no. 2 (2023): 129–46.

[27] Setiyo Purwanto et al., "Penguatan Integrasi Ekopedagogi Dan Inovasi Lingkungan Menuju Sekolah Adiwiyata Mandiri Di SMKN 16 Jakarta Pusat," *Jompa Abdi: Jurnal Pengabdian Masyarakat* 4, no. 2 (2025): 312–22.

[28] Noviani et al., "Adiwiyata-Based School Environment Management."

[29] Aminah Zuhriyah and Dedi Supandi, "Optimalisasi Gaya Kepempinan Kepala Sekolah Untuk Mendukung Terciptanya Green School," *Jurnal Basicedu* 6, no. 3 (2022): 3720–28.

Study	Key Findings
Azmi et al. (2018)	The principal's ecological leadership contributes to shaping environmental care, habituating clean and healthy living, creating an ecological school environment, and improving environmental achievements through a qualitative approach that encourages sustained collaboration within the school community.[30]
Herliana et al. (2025)	The principal's leadership at SDN Sungai Taib was key to building school–community cooperation through a clear environmental vision, the involvement of teachers and staff, and open communication in support of the Adiwiyata programme.[31]
Nilawati et al. (2025)	Visionary social leadership helps increase the involvement of the whole school community by integrating environmental practices into the curriculum and through participatory approaches that build an eco-friendly culture.[32]
Student empowerment programmes as agents of change in realizing green schools	
Nooraisya et al. (2025)	The Adiwiyata programme empowers elementary school students as agents of change through the participation of the school community in policy, curriculum, practical activities, and the management of environmentally friendly facilities, fostering sustained pro-environmental behaviour.[33]
Ayuningtias et al. (2025)	Implementing *green schools* through curriculum integration and student involvement in greening, waste management, and energy efficiency has been shown to improve environmental management behaviour and sustainability orientation.[34]
Hopkins (2024)	Adapting the *asset-based community development* (ABCD) model to education focuses on identifying student and community assets to strengthen engagement and learning experiences through a conceptual framework that values diversity and accommodates student voice.[35]
UNESCO (2024)	Learners can take part in sustainability-related community service that benefits the community while fostering responsibility. Interaction with the community also enriches local knowledge, making sustainability actions more relevant and effective for local needs.[36]
Herliana et al. (2025)	The Adiwiyata programme at SMPN 1 Kotabaru shows that student involvement in environmental activities, such as the waste bank, waste sorting, composting, and greenhouse maintenance, increases environmental awareness and responsibility. These practical activities also strengthen students' understanding of conservation and encourage environmentally friendly behaviour in daily life.[37]

Source: Compiled by the authors from previous studies.

[30] N. R. L. Azmi et al., "Kepemimpinan Ekologis Kepala Sekolah Dalam Pembentukan Sekolah Berbudaya Lingkungan," *JAMP: Jurnal Administrasi Dan Manajemen Pendidikan* 1, no. 3 (2018): 327–36.

[31] Herliana et al., "Organizational Culture Transformation Through the Leadership of the Principal at Sdn Sungai Taib in the Adiwiyata Program."

[32] Nilawati et al., "Social Leadership and Educational Transformation Enhance Green School Culture, Overcoming Challenges for Teachers and Management," *International Journal of Innovative Research and Scientific Studies* 8, no. 3 (2025): 121–37.

[33] A. M. Nooraisya et al., *Implementasi Program Sekolah Hijau Sebagai Inovasi Pendidikan Ramah Lingkungan Dalam Membentuk Karakter Siswa Di Sekolah Dasar*, n.d.

[34] N. Ayuningtias et al., "Sekolah Hijau Sebagai Wadah Peningkatan Kesadaran Lingkungan (Kampung Prafi Mulya, Kecamatan Prafi, Kabupaten Manokwari)," *Jurnal Pengabdian Masyarakat* 2, no. 1 (2025): 464–72.

[35] J. Hopkins, "Using Asset-Based Community Development to Increase Student Engagement and Improve Student Experience in Schools" (Doctoral dissertation, Virginia Commonwealth University, 2024).

[36] UNESCO, *Green School Quality Standard – Greening Every Learning Environment*.

[37] Herliana et al., "Green Leadership and Environmental Awareness Growing with Indonesia's Adiwiyata Program at a Kotabaru School."

