

The Dynamics of Community Mobilization and Participation in Strengthening Ecological Awareness

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ABSTRACT

Environmental issues in Cihampelas Village, West Bandung Regency, are related to the accumulation of household waste, the growth of water hyacinth, sedimentation, and the lack of optimal community involvement in preserving the ecosystems of the Citarum River and Saguling Reservoir. These conditions indicate that ecological problems are not merely technical in nature, but are related to public awareness, collective capacity, and community participation. This study is grounded in the perspectives of social mobilization and participatory learning, which position communities as agents of change. The study employs a qualitative approach using the Participatory Action Research (PAR) method through cycles of reflection, planning, action, and evaluation. Data were collected through participatory observation, interviews, focus group discussions, and documentation. The research findings indicate that the PAR process fosters increased ecological awareness, community engagement, the strengthening of social networks, and the emergence of collective action in environmental management. The study concludes that participation-based social mobilization can transform environmental awareness into more sustainable collective practices.

ABSTRAK

Permasalahan lingkungan di Desa Cihampelas, Kabupaten Bandung Barat, berkaitan dengan akumulasi sampah domestik, pertumbuhan eceng gondok, sedimentasi, serta belum optimalnya keterlibatan masyarakat dalam menjaga ekosistem Sungai Citarum dan Waduk Saguling. Kondisi tersebut menunjukkan bahwa persoalan ekologis tidak semata-mata bersifat teknis, tetapi berkaitan dengan kesadaran, kapasitas kolektif, dan partisipasi masyarakat. Penelitian ini berlandaskan perspektif mobilisasi sosial dan pembelajaran partisipatif yang menempatkan masyarakat sebagai subjek perubahan. Penelitian menggunakan pendekatan kualitatif dengan metode Participatory Action Research (PAR) melalui siklus refleksi, perencanaan, tindakan, dan evaluasi. Data diperoleh melalui observasi partisipatif, wawancara, diskusi kelompok, dan dokumentasi. Hasil penelitian menunjukkan bahwa proses PAR mendorong peningkatan kesadaran ekologis, keterlibatan warga, penguatan jejaring sosial, serta munculnya tindakan kolektif dalam pengelolaan lingkungan. Penelitian menyimpulkan bahwa mobilisasi sosial berbasis partisipasi mampu mentransformasikan kesadaran lingkungan menjadi praktik kolektif yang lebih berkelanjutan.

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1. Introduction

Environmental issues in rural areas are multidimensional problems that relate not only to the quality of ecosystems but also to the community's capacity to understand, respond to, and collectively manage environmental issues [1]. From the perspective of Community Education, it is important to frame this issue as a space for social learning, because changes in ecological behavior cannot be achieved solely through the transmission of knowledge; they require experience, dialogue, reflection, participation, and collective action [2]. This perspective is particularly relevant to communities located near watersheds, including Cihampelas Village in West Bandung Regency, which is geographically situated within the ecological zone of the Citarum River and Saguling Reservoir.

From an administrative and demographic perspective, Cihampelas Subdistrict is one of the areas in West Bandung Regency where the social characteristics of the population are constantly evolving. The West Bandung Regency Central Statistics Agency consistently publishes sectoral data on the population, social and economic conditions, and the state of the Cihampelas area as part of the dynamics of regional development (West Bandung Regency Central Statistics Agency, 2024, 2025). The growth of residential and economic activities in communities within areas associated with these water bodies has made environmental issues a challenge that requires sustained community involvement. In the context of the Citarum River, the issues of pollution and waste management cannot be separated from the low level of involvement by some members of the community in environmental management. Kristanto et al. (2021) indicates that communities living near the Citarum River may become more engaged when directly involved in riverbank management, although sustaining their participation remains a challenge [3].

This issue demonstrates that environmental interventions require an approach that positions communities as agents of change [4]. Listya & Ummah (2025) emphasized that community participation is a key component in the implementation of the Citarum Harum Program because the success of efforts to control pollution and damage in the watershed cannot be fully supported by government institutions alone [5]. Other findings even show that the level of community participation in the Citarum Harum program is not always high. Diana dan Kartasasmita (2019), For example, finding that community participation falls into the low category, while social capital falls into the moderate category [6]. These findings indicate a gap between ecological needs and the community's capacity for participation, which requires a more in-depth explanation.

