

Layering participation pathways in school-based environmental education

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Abstract

This article identifies possibilities for fostering meaningful and transformational participation by layering pathways of participation. Drawing on a year-long doctoral study in two Montreal high schools and their school service centre, this research explores three initiatives supporting environmental education: one elective curriculum-based course, one youth-led extracurricular activity, and one at the institutional level. Grounded in a comparative case study, informed by ethnographic and participatory approaches, the study suggests that multiple and concurrent participation pathways enable a relational and political approach to environmental education in schools. A more systemic approach to environmental education entails paying attention to intentionality and coherence within and across forms of participation that unfold at different levels.

Résumé

Cet article présente comment les parcours participatifs multiples encouragent les élèves à s'investir dans leur parcours de manière constructive et transformatrice. La recherche, inscrite dans le cadre d'une étude doctorale, s'est déroulée pendant un an dans deux écoles secondaires de Montréal et leur centre de services scolaires. Elle examine trois initiatives de soutien en éducation environnementale : un cours à option crédit, une activité parascolaire menée par des jeunes et une activité parascolaire proposée par l'école. Fondée sur des approches ethnographiques et participatives, cette étude de cas comparative montre que des parcours participatifs multiples suivis en parallèle favorisent une approche relationnelle et politique à l'éducation environnementale dans les écoles. La mise en place d'une approche systémique en éducation environnementale requiert un souci d'intentionnalité et de cohérence pour chaque forme de participation, et entre elles, perceptible sur plusieurs plans.

Keywords: environmental education, schools, young people, participation, pathways

Introduction

While the importance of young people's participation is well recognized, acknowledging, valuing, and acting upon it in school settings remains a challenge (Liebel & Meade, 2024; Wyness, 2018). Schools are rooted in political ideologies

and broader societal agendas, which often do not align with young people's environmental priorities and aspirations (Biswas, 2023). But safeguarding the planet's future entails exploring new possibilities for participation and education, including supporting young people in being part of their own learning journey (Biswas & Mattheis, 2021).

Informed by a year-long doctoral study, this article explores participation in environmental education in schools in terms of pathways. We suggest layering participation pathways as an avenue for meaningful and transformative participation in environmental education in school contexts. Below, we situate our study within the literature on approaches to environmental education and on youth's participation in schools.

Approaches to Environmental Education and Young People's Participation

Introduced in the 1970s by the United Nations Environment Program, environmental education aimed to (re)build healthy, meaningful, and ethical relationships with the natural world (Dorn, 2020). Now faced with human-driven climate change, education systems in Canada and worldwide are adopting policies and curricula to address the environmental crisis (Field et al., 2023; UNESCO, 2021). Participation is being recognized as a key aspect of environmental education—agency central to shaping society (Sen, 1985; Vromen, 2003). We review various approaches and pedagogies that foster diverse forms of participation, showing the value of complementarity.

Environmental education in schools has historically often relied on transmissive, teacher-to-student approaches to instruct on environmental issues and promote “good behaviours,” while giving students little room to assert themselves (Glithero, 2018; Jickling & Wals, 2008). These approaches often expect students to spread environmental knowledge beyond the classroom, shaping family and community practices (Damerell et al., 2013; Grégoire-Labrecque, 2023). While young people can influence their families, participation is also complex, contextual, and relational. Participatory approaches, grounded in youth agency, relationality, and collective imagination, are proving more adaptive in addressing evolving climate imperatives (Field, 2017; Jickling & Wals, 2013). These approaches offer powerful opportunities for amplifying young people's voices and for actualizing their political agency meaningfully in schools and broader society (Cutter-Mackenzie & Rousell, 2019).