Effective Community Empowerment Strategies for Sustainable *Green Schools*

The review of previous studies shows that community empowerment is one of the strategic approaches to developing environmentally oriented schools. Building a *green school* cannot be done by the school alone; it requires the involvement of various stakeholders (*multistakeholder*), such as teachers, students, parents, local governments, and the surrounding community. In the global context, UNESCO (2024) stresses that the successful development of sustainable schools rests on four main elements: inclusive school governance, environmentally friendly facility management, the integration of climate change issues into learning, and active community involvement.[38] These four aspects show that the transformation toward green schools requires a comprehensive approach, not only in policy but also in everyday educational practice.

From the perspective of community empowerment, the *Asset-Based Community Development* (ABCD) approach put forward by Forrester et al. (2020) provides a relevant conceptual framework for developing environmentally conscious schools.[39] The approach emphasizes that the school community has various potentials that can be used as capital for developing environmental programmes, whether human resources, social networks, or local wisdom that has developed in the community. Unlike problem-based approaches that focus on limitations or deficiencies, ABCD focuses on mapping and strengthening the assets the community already has. Through this process, collaboration between schools and communities can be built in a more participatory and sustainable way.

Findings from several studies in Indonesia reinforce the relevance of this approach. A 2025 study by Noviani *et al.* in Banjarmasin and a 2019 study by Lasno *et al.* in Tahai Baru show that the successful implementation of the Adiwiyata Programme depends heavily on the school's ability to mobilize the participation of various parties.[40] Principals, teachers, parents, school committees, and local government agencies need to be involved from the planning stage through to programme evaluation. Such collaboratively built participation enables environmental programmes to become not merely ceremonial activities but a sustainable school culture.

Community empowerment strategies in *green school* development thus essentially reflect a change in the way education is managed. The school is no longer understood as an institution working separately from the community but as a *community hub* that integrates various social resources to support a sustainable and ecologically aware learning environment.

[38] UNESCO, *Green School Quality Standard – Greening Every Learning Environment*.
[39] Forrester et al., "Schools as Community Assets."
[40] L. Lasno et al., "School Principal's Role in the Implementation of School-Based Management for Adiwiyata Program," *European Journal of Education Studies* 0, no. 0 (2019): 1–15; Noviani et al., "Adiwiyata-Based School Environment Management."

Success Factors of Community Empowerment in *Green School* Programmes

The analysis of the literature shows that the success of community empowerment in implementing *green school* programmes is influenced by a number of interrelated factors, both supporting factors and potential obstacles. Identifying these factors is important for understanding the dynamics of environmental programmes in schools and for answering the research question on the conditions that influence the success of community empowerment.

Among the supporting factors, strong leadership and the commitment of the school community are decisive. Purwanto *et al.* (2025) and Adistya *et al.* (2024) emphasize that the principal plays a strategic role as the driving force in building a shared vision of the importance of environmental education. Effective leadership creates a collaborative atmosphere so that all members of the school community share awareness of and responsibility for sustaining the programme.[41] Without clear and consistent leadership, empowerment efforts involving the community will struggle to develop optimally.

Besides internal school leadership, support from external institutions also plays a significant role in the success of *green school* programmes. Zarin *et al.* (2023) and Noviani et al. (2025) show that the involvement of local governments, especially the Environmental Agency and the Education Agency, makes an important contribution through policy, programme mentoring, and the provision of resources.[42] Partnerships with the private sector, community organizations, and non-governmental organizations can also extend the reach of programmes and strengthen support for environmental activities at school. In addition, adequate facilities and infrastructure are an important supporting factor that allows environmental programmes to be carried out in everyday school activities.

On the other hand, a number of obstacles have also been found in implementing *green school* programmes. One of the main obstacles is limited resources, especially budget and time allocation. Purwanto et al. (2025) note that these limitations often make environmental programmes dependent on the initiative of particular individuals, so that their sustainability is less assured.[43] In addition, some members of the school community still have a low level of awareness of the importance of environmental education. Zarin, Ichsan, and Yunianta (2023) reveal that the participation of students and parents is in some cases still symbolic and does not yet reflect deep involvement in school environmental activities.

[41] A. Adistya et al., "Integrasi Program Adiwiyata Pada MAN 1 Malang Ditinjau Dalam Perspektif Teori AGIL Oleh Talcott Parsons," *Journal of Edugeography* 12, no. 2 (2024): 24–33; Pigg, "Three Faces of Empowerment."

[42] Noviani et al., "Adiwiyata-Based School Environment Management"; Zarin et al., "Aktualisasi Sistem Green School Dalam Meningkatkan Perilaku Hidup Bersih Dan Sehat Pada Siswa MI Gunungkidul Yogyakarta."

