

# Transforming School Environmental Culture through Managerial Leadership of School Principals: A Case Study of SMP Negeri 2 Kajen

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## ABSTRACT

Creating an environmentally conscious school culture is essential to advancing education for sustainable development. This study explores how the managerial leadership of the principal at SMP Negeri 2 Kajen transforms school environmental culture within the framework of Indonesia's Adiwiyata (Green School) Program. A qualitative case study approach was used to examine the principal's leadership across five managerial functions: planning, organizing, implementing, monitoring, and innovating. Data were collected through in-depth interviews, observations, and document analysis involving school leaders, teachers, and the Adiwiyata team. Thematic analysis was applied using the Miles and Huberman model. The principal played a strategic role in embedding environmental values into the school vision, work plans, and daily routines. Participatory planning involved teachers and the Adiwiyata team, while structured coordination ensured clear task distribution. Implementation included daily waste sorting, Clean Friday routines, school greening, and recycling workshops. Monitoring mechanisms used rubrics and evaluation meetings, while innovations such as digital environmental campaigns and tree adoption fostered student engagement. These practices led to improved environmental behaviors, teacher collaboration, and community involvement. The study demonstrates that effective managerial leadership can institutionalize environmental culture by integrating sustainability into school governance. The findings offer a practical model for schools seeking to align educational leadership with ecological responsibility.

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## 1. INTRODUCTION

Education serves not only to strengthen the nation's intellectual capacity but also to cultivate character, values, and positive cultural habits within the school environment. School culture functions as the foundation for shaping behavior, work ethic, and interpersonal interactions among school members, ultimately contributing to a safe and conducive learning atmosphere. A strong and cohesive school culture becomes a driving force for continuous and comprehensive improvement in

the quality of education (Anggraeni and Effane, 2022; Lestari and Murniati, 2021). In contemporary educational paradigms, one form of school culture aligned with character education and sustainability principles is an environmentally conscious culture. This aligns closely with the goals of the Adiwiyata program, a national initiative encouraging schools to become environmentally cultured institutions through policy, participation, and environmentally responsible behavior, as mandated by the Regulation of the Minister of Environment No. 5 of 2013.

Environmental culture in schools is increasingly urgent as global environmental issues demand early awareness and concrete actions within the education sector. According to Rahmawati (2020), environmental education functions to cultivate sustainability values, ecological responsibility, and reflective awareness regarding the consequences of human behavior on the environment. An environmentally conscious culture is formed not only through curricular learning but also through consistent habituation, role modeling, and shared commitment among school members. Thus, the principal's managerial leadership becomes central in framing environmental initiatives as part of school culture rather than isolated activities.

SMP Negeri 2 Kajen, located in Pekalongan Regency, is one of the schools that has successfully achieved the National Adiwiyata School title. This recognition reflects its systematic achievements in fostering an environmentally conscious culture through concrete programs such as waste segregation, school greening, waste bank management, and recycling training. These practices demonstrate the school's commitment to integrating environmental responsibility into daily routines. Importantly, this accomplishment cannot be separated from the principal's managerial leadership, which plays a pivotal role in mobilizing all school components to share a unified environmental vision within the framework of the *Gerakan Peduli dan Berbudaya Lingkungan Hidup di Sekolah* (GPBLHS).

Based on the 2023 Education Report, SMP Negeri 2 Kajen obtained scores of 77.78% in literacy, 62.22% in numeracy, 57.26% in learning quality, and 72.40% in school community participation. These figures highlight both strengths and areas for development, especially in ensuring that environmental culture initiatives are aligned with efforts to enhance learning quality and strengthen school community engagement. Research findings by Gore et al. (2024) and Tasya, Alamsyah, and Pribadi (2025) indicate that the principal's managerial capabilities significantly influence the integration of school culture with academic improvement, highlighting the need for strong planning, team coordination, and innovative governance.