Not all participatory processes, however, are meaningful and transformative, nor welcomed in school institutions. Youth participation tends to be meaningful when rooted in respectful relationships, aligned with their interests and concerns, and linked to decision-making (Tisdall, 2021; Valentine, 2017). It becomes transformative when it serves as a learning process through which young people challenge power structures, foster empowerment, and promote the democratization of social relations and society (Liebel & Saadi, 2012; Teamey &

Hinton, 2014). Enabling such participation is the use of pedagogies that focus on co-production, performance or that are multimodal. These emphasize creativity, emotional engagement, and embodiment, thus facilitating interactions between young people and decision-makers thereby affirming young people's abilities and potential (Tisdall, 2013).

Meanwhile, schools have an ambiguous relationship with young people's activism, a form of political participation frequently defined as a collective action to shift power dynamics through public displays such as petitions, protests, demonstrations, school strikes, and sit-ins (Taft & O'Kane, 2024; Wright et al., 2024). The 2018–2019 wave of school strikes against climate change stands as a prominent example of youth activism, responses to their civil disobedience highlighting tensions between education and political participation. According to Biswas and Mattheis (2021) and Hayward (2021), school strikes had an educational potential, whereby participants exchanged knowledge, educated others, and gained experience in democratic organizing and civic action. In contrast, school administrations urged young people back “to learning,” framing school as their legally mandated place devoid of political agency (Dupuis-Déri, 2021).

Formal school settings often fall short in nurturing students' capacity for critical and systems thinking, civic engagement, and activism, due to rigid curricula, limited resources, and political constraints (Bartlett & Yemini, 2025; Carey et al., 2021). There is a need for adults and institutions to recognize and support young people's active role in their own learning, including through political participation and activism in all its forms of expression (Biswas & Mattheis, 2021).

Another approach to environmental education—a relational and ecocentric approach—advocates for viewing humans as nature and focuses on developing meaningful relationships with the more-than-humans world. It favours learning with non-humans, fostering an understanding of everyday life that is interwoven with relationships between beings, non-beings, and natural systems (Mitten, 2017; Taylor, 2017). From an environmental education and participation perspective, it involves staying open to new ways of being and learning. For example, whether by carrying stones in their pockets or leaping into snow, children's impulses to touch and interact with more-than-humans foster a unique, relational, and embodied way of knowing the world (Rautio, 2013b; Rautio & Jokinen, 2016). It entails engaging critically, artistically and emotionally with one's environment, namely through more embodied and relational pedagogies and practices which involve being receptive from head, heart, and all the senses (Lasczik et al., 2023; Mitten, 2017; Taylor, 2017; Tooth & Renshaw, 2020).

These approaches to environmental education promote diverse modes of participation that can complement one another. Although ecocentric and human-centered perspectives may seem at odds, they are not as incompatible as they appear, especially when transmissive and participatory approaches offer time and space to experience “lived curricula” (Ruck & Mannion, 2021). For example, outdoor, flexible, and small-group activities in the Polli:Nation

Conservation project encouraged free play and discovery between and around formal tasks. Unscripted moments sparked fascination over unexpected encounters and empathy for other species. Moving beyond formal curricula to appreciate spontaneity and unstructured moments in education opens up new ways of knowing (Rautio, 2013a). Through varied relationships with nature, a new foundation for young people's political participation in environmental education is foreseeable (Derr et al., 2025; Tooth & Renshaw, 2020). Fostering ethical, emotional, and meaningful relationships with the environment and living beings, including other humans, can lead to a strengthened commitment towards them (Tooth & Renshaw, 2020; Villemagne & Sauvé, 2021).

Underlying participatory initiatives to care or protect the environment is the relationship with nature—the more-than-human world—that invites for reciprocity, not just responsibility (Derr et al., 2025; Tooth & Renshaw, 2020). Connectedness with nature can be displayed through advocating and caring for the well-being of local places, such as community gardens, which can be reciprocated by offering sensory experiences, fresh air, and sustenance (Tooth & Renshaw, 2020). Relational approaches to environmental education can be reconciled with participatory and political participation; they are in fact complementary, especially when relational, embodied, and embedded in caring practices.