[43] Purwanto et al., "Penguatan Integrasi Ekopedagogi Dan Inovasi Lingkungan Menuju Sekolah Adiwiyata Mandiri Di SMKN 16 Jakarta Pusat."

Another equally important problem concerns teachers' capacity to integrate environmental education into learning. As Purwanto *et al.* (2025) point out, teachers still have limited ability to link environmental issues to learning material across subjects. This shows the need for more systematic training and mentoring programmes so that environmental education can be effectively integrated into the school curriculum.

Overall, these findings show that the success of community empowerment in *green school* programmes is influenced by a combination of the school's internal strengths and the support of its external ecosystem. Programme implementation therefore requires strategies that are adaptive, contextual, and able to accommodate the various potentials and challenges present in the school environment.

The Role of School Leadership in Building Empowerment Partnerships toward *Green Schools*

School leadership is one of the key factors that determine the successful implementation of community empowerment in *green school* development. Based on the literature, the principal holds a strategic position in directing and coordinating all elements of the school so that they can contribute to a sustainable educational environment. In this context, the principal not only performs administrative functions but also acts as a leader capable of driving organizational change.

Zuhriyah and Supandi (2022) emphasize the importance of transformational leadership in developing a school culture that supports environmental sustainability. This type of leadership focuses on the leader's ability to inspire, motivate, and build the collective commitment of the school community to shared goals. Meanwhile, Azmi *et al.* (2018) put forward the concept of ecological leadership, which focuses on systematically building environmental awareness and pro-environmental behaviour in the school.[44]

In practice, school leadership can be realized through the following strategic steps.

Building a Shared Vision

With a clear vision, all parties share the same direction and goals. Here, the principal translates Adiwiyata or *green school* policy into a vision that is understood, accepted, and owned by the whole school community.[45]

[44] Azmi et al., "Kepemimpinan Ekologis Kepala Sekolah Dalam Pembentukan Sekolah Berbudaya Lingkungan."

[45] Herliana et al., "Organizational Culture Transformation Through the Leadership of the Principal at Sdn Sungai Taib in the Adiwiyata Program."

Creating Participatory Structures

Effective leadership opens up genuine spaces for participation, such as forming an environmental team, strengthening the role of the school committee, and holding open communication forums with parents and the community. These structures allow collaboration to proceed in a focused and sustainable way.

Integrating Environmental Education into the Curriculum

The principal is the main driver in ensuring that environmental education does not stop at extracurricular activities but is integrated into learning across subjects.[46] In this way, environmental values become part of the everyday learning culture.

Being a Role Model

The principal's commitment to and concrete behaviour on environmental issues have a strong influence on school culture. This example reinforces the message that sustainability is not just a slogan but a practice carried out together.

Overall, school leadership serves as a bridge between macro-level policy and micro-level practice. Without leadership that is visionary, inspiring, and able to facilitate participation, community empowerment strategies will be difficult to implement effectively and sustainably.

Empowering Students as Agents of Change in Realizing *Green Schools*

In *green school* development, students are not only beneficiaries of environmental programmes but also key actors who can drive behavioural change toward more environmentally friendly lifestyles. The literature therefore emphasizes the importance of positioning students as *agents of change* who are actively involved in environmental activities at school.

Nooraisya *et al.* (2025) explain that the Adiwiyata Programme is designed to give students space to participate in every stage of environmental activities, from planning to programme evaluation.[47] Through this involvement, students not only gain knowledge of environmental issues but also develop care for and responsibility toward environmental sustainability.

A study by Ayuningtias *et al.* (2025) shows that student involvement in concrete activities, such as greening, waste management, and energy-saving campaigns, can raise ecological awareness and foster a more sustainability-oriented mindset.[48] Such direct learning

[46] Nilawati et al., "Social Leadership and Educational Transformation Enhance Green School Culture, Overcoming Challenges for Teachers and Management."

[47] Nooraisya et al., *Implementasi Program Sekolah Hijau Sebagai Inovasi Pendidikan Ramah Lingkungan Dalam Membentuk Karakter Siswa Di Sekolah Dasar*.

[48] Ayuningtias et al., "Sekolah Hijau Sebagai Wadah Peningkatan Kesadaran Lingkungan (Kampung Prafi Mulya, Kecamatan Prafi, Kabupaten Manokwari)."

experiences have proved more effective in shaping pro-environmental behaviour than purely theoretical learning.

