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REIMAGINING NATURE-BASED EDUCATION: ECO-PEDAGOGY IN PRACTICE AT SANGGAR ANAK ALAM (SALAM) ECO-SCHOOL YOGYAKARTA

Bayu Ananto Wibowo[1], Desca Angelianawati[2*],
Universitas PGRI Yogyakarta[1]
Universitas Musamus Merauke[2]

[*]Corresponding email descaang@unmus.ac.id

Abstract

Ecological consciousness develops through lived experience, not instruction alone. This qualitative case study examines how Sanggar Anak Alam (SALAM) Eco-School in Yogyakarta, Indonesia, enacts eco-pedagogy through nature-based learning, community participation, and local ecological knowledge. Data were collected over three months through interviews with students, parents, and educators, participant observation of daily activities, and analysis of curriculum documents and student projects. Four findings emerged. Students developed ecological sensitivity through direct engagement with gardens, animals, and natural cycles rather than through classroom teaching. The school's emphasis on autonomy allowed children to pursue projects aligned with their interests, fostering creativity and intrinsic motivation. Educators functioned as facilitators who accompanied inquiry rather than authorities who transmitted knowledge. Community members participated actively in learning, and parents reported that children's environmental awareness influenced household practices. SALAM's model suggests that eco-pedagogy requires structural transformation—permeable boundaries between school and environment, between institution and community. For Indonesia and other nations facing ecological challenges, such alternatives to conventional schooling merit serious attention.

Keywords: eco-pedagogy, environmental awareness, local wisdom, nature-based education, sustainable learning

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INTRODUCTION

The twenty-first century has brought environmental crises of unprecedented scale. Climate change, biodiversity collapse, and resource depletion now threaten not only ecosystems but the very foundations of human society. These challenges have prompted educators worldwide to ask a difficult question: is traditional schooling, with its standardized curricula and classroom walls, capable of nurturing the ecological consciousness that future generations will need? For many scholars, the answer is no. Orr, (1944) argues that conventional education has largely failed to connect learners with the natural world, producing graduates who are literate in the abstract but illiterate in the ecological systems that sustain life. Sterling, (2010) echoes this concern, noting that education systems remain stubbornly oriented toward economic productivity rather than environmental stewardship.

Out of this critique has emerged eco-pedagogy, an educational philosophy that seeks to bridge the gap between learning and living ecologically. The roots of eco-pedagogy lie in Paulo Freire's critical pedagogy, which conceived of education as a practice of freedom rather than a mechanism of social reproduction (Freire, 1970). Freire believed that genuine learning occurs through dialogue, reflection, and transformative action. Moacir Gadotti, a Brazilian educator and close collaborator of Freire, extended these ideas toward environmental and planetary consciousness. In his view, eco-pedagogy is not simply environmental education repackaged; it is a fundamental reorientation of educational purpose

toward what he calls "planetary citizenship"—an awareness that human well-being is inseparable from the health of the Earth (Gadotti, 2007). Kahn, (2010) further developed this framework, positioning eco-pedagogy as both an ethical stance and a political project that challenges the consumerist logic underlying much of modern schooling.

Indonesia offers a particularly urgent context for exploring how these ideas might be put into practice. The archipelago is one of the most biodiverse places on Earth, yet it faces severe environmental degradation. Over the past two decades, Indonesia has lost nearly ten million hectares of primary forest to agricultural expansion, illegal logging, and fires (WALHI, 2021). Coastal ecosystems have suffered from pollution and overexploitation, while rapid urbanization continues to strain the relationship between communities and their natural surroundings. For a nation whose cultural identity is deeply intertwined with its landscapes—from the rice terraces of Java to the rainforests of Kalimantan—this degradation carries not only ecological but also social and spiritual costs.

The Indonesian government has recognized the importance of environmental education. Policy documents speak of cultivating ecological awareness and sustainable development values among the young. Yet the reality in most schools falls short of these aspirations. Environmental themes, when they appear at all, tend to be confined to science textbooks or occasional tree-planting ceremonies. Pramesti et al., (2021) observes that environmental education in Indonesia remains largely theoretical, disconnected from the lived experiences of students and communities. There is a gap, in other words, between what policy envisions and what pedagogy delivers. This gap calls for alternative models—educational spaces where ecological values are not taught as content to be memorized but practiced as ways of being in the world.