In the context of educational management, the principal assumes a strategic leadership role in directing the institution toward its vision and mission. The managerial responsibilities extend beyond administrative tasks to include strategic planning, policy formulation, resource allocation, human resource management, and organizational development (Lestari, Abdullah, and Murniati, 2020). Hasibuan (2022) further emphasizes that the principal's managerial role encompasses designing need-based school development strategies, managing human resources professionally, and fostering a collaborative work culture. As a change agent, the principal is expected to encourage cultural transformation that promotes ecological awareness alongside character formation among students (Maulana, 2021). This is supported by empirical studies demonstrating that managerial leadership directly affects the effectiveness of school culture and the overall quality of education (Pratiwi, Prihatin, and Raharjo, 2023; Yusuf, Murniati, and Prayito, 2022).

However, while existing literature discusses the general leadership roles of principals in Adiwiyata schools, few studies delve into the concrete managerial strategies principals employ to institutionalize environmental values in everyday school culture. Much of the existing research stops at describing leadership roles conceptually without analyzing how principals operationalize planning, organizing, implementation, supervision, and innovation within the GPBLHS framework. This gap indicates a lack of empirical studies examining how managerial leadership is translated into systematic cultural transformation anchored in environmental sustainability. Therefore, a more detailed exploration is needed to understand how a principal's managerial role truly shapes an environmentally conscious school culture.

To address this gap, this study adopts the managerial model proposed by Wirawan (2019), which encompasses the functions of planning, organizing, implementation, supervision, and innovation development. This model is considered relevant for analyzing environmental culture development, as supported by Hamdani and Mawardaniah (2021), Faliyandra and Rosi (2021), and Lestari and Murniati (2021), who assert that effective principals are those capable of implementing management functions sustainably while encouraging participation from all school stakeholders. Environmental culture itself comprises indicators such as cleanliness, waste and sewage management, greening activities, conservation of natural resources, and active involvement of school members (Rahmawati, 2020; Nurfadilah, 2021; Kusnadi, 2023; Syamsuddin, 2019). These cultural elements can only flourish when supported by visionary, collaborative, and consistent managerial leadership (Lestari, 2020).

Based on the above considerations, the core research question of this study is: "How does the principal of SMP Negeri 2 Kajen employ managerial leadership strategies to institutionalize an environmentally conscious school culture within the GPBLHS/Adiwiyata framework?" This research aims not only to fill the theoretical gap in the study of environmental school culture but also to offer a practical and replicable model for schools seeking to harmonize educational management with ecological responsibility and sustainable cultural development.

## 2. METHODS

This study employed a qualitative approach with a descriptive case study design to provide an in-depth understanding of the principal's managerial role in fostering an environmentally conscious school culture at SMP Negeri 2 Kajen, Pekalongan Regency. The case study design was selected because it enables researchers to examine phenomena naturally and holistically through direct interaction with participants and real-life contexts (Sugiyono, 2019). Qualitative research, grounded in the post-positivist paradigm, positions the researcher as the primary instrument and relies on data collected through observation, interviews, and documentation (Moleong, 2018). This approach is widely recognized as appropriate for exploring human behavior, experiences, and social meaning in educational settings (Lestari, Abdullah, & Murniati, 2020). Descriptive qualitative analysis was chosen specifically to reveal managerial patterns related to planning, organizing, implementing, and supervising the Adiwiyata program (Falah, 2023), a method frequently used in studies on educational leadership (Lestari & Murniati, 2021; Tasya, Alamsyah, & Pribadi, 2025). Although the generalizability of this design is limited, it provides rich contextual insights relevant to similar school environments.

The study took place at SMP Negeri 2 Kajen, a National Adiwiyata School recognized for successfully integrating environmental awareness into its vision and mission (Kusnadi, 2023). Research was conducted from June to September 2025. Participants were selected using purposive sampling based on their direct involvement in planning and implementing the school's environmental programs, aligning with Ahmad's (2013) framework emphasizing the determinant role of principals in educational program success. Teachers were included because they function as implementers of leadership decisions as well as observers of schoolwide policy enactment (Anggraeni & Effane, 2022), whereas members of the Adiwiyata team contributed essential insights into program sustainability and collective school participation (Gore et al., 2024). In total, the study involved one principal, three teachers, and two members of the Adiwiyata team, stated explicitly to ensure methodological transparency and clarity regarding participant composition.