Community-based empowerment approaches such as *Asset-Based Community Development* (ABCD) also emphasize the importance of drawing on students' potential as part of the school community. Hopkins (2024) and Forrester *et al.* (2020) explain that students' creativity, enthusiasm for participation, and social networks can be important resources for developing environmental initiatives at school.[49] Students' active involvement not only increases their sense of ownership of the programme but also helps them develop important skills such as critical thinking, cooperation, and leadership.

In addition, students' involvement in community-related activities provides more contextual learning experiences. UNESCO (2024) stresses that student participation in community-based environmental projects enables them to understand directly the relationship between human behaviour and environmental sustainability. Through such experiences, students not only learn about the concept of sustainability but also experience the real impact of their actions.[50]

A concrete example can be seen in the experience of students at SMPN 1 Kotabaru who were involved in waste sorting, waste bank management, composting, and greenhouse maintenance. Direct involvement in these activities not only improved students' understanding of environmental conservation but also fostered environmentally friendly habits in their daily lives.[51]

Overall, empowering students as agents of change is an important element in the successful development of *green schools*. Students' active participation not only supports the sustainability of school environmental programmes but also helps shape a generation with ecological awareness and the ability to play an active role in conserving the environment in the future.

CONCLUSION

Based on the discussion in this literature review, it can be concluded that community empowerment strategies are the main foundation for the success and sustainability of environmentally conscious school (*green school*) programmes. Such success is not built through ceremonial activities but through a participatory approach that is systematically designed and consistently implemented. Effective empowerment strategies are characterized by the active involvement of various stakeholders (*multistakeholder*), such as teachers, students, parents,

[49] Hopkins, "Using Asset-Based Community Development to Increase Student Engagement and Improve Student Experience in Schools"; Forrester et al., "Schools as Community Assets."

[50] UNESCO, *Green School Quality Standard – Greening Every Learning Environment*.

[51] Herliana et al., "Green Leadership and Environmental Awareness Growing with Indonesia's Adiwiyata Program at a Kotabaru School."

government, and the community, in the planning, implementation, and evaluation of programmes. The development of a *green school* is therefore essentially a collaborative process that requires synergy among various parties to build a school culture oriented toward environmental sustainability.

In implementation, the *Asset-Based Community Development* (ABCD) approach is a relevant empowerment model because it emphasizes mapping and strengthening the assets and local potential of the school community. Programme success is also influenced by the synergy between internal and external factors. Internally, strong leadership and the commitment of the school community are decisive in maintaining consistent programme implementation. Externally, government policy, cross-sector partnerships, and institutional support strengthen programme sustainability. Meanwhile, obstacles such as limited resources and low awareness among some members of the school community need to be anticipated through strategies that are adaptive and suited to the school's context.

Besides leadership and community collaboration, student empowerment is also an important element in realizing sustainable *green schools*. Deep changes in environmental behaviour can occur only when students are positioned as subjects or *agents of change* rather than merely as objects of programmes. Students' proactive involvement in every stage of activities, from planning to evaluation, can foster a sense of ownership and build ecological awareness from an early age. In this respect, transformational and ecological leadership by the principal plays an important role in building a shared vision, creating a participatory culture, and bridging macro-level policy and concrete practice in the school.

Based on these conclusions, several recommendations can be made to schools: (1) schools can adopt the ABCD approach by actively mapping and using the assets they have, both within the school and in the surrounding community, such as parents' expertise, local wisdom, and partnership opportunities; (2) schools need to form a cross-sector team or driving group, such as a *green school* committee, that involves internal and external stakeholders, including parents, community leaders, and businesses, so that the programme runs collaboratively and sustainably; and (3) schools should strengthen the role of students by providing space for them to design and lead environmental projects (*student-led initiatives*) and by involving them in community service and in decision-making related to the *green school* programme.

The government should provide sustained mentoring through a model of guidance that is oriented not only toward assessment or competition but toward long-term support focused on building the capacity of teachers and school management. The government also needs to develop policies that support participation by formulating regulations or technical guidelines that explicitly encourage and incentivize schools to build strong partnerships with communities, and to provide

forums or platforms for sharing information among Adiwiyata schools so as to enable collective learning, joint capacity building, and networking among schools.