Within the framework of Community Education, this gap can be understood through the concepts of transformative learning and social learning [7]. Diduck, et.al. (2011) explains that public involvement in natural resource management can be a learning process that leads to changes in mindset, reflective abilities, and social action [8]. Thus, environmental awareness should not be understood as an accumulation of knowledge about ecological damage, but rather as a process of change in the way people understand the relationship between themselves, their communities, and the environment [9]. That perspective is reinforced by Westoby dan Lyons (2017), which shows that social networking, community organizing, and educational approaches can shape social and transformative learning processes that in turn drive collective action [10].

The Participatory Action Research (PAR) approach is highly relevant to this framework because it integrates research,

learning, reflection, and action into the process of social change [11]. The community is not treated as an object that merely provides information, but rather as an active participant in identifying issues, formulating alternative courses of action, implementing change, and reflecting on the results. This approach enables local knowledge and community experience to serve as vital sources for building both ecological awareness and collective capacity [12]. In the context of the Citarum River, the study by Kristanto et al. (2021) indicates that direct community involvement in riverbank management can increase awareness of environmental cleanliness, but changes in institutional aspects—such as the establishment of waste banks—have not yet developed optimally [3]. The findings show that a shift in awareness does not automatically lead to sustained collective action.

A recent study on community participation in the development of environmentally sustainable villages in the Cirasea sub-watershed also shows that the level of community participation varies depending on the stage of the activity [13]. Participation was relatively strong in decision-making, implementation, and evaluation, but lower in terms of benefit receipt. These findings indicate that participation is a multidimensional process influenced by socioeconomic conditions, program characteristics, environmental issues, and institutional support (Syamsiyah et al., 2025) [13]. Nevertheless, the study primarily measures the levels and determinants of participation; thus, it does not specifically explain the educational processes that enable ecological awareness to develop into social mobilization and collective action.

Berdasarkan telaah tersebut, terdapat *research gap* pada belum kuatnya integrasi antara mobilisasi sosial, pembelajaran transformatif, dan PAR dalam menjelaskan perubahan kesadaran ekologis masyarakat pada konteks lokal Cihampelas. Penelitian mengenai Citarum sebelumnya lebih banyak membahas partisipasi masyarakat, aspek kebijakan, keterlibatan komunitas, atau pengelolaan lingkungan. While this study is important, it does not fully explain how the processes of interaction, reflection, negotiation of knowledge, and community organization shape social mobilization as a mechanism of community education. Thus, the question that needs to be answered is not merely whether the community participates, but how that participation develops into collective awareness and ecological action.

This study offers a novel approach by analyzing the dynamics of community mobilization and participation in strengthening ecological awareness through PAR. This novelty lies in the framing of social mobilization as a pedagogical process that links communities' ecological experiences with social learning, critical reflection, organizing, and collective action. This focus broadens the scope of community education research from an orientation toward individual capacity building to the development of collective capacity in addressing ecological issues. In practical terms, this research is expected to provide a foundation for the development of an environmentally-based community education model that is participatory, contextual, and sustainable. Academically, this study enriches the field of Community Education by demonstrating that PAR can function not only as a research method but also as a transformative learning mechanism that enables communities to build knowledge, awareness, networks, and collective action in environmental management.

2. Method

This study employs a qualitative approach using the Participatory Action Research (PAR) method. The qualitative approach was chosen because the study aims to understand the experiences, interpretations, interactions, and social changes that occur naturally within the community. Creswell dan Poht (2018) positions qualitative research as an approach that enables researchers to understand the meanings participants construct regarding social issues through data collection in naturalistic contexts [11]. Meanwhile, PAR is used because the research does not stop at understanding environmental issues, but integrates the processes of problem identification, reflection, action planning, implementation, observation, and further reflection in a participatory manner. Kemmis et al. (2014) emphasizes that participatory action research links research, participation, and changes in practice through the active involvement of stakeholders [14].