Data collection employed three techniques observation, semi-structured interviews, and documentation with triangulation applied to strengthen data validity (Moleong, 2018). The Observation Guide enabled the researcher to explore the physical environment, behavioral patterns, and ecological practices in the school setting (Jamilah, Hamid, & Burhan, 2023). The Interview Guide was utilized to gather information from the principal, vice principal, teachers, and Adiwiyata team

regarding leadership strategies, participation mechanisms, and managerial practices in the environmental program (Hartiniingsih, 2018). The Documentation Guide facilitated the examination of institutional documents, including the school's vision and mission statements, program reports, Adiwiyata policies, and meeting records (Rusiadi, Baharuddin, & Rusmin, 2022). Primary data were obtained from participants directly involved in implementing the environmental culture, while secondary data came from institutional documents, following the classification framework proposed by Arikunto (2018) and Sugiyono (2019).

Data analysis followed the interactive and iterative model of Miles and Huberman, as outlined in Sugiyono (2019). The analysis process consisted of three stages: data reduction, data display, and conclusion drawing/verification. These stages were conducted continuously throughout the fieldwork to ensure analytical depth, consistency, and accuracy (Wiyono, 2017). In qualitative research, such inductive analysis requires reflective engagement and persistent interpretation to uncover the relationships between managerial leadership practices and the development of an environmental culture (Mulyasa, 2018). Research findings were then organized thematically and narrated according to the guidelines in Sugiyono (2019) and Arikunto (2018), emphasizing coherence, conceptual clarity, and systematic structure.

Ethical considerations were upheld throughout the research process. Informed consent was obtained from all participants, and confidentiality was ensured through anonymization and secure data management. Additionally, the researcher practiced reflexivity by continuously reflecting on their positionality as a researcher with a background in educational management. This reflexive process included acknowledging how personal assumptions, prior experiences, and interactions with participants might influence data interpretation. Reflexive notes were recorded regularly to minimize bias and maintain the integrity of participants' perspectives as the primary source of meaning in the analysis. These ethical and reflexive practices align with international standards for qualitative educational research.

### 3. FINDINGS AND DISCUSSION

SMP Negeri 2 Kajen is one of the public junior high schools in Kajen Subdistrict, Pekalongan Regency, that has been awarded the title of National Adiwiyata School. The school demonstrates a strong commitment to environmental preservation and the cultivation of environmental awareness among students. Field observations indicate that the school environment is clean, orderly, and green. Ornamental plants and trees decorate various corners of the school, complemented by facilities such as a greenhouse, a biopore area, and a student-managed waste bank supervised by teachers. Each classroom is equipped with separate waste bins (organic, inorganic, and hazardous), and motivational slogans such as *"Green School, Environmentally Conscious Generation"* are prominently displayed. Document analysis strengthens these findings. According to the 2025–2026 School Work Plan (RKS), the school's vision states: *"To realize students who are of good character, high achievement, and environmentally aware."* Environmental concern is emphasized as a core value integrated into comprehensive school programming.

#### 3.1 Planning: Designing an Environmentally Conscious School Culture

Interviews with the principal and teachers indicate that environmental program planning is conducted participatively during annual work meetings. The principal explained:

*"Kami selalu memastikan setiap kegiatan yang dirancang memuat nilai keberlanjutan. Guru dan tim Adiwiyata wajib menyampaikan usulan yang realistis dan berdampak (We always ensure that every planned activity incorporates sustainability values.)"* (Interview, Principal, 2025). He further emphasized that teachers and the Adiwiyata team must propose realistic and impactful programs.