Furthermore, a coherent and consistent implementation of environmental education based on complementary participation implies looking at education and its systems broadly. Enabling transformation involves the entire school environment supporting and reflecting those programs/approaches in a coherent and consistent way, aligning with institutional policies (Fielding & Moss, 2011; Wals et al., 2024). It entails examining education's underlying values and goals, schools' governance and culture, formal and informal learning processes, including teaching methods and curricula, and connections to communities and families to influence students' learnings. Teachers play a vital role by offering nature experiences and reflections and holding inclusive spaces for student expression and skill-building (Dunlop et al., 2021; Renshaw & Tooth, 2018). They are equally central in equipping students to challenge systemic power structures by critically examining forms of political participation, through perspective-taking, argument evaluation, and respectful deliberation (Dunlop et al., 2021). It is within this framing that recognizes multilevel and multidimensional participation that we make sense of the findings of this study.

Context and methods

This article draws on a doctoral study that investigates how youth participation, as it relates to environmental education, unfolds in a school context, and explores its transformational potential. The research was conducted in two high schools in Montreal (Quebec, Canada), each featuring an environmental initiative, and

in the school service centre that oversees projects across both schools and is responsible for the policies that shape them.

Since 2000, the school service centre (at the time, a Montreal school board) has implemented its own environmental policy, with a first Green Plan in 2006, which acknowledges public schools' responsibility and their role in addressing climate change (CSDM, 2000, 2006). The 2019–2025 Green Plan prioritized environmental education as a foundational element of their pedagogical approach (CSDM, 2019). It aims to support students, parents, and staff in becoming ecocitizens—environmentally conscious and responsible individuals engaged in addressing ecological challenges—by embedding environmental education into teaching and an ethic of ecoresponsibility in school management. The plan emphasizes the importance of participation in climate action, the role of environmental education in fostering connection to nature and respectful, intergenerational relationships, and the need for consistency within and across schools.

The first environmental initiative examined was the Environment and Urban Agriculture program. It was an elective that students could choose to complete their school curriculum. Based on a partnership between the school service centre, the high school, a horticultural school, and local community organizations, the program featured a theoretical environmental component and practical agriculture and horticulture work. Resulting from a public consultation with the community on educational needs, the program sought to enhance students' engagement in their learning, strengthen their sense of belonging to their school and community, alongside raising awareness and act on environmental issues. This high school served an ethnoculturally diverse community with low socioeconomic background and faced challenges in attracting local families.

A “Green” Committee was the second environmental initiative documented. It was an extracurricular school activity aimed at raising awareness and acting on environmental issues in and around the school. Generally, between five to 15 students from secondary 1 to 5¹, averaging 12 to 17 years of age, participated in the committee, supported by two or three school staff members throughout the year. The Green Committee was located in a high-performing high school, well regarded by the community, and serving an ethnoculturally diverse population.

The third initiative was the school service centre's Engagement Committee which stemmed from an interest in deepening the learnings on participation. They considered the doctoral research an opportunity to inform their work and contribute to the educational review process under way. The research could provide valuable insights into the newly created Environment and Urban Agriculture program. A first meeting thus evolved into an “Engagement Committee” to enable more meaningful participation among students in broad support of environmental education.

This qualitative study emerged from a collaboration between the school service centre, two schools, and the author, Geneviève, responding to practitioners' needs and young people's call for environmental action. It is

grounded in a comparative case study and is informed by ethnographic and participatory approaches. A comparative case study enables in-depth, flexible, and process-oriented exploration of complex situations in real-life contexts, foregrounding inductive, ethnographically informed inquiry (L. Bartlett & Vavrus, 2017). Throughout the study, Geneviève intentionally engaged in “deep listening” to allow time, mitigate power imbalances, and enable participatory initiatives to emerge (Veissière, 2009). While iterative collaboration took place with institutional actors in the Engagement Committee, such participatory processes were absent with students—perhaps due to over-solicitation, pandemic-related constraints, or a lack of interest. Intersecting social issues and the researcher’s positionality in the inquiry could also affect young people’s participation (Jacobson & Mustafa, 2019). Nonetheless, Geneviève was mindful throughout of their positionality as a white cisgender woman from Quebec, an early-career researcher focused on children’s and young people’s rights and participation.