The study was conducted at the Bening Saguling Foundation in Cihampelas Village, West Bandung Regency, with 30 community members involved in community and environmental activities serving as the primary participants. Supporting informants included three managers from the Bening Saguling Foundation and two community leaders. Participants were selected through purposive sampling, taking into account their direct experience in community activities, their involvement in environmental activities, and their ability to provide information on the processes of mobilization and changes in community participation. This composition allows the study to gain perspectives from residents as participants in the action, administrators as institutional drivers, and community leaders as social actors with knowledge of community dynamics.

Data collection was conducted through participatory observation, in-depth interviews, focus group discussions, and documentation. Observation was used to identify patterns of community engagement, forms of social interaction, the division of roles, and environmental practices that emerged during the PAR process. Semi-structured interviews were conducted with participants, managers, and community leaders to explore their

3. Results

The research findings were obtained through participatory observation, semi-structured interviews, reflective discussions, and documentation involving 30 community members in the Bening Saguling Foundation (BSF) area, Cihampelas Village, West Bandung Regency, as well as 3 BSF administrators and 2 community leaders. The data were analyzed using reflexive thematic analysis, focusing on four key areas: ecological awareness, community participation, social mobilization, and collective action. The field context indicates that BSF does indeed view the community as a vital component in the conservation of the Citarum River and the empowerment of riverside communities. The programs that have been developed include waste management, waste banks, TPS3R, environmental education, and river conservation activities.

Public environmental awareness

The results of the observations indicate a shift in how participants view environmental issues. At the beginning of their involvement, some participants tended to view trash, water hyacinth, and the condition of the river as environmental issues that fell outside their personal responsibility. River environments

experiences, perceptions, shifts in ecological awareness, and the factors that encourage or hinder participation. Focus groups were used as a space for collective reflection to identify issues, articulate needs, evaluate actions, and build community consensus. Documentation in the form of activity logs, photos, community archives, and program documents is used to supplement and verify field data.

The research instruments consisted of observation guidelines, semi-structured interview guidelines, reflective discussion guides, and documentation sheets. The instruments were developed based on four areas of analysis: (1) ecological awareness, (2) community participation, (3) social mobilization, and (4) collective action. The instruments are not intended to be rigid tools but were developed adaptively to follow the dynamics in the field, in keeping with the nature of qualitative research.

Data analysis was conducted using reflexive thematic analysis, which was developed Braun dan Clarke (2006) [15]. The analysis was conducted in six stages: data familiarization, initial coding, development of potential themes, theme review, theme definition and naming, and the formulation of an analytical narrative. This approach is relevant because it allows researchers to identify patterns of meaning in participants' experiences while maintaining the interpretive nature of qualitative research. Braun dan Clarke (2022) emphasizes that reflexive thematic analysis is a flexible approach for identifying and interpreting patterns or themes in qualitative data [16].

The validity of the data was strengthened through source triangulation, methodological triangulation, participatory reflection, and participant reflection. Findings from the community were compared with information provided by community leaders and local officials and confirmed through observations and documentation. A process of shared reflection was also used to ensure that the researcher's interpretations remained connected to the participants' experiences and interpretations. With this strategy, the analysis not only provides a description of changes in environmental behavior but also explains how processes of social mobilization and participatory learning shape the transformation of ecological awareness into collective action

are generally perceived as public spaces whose management is the responsibility of the government or specific agencies. After participating in a series of activities with BSF, participants began to connect environmental conditions with their daily habits, particularly their patterns of disposing of, sorting, and managing household waste.

These changes were evident during the observation of the activities. Participants began to pay attention to sorting waste before handing it over to the waste management team, discussing the impact of waste on rivers, and reminding family members and other residents about waste management. Environmental awareness has also begun to evolve from an understanding of environmental cleanliness to an understanding of the relationship between human activities and the sustainability of river ecosystems.