Sanggar Anak Alam (SALAM) Eco-School in Yogyakarta represents one such space. Founded as a community-based learning environment in Nitiprayan, Bantul, SALAM operates outside the conventions of formal schooling. There are no uniforms, no rigid timetables, no standardized tests. Children learn by doing: planting rice, composting waste, observing insects, and building with recycled materials. The natural environment is not a backdrop to learning but its primary medium. Teachers see themselves as facilitators rather than instructors, accompanying children in exploration rather than directing them toward predetermined answers. Central to SALAM's philosophy is the integration of local ecological knowledge, or local wisdom (*kearifan lokal)*, which grounds education in the wisdom of place and community rather than abstract, universal standards.

Despite growing scholarly interest in eco-pedagogy, few empirical studies have examined how it is actually practiced in Indonesian community-based settings. Much of the existing literature remains conceptual, discussing what eco-pedagogy should be rather than documenting what it looks like when enacted (Rati et al., 2017). This study addresses that gap. It explores how SALAM implements eco-pedagogy as a model of nature-based education, examining three interrelated dimensions: the cultivation of ecological awareness among students, the fostering of creativity and autonomy through nature-based practices, and the role of community engagement in shaping the educational ecosystem. Through qualitative case study methodology, this research contributes to understanding how eco-pedagogy can be localized within Indonesia's sociocultural landscape while offering insights relevant to the broader global discourse on sustainable education.

LITERATURE REVIEW

Eco-Pedagogy: Theoretical Foundations

Eco-pedagogy emerged from a marriage of critical education theory and environmental ethics. Its intellectual roots trace back to Paulo Freire, whose *Pedagogy of the Oppressed* (Freire, 1970) reimagined education as a tool for liberation rather than domestication. Freire rejected what he called the "banking model" of education, where teachers deposit knowledge into passive students. He proposed instead a dialogical approach in which learners and educators engage as co-investigators of reality, questioning the structures that shape their lives. This emphasis on critical consciousness—the ability to perceive social and political contradictions and take action against oppressive conditions—became foundational to later educational movements concerned with justice and transformation.

Moacir Gadotti, who worked closely with Freire at the Paulo Freire Institute in São Paulo, extended these ideas toward ecological concerns. Writing in the early 2000s, Gadotti observed that Freire's framework, while powerful, had remained largely silent on humanity's relationship with the non-human world. Eco-pedagogy, as Gadotti (2008) conceived it, addresses this gap by integrating environmental awareness into the project of human emancipation. The oppression Freire wrote about, Gadotti argued, extends beyond social relations to include the domination of nature itself. A truly liberatory education must therefore cultivate what he termed "planetary citizenship"—an identity grounded not in nation-states or ethnic groups but in our shared membership in the Earth community.

Richard Kahn, (2010) brought eco-pedagogy into conversation with broader currents of environmental thought. Drawing on deep ecology, ecofeminism, and animal liberation philosophy, Kahn positioned eco-pedagogy as a direct challenge to industrial capitalism and its educational apparatus. Schools, in his analysis, function largely to produce compliant workers and consumers, training young people to accept ecological destruction as the price of progress. Eco-pedagogy disrupts this logic by foregrounding questions that conventional curricula avoid: Who benefits from environmental degradation? Whose knowledge counts when we talk about nature? What ways of living have been suppressed in the pursuit of economic growth? For Kahn, these are not peripheral concerns but central to any education worthy of the name.

More recently, Misiaszek, (2016) has elaborated eco-pedagogy as a form of critical environmental literacy. This involves not simply learning facts about ecosystems or climate change, but developing the capacity to read the world ecologically—to see how environmental issues connect to patterns of inequality, colonialism, and cultural domination. A student who understands deforestation only as a biological problem, Misiaszek argues, has not yet achieved ecological literacy. True understanding requires grasping the economic pressures, political decisions, and historical processes that drive forest loss. It also requires recognizing that different communities experience environmental harm differently, with marginalized populations typically bearing the heaviest burdens.