More specifically, the research is based on a one-year data collection from November 2020 to December 2021. It draws on participant observation, group discussions, and individual semi-structured interviews as research methods. Observation and participation were carried out in an everyday school context. However, 21 people participated directly in the research through group discussions and interviews: from the Green Committee, four students and three staff members; from the Environment and Urban Agriculture program, four students and four staff members, and from the school service centre, three educational advisors and three professionals.

Participant observation of Environment and Urban Agriculture classes and Green Committee and Engagement Committee meetings allowed to build relationships with students and school staff. It made it possible to be present during real-life events, to observe, respond, and share experiences with them (Ghasarian, 2002). Geneviève supported Environment and Urban Agriculture teachers and students in their classroom and garden activities, assisted Green Committee members by taking notes and aided with facilitation and organizational tasks, and collaborated with Engagement Committee members in their reflection and action process. The Environment and Urban Agriculture class took place in two consecutive sessions during each nine-day course schedule, while the Green Committee convened biweekly over lunch—whether at school or via online platforms. Engagement Committee meetings were held once a month virtually. The research taking place during a global COVID-19 pandemic affected in-person meetings, forcing committees to meet online or in a hybrid mode. It also influenced the types of actions available to the Green Committee and encouraged outdoor activities within the environmental program.

Five group discussions were conducted. From the Green Committee, two were carried out with students and one with school staff. From the Environment and Urban Agriculture program, one was conducted with students, while Engagement Committee school staff and professionals participated in one group discussion. Each session lasted between 60 to 90 minutes. These provided

insights into each group's perspective on student participation and their experience within the initiatives and school environment, and the role of the school and staff in supporting this participation. Six semi-structured interviews were also conducted: one with a Green Committee student who wished to continue the conversation after a group discussion; two with students from the Environment and Urban Agriculture program to accommodate preferences; and two with staff from the same program and one with a school service centre professional for additional information on the initiatives and everyday tasks. Interviews and group discussions were recorded and transcribed, except for two individuals who opted out of recording. Handwritten or audio notes were taken to detail observations on student and school staff interactions, reactions and behaviors, activity structure, and pedagogy, alongside the researcher's reflections, emotions, questions, and moments of discomforts.

A thematic analysis was conducted which involved reviewing transcribed notes, group discussions and individual interviews, formal and informal activities, and comments describing them. These were coded based on types of activities and characteristics of participation. Codes were then grouped into broader themes, defined as "participation pathways" which ultimately corresponded to each initiative. To ensure anonymity and inclusion, gender-neutral language is used throughout this text with a code for each participant. Given the study was carried out in French, quotes were translated into English for their inclusion in this article. The study was approved by the research ethics boards of Concordia University as well as the school service centre and includes parental consent for students below 18 as required in Quebec. Participants were regularly reminded of the voluntary nature of participation and their right to opt out.

Participation Pathways in School Contexts

Emerging from the research is a realization that each initiative involved a distinct pathway of participation in environmental education. The Environment and Urban Agriculture program mostly centred on developing and nurturing relationships with nature, while the Green Committee focused on youth-led actions, and the school service centre's Engagement Committee addressed institutional changes. Below, we present each initiative and critically reflect on the different forms of participation it offered. We consider these to constitute pathways of environmental education in schools.