Future researchers could conduct longitudinal studies to examine the impact of various community empowerment models on changes in student behaviour and on programme sustainability after the Adiwiyata award has been obtained. Future research could also use comparative studies to examine differences among schools with different socioeconomic and geographical characteristics (urban and rural, public and private) in order to identify the most adaptive empowerment models. Further research should also explore how cultural values and local wisdom can be integrated as key assets in developing contextual and sustainable *green school* programmes.

BIBLIOGRAPHY

Adistya, A., H. F. Aziz, P. Anggraini, A. N. Faizin, and L. A. Perguna. "Integrasi Program Adiwiyata Pada MAN 1 Malang Ditinjau Dalam Perspektif Teori AGIL Oleh Talcott Parsons." *Journal of Edugeography* 12, no. 2 (2024): 24–33.

Ardianing, Nur Puji, Nurkolis Nurkolis, and Widya Kusumaningsih. "Strategi Kepimpinan Kepala Sekolah Dalam Implementasi Sekolah Adiwiyata Nasional." *Jurnal Manajemen Pendidikan (JMP)* 14, no. 3 (2025): 454–62.

Ayuningtias, N., S. Rahim, and B. Daeng. "Sekolah Hijau Sebagai Wadah Peningkatan Kesadaran Lingkungan (Kampung Prafi Mulya, Kecamatan Prafi, Kabupaten Manokwari)." *Jurnal Pengabdian Masyarakat* 2, no. 1 (2025): 464–72.

Azmi, N. R. L., A. Y. Sobri, and A. Nurabadi. "Kepemimpinan Ekologis Kepala Sekolah Dalam Pembentukan Sekolah Berbudaya Lingkungan." *JAMP: Jurnal Administrasi Dan Manajemen Pendidikan* 1, no. 3 (2018): 327–36.

Cassetti, Viola, María Victoria López-Ruiz, Ana Egea-Ronda, Dory Aviñó Juan Ulpiano, and Carmen Belén Benedé Azagra. "Facilitators and Barriers to Implement Community Engagement Approaches in Health Promotion Projects: A Qualitative Study in 13 Projects in Spain." *Public Health in Practice* 9 (June 2025): 100595.

Creswell, J. W., and J. D. Creswell. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 5th ed. SAGE Publications, 2022.

Crutzen, Paul J. "Geology of Mankind." *Nature* 415, no. 6867 (2002): 23–23.

DLH Kalimantan Selatan. "Laporan Kinerja Dinas Lingkungan Hidup Provinsi Kalimantan Selatan." 2023.

Fawcett, Stephen B., Adrienne Paine-Andrews, Vincent T. Francisco, et al. "Using Empowerment Theory in Collaborative Partnerships for Community Health and Development." *American Journal of Community Psychology* 23, no. 5 (1995): 677–97.

Forrester, Gillian, Judith Kurth, Penny Vincent, and Mike Oliver. "Schools as Community Assets: An Exploration of the Merits of an Asset-Based Community Development (ABCD) Approach." *Educational Review* 72, no. 4 (2020): 443–58.

Goldman, Daphne, Ofira Ayalon, Dorit Baum, and Bell Weiss. "Influence of 'Green School Certification' on Students' Environmental Literacy and Adoption of Sustainable Practice by Schools." *Journal of Cleaner Production* 183 (May 2018): 1300–1313.

Herliana, P., A. Suriansyah, and Aslamiah. "Green Leadership and Environmental Awareness Growing with Indonesia's Adiwiyata Program at a Kotabaru School." *Educational Research* 35, no. 3 (2025): 987–1009.

Herliana, Puspa, Dewi Aryani, Hendry Hermawan, Aslamiah Aslamiah, and Celia Cinantya. "Organizational Culture Transformation Through the Leadership of the Principal at Sdn Sungai Taib in the Adiwiyata Program." *Eduvest - Journal of Universal Studies* 5, no. 9 (2025): 10576–89.

Hopkins, J. "Using Asset-Based Community Development to Increase Student Engagement and Improve Student Experience in Schools." Doctoral dissertation, Virginia Commonwealth University, 2024.

IPCC. "Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change." In *Climate Change 2023: Synthesis Report*, edited by Core Writing Team, H. Lee, and J. Romero. IPCC, n.d. https://www.ipcc.ch/report/ar6/syr/.

Kipchoge, K., and P. Mwangi. "Eco-Schools Kenya: Practising Education for Green Economy and Sustainability." In *Handbook of Education for Sustainable Development*, edited by W. Leal Filho. International Explorations in Outdoor and Environmental Education. Springer International Publishing, 2020. https://link.springer.com/10.1007/978-3-030-46820-0_14.