From this perspective, one can draw one key insight, which is that eco-pedagogy is less about what is taught and more about how a school is built and lived. What makes it different from other educational approaches is that it treats ecology as a way of organising the school itself. The principle is suitable for SALAM Eco-School. It is not only a school that adds environmental activities to its curriculum, but also one that tries to live its ecological values in every aspect of how it runs.

Nature-Based Education: From Theory to Practice

While eco-pedagogy provides the philosophical framework, nature-based education offers practical pathways for implementation. The two are not identical: nature-based education can occur without explicit attention to critical consciousness, just as eco-pedagogy can be pursued through means other than outdoor learning. Yet the overlap is substantial, and many practitioners see direct engagement with natural environments as essential to cultivating ecological awareness.

David Sobel's work on place-based education has been particularly influential. Sobel, (2014) argues that environmental concern develops through an intimate, sustained connection with particular places. Children who grow up exploring local woods, streams, and fields develop what he calls "ecophilia," a love of place that motivates care and stewardship. Abstract knowledge about distant environmental problems, by contrast, often produces anxiety or apathy rather than engagement. Sobel's pedagogical prescription follows from this insight: start local, start concrete, start with the places children already know and love. Global environmental awareness, in this view, grows from local roots.

Richard Louv, (2008) has popularized related concerns through his concept of "nature-deficit disorder." Though not a clinical diagnosis, the term captures Louv's worry that contemporary children, increasingly confined to indoor and digital environments, are growing up disconnected from the natural world. The consequences, he suggests, include diminished creativity, attention difficulties, and a weakened sense of wonder. Nature-based education responds by creating structured opportunities for children to play, explore, and learn outdoors. Louv's work has influenced educational policy in several countries and helped fuel the growth of forest schools, outdoor kindergartens, and similar initiatives.

The researchers see this clearly at SALAM. A child who waters plants every day, watches them grow, and eats what s/he harvest is not just learning about the nature but building a relationship with it.

This kind of learning cannot likely happen in a textbook. Therefore, it is important to highlight that this is exactly what most schools are missing and why nature-based approaches matter these days.

Indigenous Knowledge and Sustainability in the Indonesian Context

Indonesia's diverse cultural traditions offer rich resources for grounding eco-pedagogy in local wisdom. The Balinese Hindu concept of *tri hita karana*, simply translated as harmony among humans, nature, and the divine, provides one such framework. Sihombing et al., (2025) have explored how this philosophy can inform sustainability-oriented education, suggesting that indigenous cosmologies offer alternatives to the anthropocentric worldview that underlies much environmental destruction. Similar principles exist across the archipelago, from Javanese notions of *keselarasan* (harmony) to various *adat* (customary) practices that regulate human relationships with forests, rivers, and agricultural lands.

Integrating such knowledge into formal education poses challenges. School curricula in Indonesia, as elsewhere, tend toward standardization and centralization, leaving limited space for local variation. Yet community-based initiatives have found ways to work around these constraints. Pramesti et al., (2021) and Rati et al., (2017) documents how nature schools and alternative learning spaces have emerged as sites where indigenous ecological knowledge can be preserved and transmitted alongside, or in creative tension with, national educational standards.

Rather than seeing this as a conflict, people can see it as an opportunity. Schools like SALAM Eco-school show that local wisdom and national curriculum do not have to compete. They can work side by side, with each enriching the other. In the researchers' perspectives, local wisdom is not just cultural heritage to be preserved. It is living knowledge that can guide how children learn to care for the world they live in. These developments provide the backdrop for understanding SALAM Eco-School's distinctive contribution. As a community-based institution that explicitly integrates local wisdom with eco-pedagogical principles, SALAM represents a concrete attempt to realize the theoretical visions outlined above within Indonesia's particular sociocultural context.

METHOD

This study adopted a qualitative case study design. Case study methodology suits research that seeks to understand complex social phenomena within their real-life contexts, particularly when the boundaries between phenomenon and context are not clearly defined (Merriam & Tisdell, 2016). Eco-pedagogy, as practiced at SALAM, is precisely such a phenomenon that is inseparable from the community, landscape, and daily rhythms in which it unfolds. A qualitative approach allowed for the kind of thick description necessary to capture how ecological values are transmitted, negotiated, and embodied in everyday educational encounters (Creswell & Poth, 2018).