The interview results revealed a similar pattern. Participants noted that the experience of being directly involved in environmental activities brought the issue of the river closer to their daily lives. They no longer viewed trash as something that was simply disposed of, but as material that must be sorted and managed—and that has consequences for the environment. Reflective discussion notes show that direct experience serves as a catalyst for new awareness. The discussion process also reveals a shift in the conversation from “cleaning up the river” to “preventing trash from entering the river”.

Community participation

Observations show that participation takes several forms. Some participants are involved in waste sorting and management activities, some take part in educational and environmental activities, while others play a role in cleanup efforts and community activities. The level of participation is not entirely uniform. Some residents participate regularly, while others are more active when specific events take place.

Interviews with 30 participants revealed that their involvement was influenced by how closely the activities aligned with their daily needs. Activities directly related to their living environment were more likely to elicit a response than those perceived as institutional programs. Participants also tended to be more active when given the opportunity to express their opinions and determine the nature of the activities.

Statements from three program managers indicate that community involvement is fostered through a gradual approach. The managers do not merely give instructions; rather, they encourage community members to participate in activities and provide opportunities for them to get involved according to their individual abilities. This approach is evident in various BSF activities, which indeed combine environmental conservation with community empowerment.

Social mobilization

The findings of the observation indicate that social mobilization develops through relationships between administrators, the community, and local leaders. Administrators serve as liaisons who organize activities, provide spaces for interaction, and connect residents with various community activities. Community leaders play a role in fostering social acceptance and encouraging other residents to get involved.

Notes from the reflective discussions indicate a shift from individual involvement to group involvement. Participants began informing one another about activities, inviting family members or other residents, and discussing environmental issues outside the activity forum. Thus, mobilization did not occur only when activities were organized by BSF, but began to develop through social relationships among residents.

Data from interviews with program managers also show that mobilization takes place through a variety of educational and practical activities. The Citarum Harum Literacy Festival, for example, was developed as an interactive educational event involving various segments of the community and stakeholders. This demonstrates that environmental activities serve as a meeting space that expands the community's social networks.

Collective action

Collective action is evident through community involvement in waste management, environmental cleanup, the reuse of local materials, and educational activities. Observations show that collective action is more robust when the goals of the activities are shared and there is a clear division of roles.

Some participants began to take on roles beyond their initial involvement. Residents who had previously only participated in the activities began to help recruit other residents, spread the word about the activities, or assist with waste management. At the community level, collective action is also evident in the connection between environmental activities and economic empowerment. BSF itself has developed various programs that link waste management, river conservation, environmental education, and community empowerment.

Results of the Reflective Thematic Analysis

The analysis yielded four interrelated main themes. *The first theme*, is 'experience-based ecological awareness', which suggests that an understanding of the environment develops through direct engagement. *The second theme*, is 'participation as a gradual process', which suggests that citizens' engagement evolves from taking part in activities towards more active contributions. *The third theme* is 'mobilisation through social media', which highlights the role of community leaders and figures in connecting individuals with community action. *The fourth theme*, is 'collective action as a form of the realisation of awareness', which shows that ecological awareness is beginning to be translated into collective practice.

These four themes form a dynamic process: environmental experience, reflection, increased awareness, engagement, social mobilisation, and finally collective action. The analysis also shows that transformation does not occur in a linear or uniform manner across all participants. Some residents move more quickly from awareness to action, whilst others require repeated engagement and social support.

Overall, the findings suggest that the PAR process within the BSF context not only fosters community involvement in environmental activities, but also brings about a shift in the way the community understands its role and responsibilities towards the environment. This change is evident in the evolution from individual ecological awareness towards social engagement and collective action. These findings also demonstrate that social mobilisation, in the context of this research, develops through processes of learning, interaction, reflection and shared experiences that take place within community life.

4. Discussion

Research findings show that the process of social mobilization within the Bening Saguling Foundation (BSF) did not occur instantly, but rather developed through a series of experiences, interactions, reflections, and community engagement on environmental issues. The four themes identified through reflexive thematic analysis—experience-based ecological awareness, participation as a gradual process, mobilization through social networks, and collective action as the actualization of awareness—demonstrate a mutually reinforcing relationship between the process of community education and social change. This pattern shows that changes in ecological awareness are not merely the result of knowledge transfer, but are shaped by social experiences that enable citizens to connect environmental issues with their daily lives [17].