KLHK. *Laporan Kinerja Kementerian Lingkungan Hidup Dan Kehutanan*. 2022.

Lasno, L., A. Suriansyah, and M. Saleh. "School Principal's Role in the Implementation of School-Based Management for Adiwiyata Program." *European Journal of Education Studies* 0, no. 0 (2019): 1–15.

Malta. "The Concept of Strategy in Community Empowerment: A Literature Review." *Influence: International Journal of Science Review* 5, no. 3 (2023): 24–34.

Nilawati, Murniati, Husaini, and M. Aulia. "Social Leadership and Educational Transformation Enhance Green School Culture, Overcoming Challenges for Teachers and Management." *International Journal of Innovative Research and Scientific Studies* 8, no. 3 (2025): 121–37.

Nooraisya, A. M., F. S. Septiani, M. A. Najmi, et al. *Implementasi Program Sekolah Hijau Sebagai Inovasi Pendidikan Ramah Lingkungan Dalam Membentuk Karakter Siswa Di Sekolah Dasar*. n.d.

Noviani, Noviani, Ahmad Suriansyah, and Sulistiyana Sulistiyana. "Adiwiyata-Based School Environment Management: A Multi-Case Study in Banjarmasin." *Curricula: Journal of Curriculum Development* 4, no. 2 (2025): 1355–68.

Nurdin, M. N. I., E. Munastiwi, and J. Sari. "Problematika Program Adiwiyata Sekolah: Studi Kasus Pada MAN Pangkep Kabupaten Pangkep." *Didaktika: Jurnal Kependidikan* 12, no. 4 (2023). https://jurnaldidaktika.org.

Pigg, Kenneth E. "Three Faces of Empowerment: Expanding the Theory of Empowerment in Community Development." *Journal of the Community Development Society* 33, no. 1 (2002): 107–23.

Purwanto, Setiyo, Islamiah Kamil, Ida Royani Damayanti, Maman Ruhiman, Firdaus Firdaus, and Nur Endah Retno Wuryandari. "Penguatan Integrasi Ekopedagogi Dan Inovasi Lingkungan Menuju Sekolah Adiwiyata Mandiri Di SMKN 16 Jakarta Pusat." *Jompa Abdi: Jurnal Pengabdian Masyarakat* 4, no. 2 (2025): 312–22.

Rappaport, J. "Terms of Empowerment/Exemplars of Prevention: Toward a Theory for Community Psychology." *American Journal of Community Psychology* 15, no. 2 (1987): 121–48.

Rokhmah, N. "Kebijakan Program Adiwiyata Dan Implikasinya Terhadap Budaya Sekolah." *Jurnal Kebijakan Pendidikan* 9, no. 2 (2019): 54–68.

Rong, T., Mei-Po Kwan, Jiannan Cai, Yang Liu, and Dong Liu. "Exploring Community Engagement in Place-Based Approaches." *Health & Place* 82 (September 2023): 103–15.

Snyder, Hannah. "Literature Review as a Research Methodology: An Overview and Guidelines." *Journal of Business Research* 104 (November 2019): 333–39. https://doi.org/10.1016/j.jbusres.2019.07.039.

Thompson, R., and M. Green. "Whole-School Approaches to Sustainability: A Comprehensive Framework." *International Journal of Sustainability in Higher Education* 24, no. 3 (2023): 456–72.

UNESCO. *Green School Quality Standard – Greening Every Learning Environment*. 2024. https://unesdoc.unesco.org/ark:/48223/pf0000390028.

Yuliana, Y., and S. Suryanto. "Pemberdayaan Masyarakat Dalam Pelaksanaan Program Adiwiyata Di Sekolah Dasar." *Jurnal Pendidikan Dan Pembelajaran Untag* 25, no. 1 (2025): 1–10.

Zarin, Puti Astias, Ahmad Shofiyuddin Ichsan, and Rohmat Dwi Yunianta. "Aktualisasi Sistem Green School Dalam Meningkatkan Perilaku Hidup Bersih Dan Sehat Pada Siswa MI Gunungkidul Yogyakarta." *EDUCASIA: Jurnal Pendidikan, Pengajaran, Dan Pembelajaran* 8, no. 2 (2023): 129–46.

Zuhriyah, Aminah, and Dedi Supandi. "Optimalisasi Gaya Kepempinan Kepala Sekolah Untuk Mendukung Terciptanya Green School." *Jurnal Basicedu* 6, no. 3 (2022): 3720–28.