The choice of methodology also reflected the epistemological commitments of eco-pedagogy itself. Freire's dialogical approach to knowledge, which underpins eco-pedagogical theory, resists the reduction of human experience to quantifiable variables. It calls instead for engaged, participatory inquiry that honours the voices and perspectives of those being studied. This study attempted to embody that spirit by privileging participant narratives, attending to context, and remaining open to unexpected themes that emerged from the data.

Research Site and Participants

Fieldwork was conducted at SALAM Eco-School between March and May 2023. The three-month period encompassed a full academic term, allowing observation of recurring routines as well as special events such as harvest celebrations and community gatherings. Participants were selected through purposive sampling based on their active involvement in SALAM's programs and their capacity to offer diverse perspectives on eco-pedagogical practice (Patton, 2001). The final sample included eighteen individuals across three groups:

Students (n=8): Four boys and four girls ranging in age from seven to fourteen years. Selection aimed for diversity across age levels (elementary and junior high) and length of enrolment at SALAM (ranging from one to six years). Students were invited to participate based on teacher recommendations and willingness to engage in conversation about their learning experiences. *Parents* (n=6): Mothers and

fathers whose children had attended SALAM for at least two years. This criterion ensured familiarity with the school's practices and philosophy. Parents represented varied occupational backgrounds, including farmers, small business owners, and university employees. *Educators* (n=4): Two full-time facilitators and two part-time community teachers. All had worked at SALAM for a minimum of three years and played active roles in curriculum development and daily instruction.

Informed consent was obtained from all adult participants. For student participants, parental consent was secured alongside the child's verbal assent. Participants were assured of confidentiality; pseudonyms replace actual names in all reporting.

Data Collection

Three methods of data collection were employed: interviews, participant observation, and document analysis. This triangulation strengthened the study's validity by enabling cross-verification of findings across data sources (Denzin & Lincon, 2017). *Interviews* were conducted individually with all eighteen participants. Each session lasted between thirty and sixty minutes and followed a semi-structured format. Core questions addressed participants' understanding of SALAM's educational philosophy, their experiences with nature-based learning activities, and their perceptions of how ecological values were cultivated. Students were asked to describe their favourite activities and what they had learned from working with plants, animals, or natural materials. Parents reflected on changes they observed in their children's attitudes and behaviour at home. Educators discussed their pedagogical intentions and the challenges of facilitating learning outside conventional classroom structures. All interviews were audio-recorded with permission and transcribed verbatim.

Participant observation took place over twenty-four visits during the fieldwork period, totaling approximately seventy-two hours of direct observation. The researcher attended regular learning sessions, outdoor activities, communal meals, and weekly reflection circles. Field notes documented physical settings, interactions between students and facilitators, the kinds of questions children asked, and the ways ecological themes surfaced in everyday conversation. Particular attention was paid to moments when learning appeared to emerge spontaneously from engagement with the natural environment. *Document analysis* examined institutional materials, including SALAM's founding philosophy statement, curriculum guidelines, sample lesson plans, and examples of student project documentation. These materials provided insight into the school's articulated values and how those values were translated into pedagogical practice.

Data Analysis

Analysis followed the six-phase thematic approach outlined by Braun & Clarke, (2008). The process began with familiarization—reading and rereading transcripts and field notes to develop an initial sense of patterns in the data. This was followed by systematic coding, conducted inductively without a predetermined framework. Codes were then grouped into potential themes, which were reviewed and refined through iterative comparison with the original data. Final themes were defined and named before the writing phase.

Four major themes emerged from this process: ecological sensitivity among students, creativity and autonomy in learning, the facilitator role of educators, and community participation in the educational ecosystem. Observational and documentary data were used to corroborate and deepen interpretations derived from interviews. Trustworthiness was addressed through several strategies. Member checking involved sharing preliminary interpretations with selected participants to verify accuracy and resonance. An audit trail documented analytical decisions through dated memos and reflective journal entries. Prolonged engagement over three months allowed for deeper familiarity with the research context and reduced the likelihood of superficial interpretation (Lincoln & Guba, 1985).