Environment and Urban Agriculture Program and Building Relationships with Nature

The Environment and Urban Agriculture program mostly centred around developing and nurturing relationships with nature, including humans, through gardening and outdoor activities. Students participated in the garden's life

cycles, experiencing seasonal changes emotionally and physically. Early spring, students began growing seedlings indoors. As the plants grew, so did their curiosity and excitement about gardening. By late May, students transplanted them in garden plots, enjoying the first warmer days. Over the summer, a local NGO and a student volunteer cared for the garden, harvesting vegetables for the community. In early fall, students returned to their garden to pick up the last vegetables. With temperatures steadily dropping, they closed the garden for winter by November, composted the frozen remains for next season.

Gardening activities fostered relationships with nature through hands-on care. Being attentive to the garden's needs, learning how to use tools, and applying those skills daily made their participation concrete, meaningful, and a relational learning process. In early fall, gardening staff taught students to weed, prune, water, and harvest, and they immediately tended their plots. "It was cool that they trusted us" commented a participant (E5), indicating the significance of being entrusted with garden care and tools.

Connecting with students and adults was also an important part of the program. Adults from different backgrounds gravitated around it, including a horticulture school and two NGOs. Students valued the involvement and knowledge adults shared, although frequent staff changes—even for valid reasons such as sick or parental leave—made it difficult to build strong connections. Students also learned to collaborate with classmates. Participants enjoyed being paired with friends because of the reassuring familiarity and the gardening help it provided. Yet, they also faced challenges like uneven workloads or conflicts over garden plots. Still, most learned together in a warm atmosphere, with gardening fostering informal and friendly discussions.

Another particularity of the program was its flexibility. In and between tasks, students could explore their environment. They could also choose tasks, for example cut dead plants, move soil or spread mulch, and work at their own pace. They could even take a break, lean on trees, and chat. The program also made space for spontaneous park walks or outdoor playtime. One February afternoon, teachers led students on a stroll in the snowy park. Students were engaging with the snow and each other, flurrying it back and forth across the path, while chatting and laughing. Overall, spending time outside was appreciated by students: "I really like that we go out into the garden, or we go on outings, or sometimes, we go to the park; we don't usually do that at school" (E6).

In instances where gardening could not take place, the program shifted focus to more academically oriented activities on environmental and awareness-raising matters, such as presentations on healthy lifestyle and environmental footprint, and documentaries on circular economy and overconsumption. Quizzes, small scale action projects, self-assessment consumption behaviours, reflections on environmental challenges and inequality took place. Despite the emphasis on building relationships with nature, there was a noticeable absence of activities designed to help process experiences, individually or together.

The Green Committee and Youth-Led Actions

The Green Committee's activities involved youth-led actions against climate change, including education for more environmental-friendly behaviours and advocating for institutional changes. To do so, meetings focused on identifying and planning actions. At the beginning of the school year, students proposed project ideas they would like to carry out, such as recycling, awareness-raising campaign, reusable placemats and cutlery sale, advocacy letter for greener facilities in the new school's cafeteria, more greenery in and outside of school. Subsequent meetings focused on project tasks: follow-ups, reviews of outcomes, planning next steps, and teamwork.

Debriefs were spaces for reflection, from overcoming obstacles to envisioning change. At the third meeting, students and staff discussed strategies to boost enthusiasm for recycling, and institutional barriers to composting. A deeper discussion emerged after non-Green Committee students criticized the reusable placemats and utensils sale, highlighting the school's responsibility to provide dishwashing infrastructure, and raising concerns about overconsumption and profit. Some Green Committee students also expressed skepticism about their capacity for sustainable change at school, noting recycling efforts often collapsed when individuals left high school. While students sought institutional reforms, staff encouraged and supported small, local projects, based on past experiences with students feeling overwhelmed by broad environmental issues and discouraged by institutional refusals.