The first finding, regarding experience-based ecological awareness, shows that direct participation in environmental activities encourages a shift in how communities perceive ecological issues. At the beginning of their involvement, some participants viewed trash and the condition of the river as external problems that were primarily the responsibility of the government or environmental agencies. After participating in the activity, participants came to understand that household habits and individual behaviors are linked to environmental conditions. This shift reflects the nature of transformative learning—that is, a change in how one views an issue through experience, reflection, and the formation of a new framework of meaning. Diduck et al. (2012) explains that public involvement in environmental management can lead to instrumental, communicative, and even transformative learning when such

experiences are accompanied by reflection and a shift in perspective [8].

In the context of this study, this process is evident in the reflective discussion notes, where the community's conversation shifted from the activity of "cleaning the river" to efforts to "prevent trash from entering the river". This shift in focus is important because it signals a change in orientation—from addressing symptoms to understanding the root causes of the problem. Thus, the ecological consciousness that emerges is not merely an awareness of cleanliness, but begins to encompass a sense of responsibility and reflection on the community's own behavior. These findings reinforce the argument that community-based environmental education can take place through concrete experiences and social reflection, not just through formal learning [18].

The second finding shows that community participation occurs gradually and is not uniform. Some residents participate regularly, while others get involved when specific activities are organized. This pattern indicates that participation should not be understood as a binary condition of "participating" or "not participating," but rather as a process that can evolve from initial involvement toward more active contributions. Within the framework of Participatory Action Research, this condition is important because participation is not merely a data-collection technique, but rather a principle that links knowledge, action, and changes in practice. Kemmis et al. (2014) view participation as an integral part of the critical action research process that enables community actors to engage in both understanding and transforming their social practices [14].

These findings are also consistent with the research by Kristanto et al. (2021) on community engagement in the Citarum region. The study showed that direct community involvement can increase awareness of the river environment and reduce littering along the riverbanks, but not all forms of institutional change occur simultaneously [3]. Findings from the BSF indicate a similar trend: shifts in awareness and engagement can develop more quickly than the establishment of fully stable collective action. This means that the success of environmental education should be viewed as an ongoing process, rather than as the result of a one-time intervention.

The third theme, about mobilization through social networks, shows that individual change gains strength when connected to social relationships. BSF administrators serve as activity organizers, while community leaders help build social legitimacy and expand citizen engagement. At the same time, community members themselves began to serve as liaisons by engaging other residents, sharing information, and discussing environmental issues outside of formal activities. These findings indicate that social mobilization does not stem solely from institutional structures but also grows through horizontal relationships among community members.

These findings are consistent with Westoby and Lyons (2017), who show that social networks and community organizing can create spaces for social learning and transformative learning [10]. They emphasize that transformative learning within a community becomes more meaningful when linked to processes of organizing and social action. Thus, mobilization within the BSF can be understood as a mechanism that connects individual learning with the community's social capacity. The knowledge individuals acquire becomes more powerful when it is shared, discussed, and translated into a shared agenda [19].

The fourth theme shows that collective action is a manifestation of a growing ecological awareness. Citizens'

involvement in waste management, environmental cleanliness, education, and community activities indicates that this awareness is beginning to be put into practice. However, collective action does not arise automatically from increased knowledge. It requires coordination, division of roles, community leadership, and a space for interaction that enables the community to reach consensus. This explains why the BSF is important not only as a program implementer but also as a social space where learning and organizing take place.

When these four themes are integrated, this study yields a conceptual framework as shown in Figure 1 below :

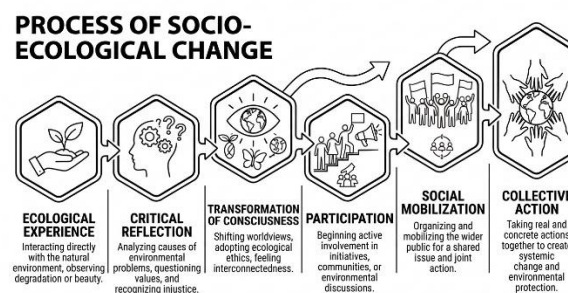


Figure 1. The Process of Socio-Ecological Change

This pattern shows that PAR, in the context of BSF, serves as more than just a research method. The cycle of problem identification, planning, action, observation, and reflection creates a learning space that enables communities to generate knowledge based on their own experiences. This approach aligns with the principles of critical participatory action research, which links research to reflection and changes in social practice.