Teachers confirmed their involvement. One teacher stated: *"Setiap tahun kami ikut menyusun prioritas kegiatan, terutama program kebersihan dan daur ulang."* (Each year, we participate in formulating

activity priorities, particularly those related to cleanliness and recycling programs) (Interview, Teacher A, 2025). He further emphasized that teachers and the Adiwiyata team must propose realistic and impactful programs.

The planning process includes integrating Adiwiyata values into the school's vision, mission, and School Activity and Budget Plan (RKAS). Table 1 presents the structured interview guide used in this phase.

**Table 1.** Sample Interview Questions in the Planning Phase

No	Interview Focus	Sample Questions	Informants
1	School Vision and Mission	How do you ensure that the school's vision and mission reflect environmental awareness values?	Principal
2	Program Planning	What activities are planned annually to support an environmentally conscious culture?	Principal, Adiwiyata Team
3	Teacher Involvement	To what extent are teachers involved in designing environmental programs?	Teachers
4	Evaluation Plan	How is the Adiwiyata program evaluation mechanism designed during the planning stage?	Principal

Planning outcomes are also recorded in the 2025 RKAS, which allocates IDR 8,500,000 to greening, biopore creation, recycling training, and classroom cleanliness competitions. Table 2 summarizes the school's environmental activity plan.

**Table 2.** School Environmental Activity Plan for 2025

No	Activity	Objective	Success Indicators
1	School Greening	To increase green space within the school	Gardens and potted plants available in each class
2	Recycling Training	To improve students' skills in utilizing waste materials	Students produce crafts from recycled materials
3	School Waste Bank	To reduce inorganic waste	Waste is sorted and proceeds are reused
4	Clean Friday	To foster a habit of maintaining cleanliness	Clean and well-maintained school environment weekly

Observational data confirm that all planned activities have measurable indicators. Each classroom already contains potted plants from the greening program, and students regularly participate in *Clean Friday* under the supervision of teachers on duty.

### 3.2 Organizing: Structuring Responsibilities and Roles

The principal organizes the program by establishing the School Adiwiyata Team. Participants reported that assignments are based on competence, interests, and prior experience. A member of the Adiwiyata team noted: "*Pak Kepala Sekolah selalu menempatkan guru sesuai keahlian.*" (The principal always assigns teachers according to their expertise) (Interview, Adiwiyata Team Member, 2025).

Coordination meetings ensure clarity of roles, and observations confirm active cross-department collaboration. Documentation in the 2025 Adiwiyata Team Agenda Book lists monthly meetings, evaluations, and follow-up activities. The organizational structure appears in Table 3.

**Table 3.** Organizational Structure of SMP Negeri 2 Kajen Adiwiyata Team

No	Position	Name	Main Duties
1	Chairperson	Agus Pambudi, S.Pd. (Vice Principal)	Coordinate Adiwiyata program implementation
2	Secretary	Habiburrahman, S.Pd.	Document environmental activities
3	Treasurer	Nur Khasanah, S.Pd.	Manage Adiwiyata program funds
4	Greening Division	Nur Cahyaningsih, S.Pd. & student representatives (Grades 8–9)	Maintain gardens and green areas
5	Recycling Division	Rohman, S.Pd. & student representatives (Grades 8–9)	Manage and utilize plastic waste
6	Publication Division	Firman Alamsyah	Publicize activities via school media

### 3.3 Implementing: Executing Environmental Programs

Environmental programs are implemented through daily, weekly, and semester-based activities. The principal demonstrates exemplary leadership, as noted in the interview: *“Saya harus turun langsung supaya anak-anak melihat bahwa menjaga lingkungan itu bukan sekadar teori.”* (I must go directly to the field so students see that environmental care is more than theory) (Interview, Principal, 2025).

Observations confirm that the principal participates in Clean Friday, greening activities, and waste bank operations. The 2024/2025 GPBLHS report records a 92% student participation rate in these routine programs. Implementation outcomes are summarized in Table 4.