This form of participation in environmental education led to notable achievements: students and staff initiated projects, saw tangible outcomes, and celebrated successes. A student (E2) shared: "I'm really glad that we managed to organize ourselves, like the placemats sale was a success; the Kahoot quiz worked; our presentation; the [book box] project". Year-round recycling and the recruitment of 50 students for Earth Week yard cleaning marked both environmental impact and determination. A major win was the school's agreement to implement Green Committee demands, including gardens, a picnic area, waste sorting and a dishwasher in the new school. Committee involvement also gave students a sense of agency and empowerment. As the same student (E2) later noted: "I think it's cool to be able to go the extra mile and get resources [...] to have all the possibilities we want, and to tell ourselves: 'we want to do this project' and we are given the opportunity to work to complete it". Staff hoped this participation would spark broader student engagement.

When reflecting on their role, staff believed that adults' presence and support could be beneficial in a student-led committee if they listened and stayed open to youth input. They emphasized balancing guidance with giving students space to reflect, ponder, plan, and lead actions: "At the beginning, you really have to push students and take up more space, but once they're ready, you must let them shine, and sometimes, make mistakes" (SP9). In practice,

this proved difficult. During a student-initiated discussion on decision-making (Who votes? Who has final say?), staff ultimately decided to evaluate each case individually rather than apply a uniform rule. Reflecting on the year, they recognized their assertiveness had impacted student participation: “[Students] expressed their concerns very clearly: ‘I don’t want it to be all the adults who decide’. (...) But if we had left it all in the students’ hands, I think we wouldn’t have done as much, and they might have lost interest without a sense of accomplishment” (SP11). While staff hoped for more student-led activities, such as facilitating meetings and leading recruitment, challenges remained.

In many ways, students were given a clearly defined framework in which to participate—often limited to small-scale projects. This restrictive view underscores adults’ difficulty in supporting them in their own environmental formation, but also the importance of doing so to access diverse participation perspectives as they relate to environmental education in schools. In a research debrief, students stressed that leading change required being treated as equals. One argued adults in student committees shouldn’t hold authority or have voting rights but could help by answering questions without interfering. The “for and by students” dimension was fundamental to students’ engagement in the Green Committee.

Teamwork and team spirit were seen as essential for building a “solid base” to address key questions of purpose and goals. Leading change in school also meant recognizing individual strengths, preferences and identity: “not everybody can be a ‘positive leader’” (E1). Students proposed strategies to be heard and drive change, such as recruiting peers to confront schools, striking and raising issues publicly, or partnering with schools to find solutions to structural barriers together. These point to challenges generated by choosing this mode of participation in a school setting, and the relational and creative work needed to break through impasses.

The Engagement Committee and Institutional Change

Less directly involved with students or environmental education, the Engagement Committee focused on enabling institutional change for more meaningful student participation across their 35 high schools. The most compelling aspect of this committee’s experience is the participatory process of institutional change that developed over time. As a school service centre’s subcommittee, they were initially tasked with developing a shared vision on student participation for school administrators. Members, including educational advisors and professionals, embarked however on a participatory action research journey that led to the creation of a comprehensive tool to help school staff foster student engagement and meaningful participation across the service centre.

The shift was driven by members’ eagerness to make a difference and to deepen collective learnings. A professional noted (P17): “Can we also help ourselves by creating something? A tool? A schema?”. Their journey

reflected school staff engagement toward young people's meaningful participation which could spark institutional change. Enabling conditions of such iterative process of learning and action show the importance of flexibility, openness, facilitation, commitment, trust, equality among participants, and time. From the beginning, they set clear intentions, remained flexible and open to questions, willing to adjust their initial plan and ready to invest themselves.

A voluntary facilitator taking notes, summarizing ideas, asking clarifying questions, and supporting decision-making eased the participatory process. Members' readiness to take part in such a journey was highly valued: "It's the group that did it by accepting, by answering questions, by being volunteers, by saying 'We're going this way'" (P17). This complementarity was seen as a "participatory" process—a contract not imposed but evolving with the group's accord. Creating a "safe" and friendly space also allowed participants to be vulnerable, challenge ideas respectfully, and build trust. A member shared the difficulty of the work and their honesty was welcomed, highlighting the importance of communication to move forward. The meaningfulness of the work—meeting needs, producing positive outcomes, monitoring progress—legitimized the process and motivated staff to carve out time to meet.