Thus, the research findings show that a transformation in ecological awareness occurs when environmental knowledge gains a social context through participation and mobilization. Individual awareness becomes more sustainable when it gains the support of social networks and is translated into collective action. For community education, these findings underscore the importance of developing an ecological educational approach that goes beyond simply increasing knowledge to building residents' capacity to learn together, reflect on issues, organize social resources, and act collectively. In the context of Cihampelas, BSF serves as a space for community education that brings together ecological learning processes with community empowerment and organization. Therefore, the main contribution of this research lies in the understanding that social mobilization can serve as a pedagogical mechanism that transforms ecological awareness into a collective capacity for action.

5. Conclusion

This study shows that social mobilization and community participation through Participatory Action Research (PAR) play a role in fostering a transformation in the community's ecological awareness in the Bening Saguling Foundation area, Cihampelas Village, West Bandung Regency. The research findings reveal four interrelated main processes: experience-based ecological awareness, participation as a gradual process, mobilization through social networks, and collective action as the actualization of that awareness. Community involvement in environmental activities not only enhances understanding of

waste management and river sustainability issues but also fosters a shift in perspectives regarding individual and social responsibility in environmental management. This process unfolds through interaction, reflection, dialogue, and shared experiences, so that individual awareness gradually takes on a collective dimension.

From an academic perspective, this study contributes to the development of Community Education by affirming that ecological education can take place through a social learning process grounded in community experiences and actions. PAR serves not only as a research method but also as a pedagogical space that brings together local knowledge, critical reflection, participation, mobilization, and collective action. Moving forward, research in Community Education needs to develop a community-based ecological education model that integrates transformative learning, community organizing, social capital, and environmental sustainability. Strengthening the capacity of facilitators, institutional networks, and participatory evaluation mechanisms is also necessary so that shifts in awareness can evolve into consistent and sustainable collective practices.