**Table 4.** Implementation of GPBLHS Programs at SMP Negeri 2 Kajen

No	Activity	Frequency	Participants	Measurable Impact
1	Waste sorting	Daily	Students and teachers	Mixed waste volume reduced by 40%
2	Clean Friday	Weekly	All school members	Cleaner and more organized environment
3	School greening	Every semester	Teachers and students	Approx. 150 new plants added
4	Composting	Monthly	Adiwiyata Team	Compost used for school gardens
5	Recycling workshop	Twice a year	Art teachers and students	Students produce eco-friendly crafts

### 3.4 Monitoring: Ensuring Program Continuity

Monitoring is carried out through daily supervision and scheduled evaluations. The principal noted: *“Setiap hari kami pantau, dan setiap bulan kami evaluasi bersama.”* (We monitor daily and conduct joint evaluations every month) (Interview, Principal, 2025).

Observation data confirm routine inspections in various school areas. Monitoring rubrics in the Adiwiyata Evaluation Book assess cleanliness, participation, and sustainability. Indicators appear in Table 5.

**Table 5.** Adiwiyata Program Monitoring Indicators

No	Aspect Monitored	Evaluation Indicator	Evaluation Method
1	Environmental cleanliness	Waste-free school areas	Direct observation
2	Student discipline	Students consistently dispose of waste properly	Daily duty reports
3	Program sustainability	Activities implemented on schedule	Monthly evaluation meetings
4	School participation	All school members involved	Attendance lists and photo documentation

### 3.5 Innovating: Creating Sustainability-Oriented Initiatives

The principal fosters innovation to keep environmental programs engaging and relevant. A teacher reported: “*Anak-anak lebih semangat ketika program menggunakan teknologi.*” (Students are more enthusiastic when the program uses technology) (Interview, Teacher B, 2025).

Field observations identify creative programs such as environmental vlogs, outdoor learning in the Ecology Corner, and a Tree Adoption initiative. These innovations are documented in Table 6.

**Table 6.** Environmental Program Innovations at SMP Negeri 2 Kajen

No	Innovation	Description	Objective
1	Digital Green School	Student-produced educational videos	Technology-based environmental education
2	Ecology Corner	Outdoor area for science learning	Contextual nature-based learning
3	Tree Adoption	Each student is responsible for one plant	Fostering ecological responsibility
4	Community Collaboration	Joint greening activities with local residents	Strengthening school–community synergy

### 3.6 Cultural Impact: Changes Resulting from managerial Leadership

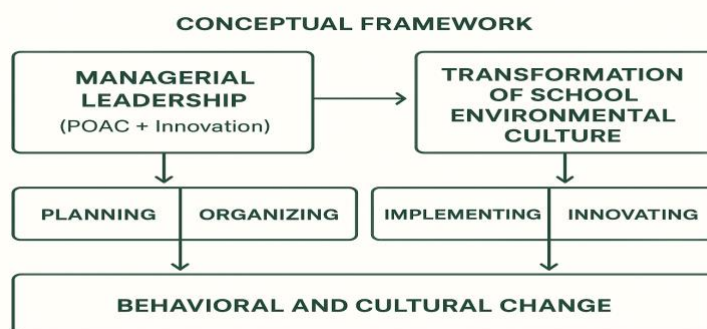
The combined influence of planning, organizing, implementing, monitoring, and innovating has transformed the school culture. Students now demonstrate environmentally responsible behaviors, and teachers collaborate across subjects to guide Adiwiyata activities. A comparison of conditions before and after the program appears in Table 7.