FINDINGS

The results of this study reveal that Sanggar Anak Alam (SALAM) Eco-School implements eco-pedagogy through a combination of experiential learning, community participation, and environmental stewardship. The integration of nature-based activities into the daily learning process allows children to develop environmental awareness, creativity, and responsibility in ways that transcend conventional

classroom learning. From the collected data: interviews, observations, and document analysis, four major patterns emerged: (1) children's ecological sensitivity, (2) the cultivation of creativity and autonomy, (3) the transformative role of educators, and (4) community engagement as part of the educational ecosystem.

Children's Ecological Sensitivity

The first finding highlights the growth of ecological awareness among children. Students at SALAM displayed increasing familiarity with and appreciation for their natural surroundings. They participated in activities such as organic gardening, composting, and waste management, which helped them understand ecological interdependence in tangible ways. Observations showed that students were able to articulate concepts like "balance in nature" and "caring for living things" through their own experiences. The learning process encouraged observation and reflection rather than rote memorization, making environmental knowledge personally meaningful. For many students, daily interaction with soil, plants, and animals cultivated a sense of belonging to their environment and fostered responsibility toward it.

Creativity and Autonomy in Learning

The second pattern concerns creativity and autonomy in learning. SALAM's curriculum provides students with the freedom to pursue subjects and projects aligned with their interests. This autonomy was evident in diverse learning outcomes: some children focused on art and crafts using recycled materials, others on food production or environmental storytelling. Documentation and interviews confirmed that children were more motivated when learning emerged from their own curiosity rather than external instruction. The emphasis on open-ended projects allowed them to develop initiative, problem-solving skills, and confidence in expressing ideas. Such autonomy also strengthened students' sense of agency as they realized their capacity to contribute meaningfully to the environment and community.

The Transformative Role of Educators

The third result underscores the transformative role of educators as facilitators of learning. Teachers at SALAM see themselves not as instructors who deliver fixed knowledge but as co-learners who accompany children in exploration and inquiry. Observations showed that lessons were rarely confined to classrooms; instead, learning often took place outdoors, such as by the river, in gardens, or on local farms. Educators guided students to ask questions, investigate environmental phenomena, and make connections between daily life and ecological principles. Their approach encouraged dialogue and mutual respect, creating a learning atmosphere that was democratic and nurturing. Teachers frequently emphasized ethical values such as empathy, care, and collaboration as integral to environmental learning.

Community Participation as Educational Ecosystem

The fourth finding reveals that community participation is essential to SALAM's educational ecosystem. Parents, neighbours, and local artists contribute actively to school activities, sharing local knowledge about farming, traditional crafts, and cultural rituals. Interviews with parents showed that their children became more responsible at home as they started living with awareness, like reducing waste, appreciating food sources, and initiating small-scale environmental projects. Many parents also reported feeling inspired to adopt more sustainable habits in their daily lives. This reciprocal relationship between school and community blurs the boundary between formal and informal education, turning the local environment into a living classroom. In this context, learning extends beyond academic goals to encompass social and ecological transformation within the wider community. Overall, the findings indicate that SALAM Eco-School successfully embodies eco-pedagogical principles by merging environmental education with creativity, collaboration, and community engagement. The school's practices demonstrate that learning grounded in nature and local wisdom can cultivate children's ecological consciousness while reinforcing values of empathy, cooperation, and sustainability.

The findings presented earlier illustrate how Sanggar Anak Alam (SALAM) embodies eco-pedagogical principles through an organic integration of learning, nature, and community life. This section discusses these findings in relation to the broader theoretical perspectives on eco-pedagogy, nature-based education, and transformative learning. Through this analysis, SALAM's model is positioned as both a reflection of and a contribution to global conversations on sustainability-oriented education, particularly within the Indonesian socio-cultural context.

DISCUSSION

The findings from this study illuminate how eco-pedagogy can be enacted within a community-based Indonesian educational setting. Rather than treating environmental awareness as curricular content to be transmitted, SALAM cultivates ecological consciousness through lived experience, relational learning, and community participation. This section interprets these findings in dialogue with the theoretical literature, considers the study's limitations, and reflects on implications for practice and future research.

Ecological Sensitivity as Embodied Knowledge

The ecological awareness observed among SALAM students differs qualitatively from what conventional environmental education typically produces. Students did not simply recite facts about ecosystems; they demonstrated what Sobel, (2014) calls a "sense of place"—an affective bond with their immediate environment developed through sustained, embodied interaction. When Sinta described the cyclical relationship between chickens, compost, and vegetables, she was not repeating textbook information but articulating understanding that had emerged from direct participation in those cycles.