Participating in the Engagement Committee allowed professionals to form new knowledge and deepen existing theoretical frameworks on student participation, setting the stage for institutional change:

I realized that I was focusing a lot on the classroom, on the act of teaching, on the teacher-student relationship. It's still present, but with the concepts of participation, diversity, and inclusion, it allowed me to see that it's bigger than the classroom. [...] the vision must come from the institution, from the school, so that it can influence the teachers as well, and then, it can enter the classroom. (P18)

Intertwined in this new knowledge is a notion of personal and professional growth. "Enriched perspective," "new intervention levers," and "a 360 degrees vision" were words they used to describe their professional journey within the Engagement Committee. Members realized that the distinctiveness of their journey toward more meaningful student participation lay in the iterative process of reflection and action they had undertaken. This process resulted in the creation of a participatory tool designed for all school professionals engaged in continuing education within the school service centre. The tool, a customizable participation and engagement framework, encourages reflection when planning an intervention related to student participation and can be adapted as professionals' learning and experience evolve. Nonetheless, as deep, honest, and thorough as this participatory journey was, students' input to inform both the tool and process were absent.

Discussion

Emerging from this study is an understanding that each initiative offered a potential for participation—a pathway—in school-based environmental education (see Table 1 for summary).

Initiatives	Participation pathways	Forms of participation	Gaps	Ways forward
Environment and Urban Agriculture program	Building connection with nature	• Fostering relationships with nature, including peers, adults, and more-than-humans • Flexible and unstructured moments, everyday interactions, outdoor time, gardening, and embodied pedagogies	Lack of reflective opportunities to come to know with nature	More intentional participation processes to encourage awareness, deeper reflection, youth-led or collective actions to protect living environments
Green Committee	Youth-led actions	• Reflection and discussion on change processes and decision-making, leading actions • Empowerment and skills development rarely covered in classrooms	Tensions between students and staff stemming from adults' predefined notions of environmental change, youth participation, climate action	Stronger focus on relationality through embodied pedagogies, building relationships with nature, imagining futures together
Engagement Committee	Institutional change	• Participatory process to address professionals' representations, educational values and goals, pedagogies, and school spaces for more meaningful student participation • Taking time to be in relationships and to work through situations	Lack of student perspectives and disconnected from environmental policy	Integration of students and of environmental policy in the process

Table 1. Summary of Participation Pathways: Forms, Gaps and Ways Forward

In the Environment and Urban Agriculture program, participation rested primarily on building relationships with nature, through peers, adults, and more-than-humans in everyday interactions, outdoor time, and gardening. These activities, coupled with unstructured moments, allowed students to explore and engage with their environment through bodies and senses, thus experiencing “lived curricula” (Ruck & Mannion, 2021). Such everyday relational spaces were fundamental in fostering connection and togetherness with nature—both central elements of environmental education.

Oscillating between transmissive and participatory approaches to environmental education, the Green Committee focused on youth-led actions, from awareness-raising among peers, to leading interventions on school grounds, and advocating for long-term changes within their school. This extracurricular initiative offered participation opportunities on the margins of formal schooling and addressed topics and skills rarely covered in classrooms, such as civic engagement and critical and systems thinking (T. Bartlett & Yemini, 2025; Carey et al., 2021). Participation lay in students’ intent to influence their school through reflecting on change processes, discussing decision-making, leading actions, and experiencing empowerment.

As for the Engagement Committee, its potential for participation was three-fold. First, it hinged on professionals working toward institutional change for more meaningful student participation in schools, broadly aligned with environmental education. Second, it involved fostering an iterative process of reflection and action to address professionals’ representations, educational values and goals, pedagogies, and school spaces. Finally, it addressed the need for reflection and consciousness by taking the time to *be* in relationships and to work *through* situations.