**Table 7.** Changes in School Culture Before and After the Adiwiyata Program

No	Aspect	Before	After	Impact
1	Environmental cleanliness	Many dirty areas, mixed waste	Clean school, functioning waste segregation	Established cleanliness culture
2	Student participation	Passive, waiting for teacher instructions	Students actively lead environmental activities	Increased student responsibility
3	Teacher involvement	Uncoordinated	Teachers serve as Adiwiyata mentors	Cross-subject collaboration established
4	Community relations	Limited cooperation	Joint greening and composting training held	Strengthened school–community synergy

The 2023 Education Report shows measurable improvements in environmental indicators and Pancasila Student Profile achievements. School–community collaboration has also strengthened through joint greening and composting initiatives.

To clarify the relationships among the findings, Diagram 1 presents the conceptual framework linking managerial leadership and the development of environmental culture at SMP Negeri 2 Kajen.



**Figure 1.** Conceptual Framework linking Managerial Leadership

## Discussion

### The Principal as a Strategic Planner in Building an Environmental Culture

The findings of this study indicate that the principal of SMP Negeri 2 Kajen plays an active role in formulating the school's vision, mission, and programs that internalize environmental values into the RKAS. This aligns with transformational leadership principles emphasizing shared vision and collective motivation (Herliana & Suriansyah, 2025; Noviyanti, 2023). In contrast to prior studies that primarily emphasized teacher contributions to Adiwiyata planning, this research highlights the more central, directive role of the principal, strengthening the view that leadership becomes the catalyst for cultural shifts (Jerab & Mabrouk, 2025; Duong et al., 2020).

The principal's decision to allocate specific funds for greening and recycling training further confirms strategic leadership functions, consistent with studies on green leadership emphasizing budgeting and long-term commitment (Sari et al., 2025; Darmawan et al., 2025). This finding expands earlier research by demonstrating not only planning involvement but also financial governance that ensures program continuity. Participatory planning involving teachers, the Adiwiyata team, and the school committee through annual meetings further demonstrates a collaborative approach consistent with prior findings (Herliana & Suriansyah, 2025; Duong et al., 2024). Thus, the principal effectively places environmental awareness as a school-wide strategic agenda.

### Effective Organizing: Structure and Coordination of the Environmental Team

This study found that the principal developed a clear organizational structure for the Adiwiyata Team, enhancing program execution. This is in accordance with organizational culture theory stating that structure and norms facilitate shared values (Abdullah & Siam, 2014; Zhao et al., 2023). Unlike previous studies that focused solely on team task division, the present study reveals how the principal institutionalizes coordination mechanisms through agenda books and scheduled monitoring, reinforcing a climate conducive to cultural strengthening (Uhl & Pérez-Sellés, 2025).

Monthly meetings and written follow-ups demonstrate accountability and continuity, in line with the principles of participatory management (Gagakuma, 2025; Lostarnau et al., 2024). These findings show that the principal not only organizes structures but sustains collaborative practices essential for maintaining environmental culture.

### Program Implementation: Exemplary Leadership and Curricular Integration

Field observations confirm that the principal demonstrates exemplary leadership by directly participating in activities such as Jumat Bersih, tree planting, and waste management. This supports literature identifying role modeling as a core element of environmental leadership (Ansori, 2024; Darmawan et al., 2025). In contrast to prior studies that highlighted teacher-led initiatives, this

research underscores the principal's direct involvement, making the leadership approach more holistic.

Environmental values integrated into learning activities align with studies emphasizing that cultural values must permeate all school operations to take root (Boeve-dePauw & Petegem, 2023; Lithanta et al., 2024). With 92% student participation (GPBLHS Report 2024/2025), these findings confirm that active engagement indicates successful internalization of environmental culture (Rijal et al., 2024; Ansori et al., 2025).

### **Supervision and Evaluation: A Disciplined Monitoring Mechanism**

The principal applies structured supervision through daily monitoring, teacher involvement, and formal evaluations, consistent with leadership accountability models (Acton, 2025; Ongukah & Otaru, 2025). Whereas previous studies mostly discussed evaluation as administrative documentation, this study shows how real-time inspections and rubric-based reviews accelerate continuous improvement (Syah et al., 2024; Mentese-gullari, 2023).