This finding resonates with Louv's (2008) argument that ecological concern develops through intimate contact with nature rather than abstract instruction about distant environmental problems. The students at SALAM who cared most deeply about their gardens were those who had invested time and attention in them. Their knowledge was personal in a way that information about rainforest destruction or polar ice melt cannot easily be. This suggests that eco-pedagogy's emphasis on local, experiential learning is not merely a pedagogical preference but an epistemological necessity, certain kinds of understanding can only emerge through certain kinds of engagement.

The findings also support Misiaszek, (2016) conception of ecological literacy as the capacity to read environmental relationships critically. Students at SALAM did not simply observe nature; they questioned it, experimented with it, and reflected on their own role within it. The composting session where children designed an experiment to test worm preferences exemplifies this critical dimension. Ecological sensitivity, in this model, involves not passive appreciation but active inquiry.

Figure 1. SALAM – Sanggar Anak Alam Eco-School

A key feature of SALAM's approach is its flexible and inclusive learning environment. In contrast to conventional schools characterized by uniforms, strict schedules, and fixed tuition fees, SALAM promotes autonomy and community dialogue. Parents are encouraged to negotiate contributions according to their capacity, often through non-monetary means such as agricultural produce. This practice reinforces a culture of mutual care and local solidarity while reducing economic barriers to learning. The school environment itself embodies openness: rather than enclosed classrooms, learning spaces are designed to resemble gardens, playgrounds, and communal pavilions, encouraging students to move freely and learn from nature's rhythms.

Students at SALAM come from diverse socio-economic backgrounds, including children who were previously unable to access formal education. The school accommodates learners across five developmental levels which are playgroup, kindergarten, elementary, junior high, and senior high within an integrated learning community. This structure allows interaction across age groups and promotes peer learning, empathy, and cooperation. Observations show that younger students often learn from older peers through shared projects and storytelling, while older students develop leadership and mentoring skills. Such cross-age collaboration reflects SALAM's belief that learning is most meaningful when grounded in community and shared experience.

In this setting, education becomes a living practice rather than a mechanical process. The school's non-hierarchical atmosphere dissolves distinctions between teacher and learner, formal and informal, theory and practice. Learning unfolds through participation, dialogue, and reflection, qualities that align closely with the principles of eco-pedagogy and transformative learning. By reimagining education as a social, ecological, and ethical act, SALAM positions itself as a model of alternative schooling that challenges the conventional dichotomy between institutional instruction and everyday life.

Figure 2: Classrooms at SALAM School

Autonomy, Creativity, and the Rejection of Banking Education

The second theme: creativity and autonomy, speaks directly to Freire's (1970) critique of banking education. SALAM's pedagogical structure rejects the model in which teachers deposit knowledge into passive students. Instead, learning emerges from children's own questions and interests, with facilitators serving as resources rather than authorities. The diversity of student projects observed during fieldwork, such as irrigation systems, bird songs, and traditional recipes, reflects this orientation. No predetermined curriculum could produce such variety; it emerges only when learners are granted genuine agency.

This finding aligns with Gadotti's (2008) vision of eco-pedagogy as education for freedom extended to planetary consciousness. At SALAM, freedom is not abstract but concrete: the freedom to

spend a morning building, the freedom to pursue curiosity wherever it leads, the freedom to learn at one's own pace. Students reported that this autonomy made them more invested in their work. When Dewi noted that she tried harder on projects she chose herself, she was describing a phenomenon well documented in educational research: intrinsic motivation produces deeper engagement than external compulsion.

Yet autonomy at SALAM is not individualistic. Projects frequently involved collaboration, and the school's physical and social structure encouraged interaction across age groups. This combination of individual freedom and collective participation is described as eco-pedagogy's challenge to both authoritarian education and atomistic individualism (Kahn, 2010). Learning at SALAM is neither teacher-directed nor solitary but dialogical and communal.