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Reference

- [1] Ansori, Dinno Mulyono, and Galih Dani Septiyan Rahayu, "CEC (Center Ecoliteracy Of Cibeber) Pusat Kegiatan Reduce, Reuse, Dan Recycle Dalam Upaya Mewujudkan Kawasan Ciseupan Kelurahan Cibeber Sebagai Kawasan Bestari (Bersih, Sehat, Tertib, Dan Lestari)," *Abdimas Siliwangi*, vol. 2, no. 2, pp. 90–102, 2019.
- [2] Dinno Mulyono, "Menegaskan Karakter Pendidikan Nonformal," *Empowerment*, vol. 1, no. 1, pp. 63–68, 2012, doi: <https://doi.org/10.22460/empowerment.v1i1p%25p.365>.
- [3] G. A. Kristanto, M. A. Pratama, P. A. C. Nandhita, D. Kemala, A. Munif, and D. A. Ahmad, "The Citarum River as our front yard: A case of community engagement in Bintang Alam, Indonesia," *IOP Conf. Ser.: Earth Environ. Sci.*, vol. 716, no. 1, p. 012003, Mar. 2021, doi: 10.1088/1755-1315/716/1/012003.
- [4] D. Mulyono, G. D. S. Rahayu, and A. Ansori, "Revitalisasi Kearifan Lokal Melalui Edukasi Lingkungan Berbasis Masyarakat di Daerah Aliran Sungai (DAS) Citarum," *Jurnal Pengabdian Profesi*, vol. 1, no. 1, pp. 6–10, 2025.
- [5] D. L. Cahya and A. K. Ummah, "Water Resource Management Strategies in the Citarum River Basin," *West Science Nature and Technology*, vol. 3, no. 3, 2025.
- [6] M. Diana and P. S. Kartasmita, "MODAL SOSIAL, PERSEPSI TENTANG KETERLIBATAN MILITER DAN PARTISIPASI MASYARAKAT DALAM PELAKSANAAN PROGRAM CITARUM HARUM," *CRJ*, vol. 5, no. 02, pp. 63–74, Dec. 2019, doi: 10.34147/crj.v5i2.218.
- [7] A. Saepudin and D. Mulyono, "COMMUNITY EDUCATION IN COMMUNITY DEVELOPMENT," *empowerment*, vol. 8, no. 1, p. 65, Feb. 2019, doi: 10.22460/empowerment.v8i1p65-73.1165.
- [8] A. Diduck, A. J. Sinclair, G. Hostetler, and P. Fitzpatrick, "Transformative learning theory, public involvement, and natural resource and environmental management," *Journal of Environmental Planning and Management*, vol. 55, no. 10, pp. 1311–1330, Dec. 2012, doi: 10.1080/09640568.2011.645718.
- [9] Hasliza Tartila Maulida, Erisfa Fathimatuz Zahro, and Hasan Ashari, "Edukasi Komunitas SIBAT Berbasis Memori Kolektif Ekologis dalam Mitigasi Bencana Banjir di Kampung Sewu, Surakarta," *J. Educ. Teach. Learn.*, pp. 1203–1212, Jul. 2026, doi: 10.59211/mjpetl.v4i1.300.
- [10] P. Westoby and K. Lyons, "The Place of Social Learning and Social Movement in Transformative Learning: A Case Study of Sustainability Schools in Uganda," *Journal of Transformative Education*, vol. 15, no. 3, pp. 223–240, Jul. 2017, doi: 10.1177/1541344617696970.
- [11] J. W. Creswell, *Research design: qualitative, quantitative, and mixed methods approaches*, 4. ed. Los Angeles, Calif.: SAGE, 2014.
- [12] L. D. Sihotang, "Policy Analysis and Effectiveness of Deep Learning-Based Project Learning for Green Entrepreneurship," *J. Educ. Teach. Learn.*, pp. 586–594, Jul. 2026, doi: 10.59211/mjpetl.v4i1.234.
- [13] N. Syamsiyah, A. H. Sadeli, Z. Saidah, T. I. Noor, and S. Widiyanesti, "Community Participation in the Development of Sustainable, Environmentally Conscious Villages in the Cirasea Sub-Watershed, Indonesia," *Sustainability*, vol. 17, no. 11, p. 4871, May 2025, doi: 10.3390/su17114871.
- [14] S. Kemmis, Ed., *The action research planner*, 3. ed., Substant. rev., Repr. Victoria: Deakin University, 1992.
- [15] V. Braun and V. Clarke, "Using thematic analysis in psychology," *Qualitative Research in Psychology*, vol. 3, no. 2, pp. 77–101, Jan. 2006, doi: 10.1191/1478088706qp0630a.
- [16] V. Braun and V. Clarke, "Conceptual and design thinking for thematic analysis," *Qualitative Psychology*, vol. 9, no. 1, pp. 3–26, Feb. 2022, doi: 10.1037/qap0000196.
- [17] R. Apriansah, N. M. Firdaus, and D. Mulyono, "Peran Bank Sampah dalam Meningkatkan Pendapatan Masyarakat melalui Pengelolaan Sampah di Desa Rancamulya," *Comm-Edu (Community Education Journal)*, vol. 8, no. 1, 2025.
- [18] D. Mulyono, A. Hufad, and U. Wahyudin, "Literacy Festival Program as a Means of Ecology Education for Society," *j. pendidik. pemberdaya. masy.*, vol. 11, no. 1, pp. 73–84, Mar. 2024, doi: 10.21831/jppm.v11i1.61710.
- [19] N. Nursaidah, T. Rosita, and D. Mulyono, "Development of a community learning activity center (PKBM) based on the potential of local naturals to improve the ability of community green behavior," *Empowerment: Jurnal Ilmiah Program Studi Pendidikan Luar Sekolah*, vol. 9, no. 2, pp. 296–305, 2020.