Semester evaluation documents showing consistently high scores ( $\geq 85$ ) substantiate that monitoring mechanisms effectively sustain environmental programs, supporting literature that emphasizes the need for control systems in cultural maintenance (Acton, 2025; Aderet-German, 2025).

### **Innovation and Program Sustainability**

The principal develops innovative programs such as Digital Green School, Ecology Corner, and Tree Adoption. Field findings (96% plant survival; 15 educational videos) illustrate dynamism consistent with environmental leadership literature (Santosa, 2024; Kariuki, 2025). Compared to earlier studies that described innovation as peripheral activities, this research demonstrates that innovation is integrated into the school's strategic culture-building process.

Collaboration with the surrounding community reinforces socio-ecological sustainability (Utaya & Bachri, 2025; Ismail et al., 2025). Effective green school leadership requires external networking (Kariuki, 2025; Utaya & Bachri, 2024). These results confirm that environmental culture must evolve continuously (Sabherwal et al., 2025; Santosa, 2024).

### **Impact on School Culture: Environmental Transformation and Institutional Identity**

Visible improvements in cleanliness, student involvement, and school-community collaboration demonstrate that environmental responsibility has become part of the school's identity. This supports the idea that school culture emerges from shared values, systematic practices, and leadership consistency (Rahayu et al., 2024; Miao & Nduneseokwu, 2025). Unlike previous studies that viewed environmental culture as activity-based, this study shows how it becomes an institutional identity. Awards and recognition also validate the school's transformation. Effective principals maintain cultural continuity beyond temporary initiatives (Notrilauvia et al., 2025; Boeske, 2025).

### **Study Limitations**

Despite providing rich insights into the role of managerial leadership in shaping environmental school culture, this study has several limitations. First, the research was conducted in a single school SMP Negeri 2 Kajen so the findings may not fully represent broader variations in environmental leadership practices across different institutional contexts. Second, the qualitative descriptive approach relies heavily on subjective interpretations derived from interviews, observations, and documentation, which may introduce researcher bias despite careful triangulation. Third, although the study includes the perspectives of teachers, school leaders, and the Adiwiyata team, the perspectives of broader external stakeholders such as community groups and local government

environmental agencies were not examined in depth, limiting a more holistic understanding of external influences on school ecological culture. This gap suggests the need for further examination of multi-level governance and community-school partnerships to understand their long-term role in environmental culture development.

### Community and Local Government Role

The sustainability of the school's environmental culture is significantly reinforced by the role of community organizations and local government agencies. The district environmental office regularly provides technical assistance in waste management and biodiversity preservation, while community groups participate in joint greening, composting workshops, and environmental campaigns. These external collaborations mirror findings in socio-ecological leadership studies emphasizing that sustainable school culture requires multi-stakeholder engagement beyond internal school structures (Suriyankietkaew, Krittayarangroj & Iamsawan, 2022; Baranova, 2022). The active involvement of external actors not only strengthens program continuity but also expands the school's ecological influence within the wider community.

## 4. CONCLUSION

This study concludes that effective managerial leadership plays a decisive role in institutionalizing environmental culture in schools, with the main finding demonstrating that the systematic application of the POAC framework—planning, organizing, actuating, and controlling—enables school principals to embed sustainability values into daily practices, organizational structures, and long-term development strategies. By examining the case of SMP Negeri 2 Kajen, the research confirms that sustainable environmental culture is not achieved through symbolic activities alone but through structured, participatory, and continuous managerial processes supported by stakeholder collaboration and contextual innovation. However, this study is limited by its single-case design, which restricts the generalizability of findings across diverse educational contexts and does not fully capture the long-term sustainability of environmental culture transformation. Therefore, future research should adopt comparative and longitudinal approaches to assess environmental culture development across multiple schools and over extended periods, while also exploring the relationship between environmental culture, instructional quality, and student learning outcomes to deepen understanding of the broader educational impact of sustainability-oriented leadership.

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