Findings also highlight obstacles or limits within each initiative that constrain their participation potential. These barriers bring into focus the question of layering of forms of participation for more meaningful and transformative experience in environmental education and to uphold environmental policies. Despite considerable attention to engaging with nature in the Environment and Urban Agriculture program, the lack of reflective moments compromising the processes of coming to know *with* nature—the links between experiences, feelings and perceptions of one’s relationship with the world and a deeper desire to care for the environment (Derr et al., 2025; Taylor, 2017; Tooth & Renshaw, 2020).

Indeed, more intentionality in relational participation processes is called for. An added effort to include different ways of knowing, such as listening practices and to encourage deeper reflections through (un)structured debriefings on students and staff’s experiences could help raise awareness on the emotions, feelings, and reflections encountered when interacting with nature, including humans. This could open the door to another type of participation in environmental education, such as collective or youth-led actions to protect students’ living environment as called for by Villemagne and Sauvé (2021).

This study also highlights tensions between students and school staff, and between participation and education. In retrospect, the Green Committee was driven by a predefined notion—shaped by the school and adults—of what environmental change meant and how students should participate. Most of the time, this predefined notion entailed adopting transmissive approaches or confronting institutions without considering participation's relational and contextual dimensions (Grégoire-Labrecque, 2023). School staff struggled to recognize students' agency beyond the well-defined youth-led actions, thus making it difficult to take the time to reflect, listen, and act upon students' unique views on participation in schools. A stronger focus on relationality—through embodied pedagogies, through building relationships with nature in a broad sense, and through imagining futures together—could open up to a wider range of political participation practices, transform oneself and one's relationships to the world (including student-staff relationships), and ultimately create more meaningful and transformative participation.

In terms of participation limits to environmental education, the Engagement Committee could benefit from being more integrated with existing student committees. This raises questions about the timing and mechanisms for implementing student participation at the institutional level. The school service centre's environmental policy could have been a useful cross-cutting tool for reframing participation in a broad relation to environmental education. Generally, there could have been more cross-pollination across these initiatives, rather than them operating largely in isolation—an issue exacerbated by the pandemic preventing collective processes.

This study points to the value of layering participation pathways to environmental education for more coherent, consistent, meaningful, and transformational participation in schools. Layering different forms of participation provides a holistic and systemic perspective on environmental education (Wals et al., 2024), paving the way for a deeply relational participation at each level. This process has the potential to create more respectful relationships by supporting the interconnection of the more-than-human world in everyday life, providing for students' interests and concerns through listening as well as influencing decision-making. Combined, this multi-level perspective can foster empowerment among students, teachers, and administrators working within the school system. Infusing more reflection and intentionality in participatory and participation processes makes it also possible to challenge power structures in the political sense of participation.

A layering of participation also draws attention to the need for relational and political approaches to environmental education to inform one another, as a driver for action and as an ethic of collaboration. We suggest that this synergy can be supported by collaborative, creative, and embodied pedagogies as well as through everyday caring practices (Derr et al., 2025; Lasczik et al., 2023; Mitten, 2017; Tooth & Renshaw, 2020). We also propose recognizing the relational

and political dimensions of environmental education by reconnecting it to its historical aims: cultivating healthy, meaningful, and ethical relationships with nature and addressing ever-evolving climate change. Moving in this direction will, however, as Skovdal and Campbell (2015) identify, require adequate resources, external support, and awareness of schools' embeddedness in broader systemic challenges. In many ways, layering participation pathways calls for activism as a form of political participation. This positioning is part of embracing participation as a way of being, relating, learning together with nature, including humans, inside and outside of the school system.

Notes

- ¹ In Québec, the high school system is structured into five levels or years, known as Secondary 1 to 5.

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