Facilitation and the Transformation of Teaching

The educators at SALAM described and enacted a role fundamentally different from conventional teaching. They saw themselves as co-learners, companions in inquiry rather than dispensers of knowledge. This stance has theoretical grounding in Freire's dialogical pedagogy, which positions teacher and student as mutual subjects engaged in understanding the world together. When Ibu Ratna observed that students sometimes notice things she never saw, she was articulating this reciprocal relationship.

The facilitative approach observed at SALAM also resonates with literature on nature-based education. Effective outdoor learning, researchers have noted, requires teachers who can tolerate uncertainty, follow children's lead, and resist the impulse to provide immediate answers. The river session, where a facilitator responded to a child's question with another question, "What could we do to find out?" exemplifies this pedagogical restraint. The goal is not efficiency in knowledge transfer but depth in understanding.

Community as Educational Ecosystem

Perhaps the most distinctive aspect of SALAM's model is the permeability between school and community. Parents, neighbours, and local artisans are not occasional visitors but integral participants in the educational process. This finding extends eco-pedagogy's theoretical framework in important ways. While the literature emphasizes relationships between learners and nature, SALAM demonstrates that these relationships are always mediated by community. Children learn to care for the environment within webs of social relationships with parents who farm, neighbours who share traditional knowledge, and facilitators who model ecological attentiveness.

The reciprocal effects reported by parents, saying that children influence household practices, prompting adult reflection on environmental habits, suggest that eco-pedagogy's transformative potential extends beyond the immediate educational context. When Pak Bambang admitted that his children teach him about pesticides and water conservation, he was describing a reversal of the usual direction of knowledge transmission. This intergenerational dialogue, flowing from children to adults as well as from adults to children, represents a form of community transformation that aligns with Freire's vision of education as social change.

Limitations

Several limitations constrain the interpretation of these findings. The sample, though appropriate for qualitative inquiry, was small and drawn from a single institution. SALAM is an unusual school, and its practices may not transfer readily to other contexts. The three-month fieldwork period captured a limited slice of the school's annual rhythm; longer engagement might have revealed different patterns. Additionally, the study relied primarily on self-reported perceptions; observing long-term outcomes in students' ecological attitudes and behaviours would require longitudinal research that was beyond this study's scope.

The researchers' own interest in eco-pedagogy may have influenced data collection and interpretation. While reflexive practices were employed to mitigate this risk, complete neutrality is neither possible nor, from a Freirean perspective, desirable. The findings should be read as one interpretation of SALAM's practice, not as the definitive truth.

Implications and Future Directions

For practitioners, this study suggests that eco-pedagogy requires more than adding environmental content to existing curricula. It demands structural changes: physical environments that connect learners with nature, pedagogical relationships that honour student agency, and institutional boundaries permeable to community participation. These are not minor adjustments but fundamental reorientations.

For researchers, SALAM's model raises questions that warrant further investigation. How do graduates of eco-pedagogical programs differ from conventionally educated peers in their environmental attitudes and behaviours over time? Can elements of SALAM's approach be adapted to formal school settings constrained by national curricula and standardized assessments? How do eco-pedagogical practices vary across Indonesia's diverse cultural contexts?

For policymakers, the findings suggest that alternative educational models like SALAM deserve recognition and support. Indonesia's ecological challenges require citizens capable of thinking ecologically and acting responsibly. Schools that cultivate these capacities, even when they operate outside conventional structures, contribute to national goals that extend far beyond education.

CONCLUSION

SALAM Eco-School demonstrates that ecological consciousness cannot be taught through textbooks alone; it must be lived. The findings of this study reveal that when children engage directly with soil, plants, and community, they develop an environmental understanding that is personal, embodied, and enduring. This understanding emerges not from instruction but from participation: tending gardens, designing projects, asking questions that matter to them. Three insights carry weight beyond this single case. First, eco-pedagogy requires structural change, not merely curricular adjustment. Physical spaces, pedagogical relationships, and institutional boundaries must all shift to allow nature-based learning to flourish. Second, educators function most effectively as facilitators who accompany inquiry rather than authorities who dispense answers. Third, the line between school and community must blur; environmental learning gains depth when parents, neighbours, and local knowledge holders participate as partners. Indonesia's ecological challenges demand citizens who think and act with environmental responsibility. Schools willing to reimagine their purpose, as SALAM has done, offer one path toward cultivating such citizens.

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