



Significance of Lived Experiences in Developing Eco-Literacy

Pedagogical Insights for Climate Education

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Abstract

This article examines the eco-literacy of early youth, focusing on their consumption practices, everyday climate change activism, and performances of critical agency. By analyzing geosocial data from a recent study (Firinci Orman, 2024a), this piece underscores the significance of local contexts and relational understanding in climate education. It advocates for a pedagogical framework that emphasizes collective learning, creative expression, and place-based approaches to enhance climate literacy among young people. The findings support a participatory approach that empowers students to navigate the complexities of environmental challenges and cultivate eco-literate citizenship.

Keywords

Ecoliteracy, climate education, early youth, place-based pedagogies, participatory learning

Introduction

As climate crises escalate, fostering universal climate literacy among youth is urgent. Informed, active global citizens are vital, especially as young people take on key roles in environmental advocacy. Consider a study participant who made deliberate lifestyle changes (see Firinci Orman, 2024a): reducing meat consumption despite limited vegan options and encouraging friends to follow suit. They also forwent products like deodorant, believing small changes could collectively drive significant environmental benefits. This example highlights how eco-literacy shapes personal choices, linking everyday actions to broader environmental concerns.

Eco-literacy, as a broader term in this essay, encompasses the knowledge and skills necessary to engage with environmental issues and foster agency in addressing them (Rousell & Cutter-Mackenzie-Knowles, 2020). It refers to understanding the underlying principles that govern ecosystems and responsibly applying this knowledge to build sustainable communities and societies (Capra, 1997), while climate literacy specifically involves understanding the climate system, climate change science, and solutions to inform decision-making and action. Together, they equip individuals with the awareness and expertise needed to contribute to global sustainability and tackle the climate crisis.

In this essay, I reflect on my research practice in studying the eco-literacy of early youth (ages 13–17), focusing on their subjectivities, consumption, and climate activism (see Firinci Orman, 2024a, 2025). This work is part of a broader interdisciplinary, and multi-site research project on youth environmental citizenship, involving young people from Bulgaria, Turkey, Finland, and the UK (see Firinci Orman, 2024b). My study on eco-literacy included an online mapping activity, in-depth interviews, and free-style writing, through which participants reflected explored their everyday activism performances as well as their environmental identity formation. Framing these findings within critical eco-pedagogical frameworks such as place-based education, climate change education, and global citizenship education, I offer insights for educators fostering climate literacy through innovative, context-sensitive teaching—empowering students to engage with local environments, understand global interdependencies, and actively participate in sustainable practices.

Understanding Eco-Literacy in Context

Understanding eco-literacy in context requires a nuanced exploration of how young people internalize and act on their awareness of environmental issues in their daily lives. This practice-oriented reflection builds on my recent study (Firinci Orman, 2024a, 2025), which highlights the role of lived experiences in shaping early youth's eco-literacy performances. These performances demonstrate the ability to connect consumerist culture with the larger climate crisis, translating awareness into actionable everyday behaviors.

For instance, one participant from the study reevaluated their clothing choices after learning about the environmental and ethical implications of fast fashion. This individual began purchasing second-hand clothing online, despite recognizing the limited options available. Their decision was deeply influenced by an emotional response to visual media such as Instagram and YouTube, depicting the destructive impacts of fast fashion, which provoked a shift in their ethical perspective.

I further draw on previous research showing that while early youth are increasingly aware of the climate crisis, their eco-literacy is shaped by local contexts and experiences (Firinci Orman, 2023, 2025). The depth of their ecological understanding is strongly influenced by their surroundings (Pitman & Daniels, 2020). Local environmental experiences—material, social, and political—play a crucial role in shaping eco-literacy (Börner et al., 2021).

Pedagogical insights for teaching climate literacy

Developing Tools for Collective Learning

Studying eco-literacy of young people, I used an online mapping exercise with Padlet as part of the methods. In this exercise, I asked participants to mark places that are important to them across various scales (neighborhood, city, country, region, and global). Using sticky notes, participants reflected on their climate and consumption-related experiences. This mapping, grounded in Kallio's (2021) topological approach, is useful for exploring young people's subjectivity, spatial attachments, and the political dimensions of climate experiences (see Firinci Orman, 2025).

The platform supported both synchronous and asynchronous participation, enhancing accessibility for diverse participants in remote or hybrid settings. It included

youth from Turkey, Bulgaria, and, more recently, Finland. Participants represented rural and urban backgrounds with varying cultural and socio-economic contexts, all shaped by their society's welfare system. I asked participants to also color-code their emotional responses: green for hope or positive change, red for concern or anxiety, and yellow for uncertainty or mixed feelings. This approach allowed students to visually track their emotional reactions, fostering a deeper understanding of the emotional impact of climate change. The exercise not only mapped locations but also created a semi-public space to express and discuss climate-related issues on multiple scales (see Figure 1).

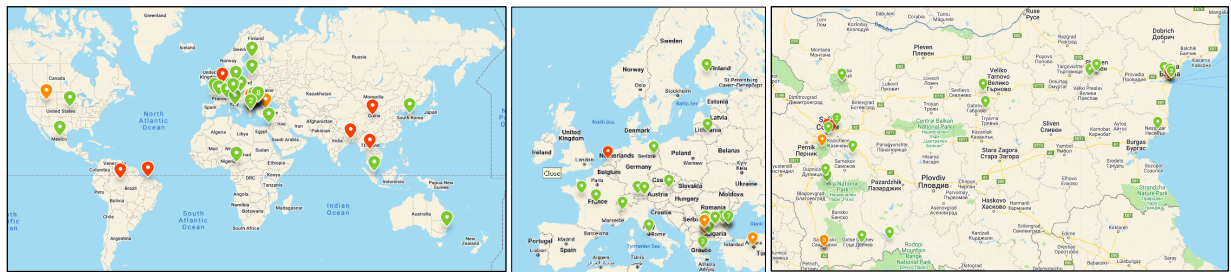


Figure 1: Padlet map where participants from Bulgaria pinned notes reflecting their lived experiences on different scales (World, Europe, and Bulgaria maps, respectively).

I analyzed the mapping data through three dimensions of geo-socialization: intersubjective (intergenerational dynamics), spatial (topological—sociality embedded in all spatial relations), and political (politicization—what matters in people’s lived worlds) (Kallio, 2018). Participants reflected on places they had lived, currently reside, visited for family or friends, traveled to or moved to as internal or external migrants. They marked places learned about or discovered online, often tied to personal interests, as well as envisioned future destinations or potential homes.

After the activity, participants were interviewed to discuss, compare, and evaluate these places from an environmental perspective, revealing their eco-literate worldviews. Some identified countries as major polluters or associated them with unsustainable policies. Others reflected on environmental injustices and colonial legacies. One participant, for example, marked a resort village with a dam, where they regularly collected garbage—an experience they described as meaningful and rewarding (Firinci Orman, 2025). Further discussion revealed their involvement in a grassroots environmental movement, where they and their friends conducted clean-ups

using boats, integrating water sports with environmental activism. This example illustrates how personal experiences, and social interactions shape young people's eco-literate worldviews.

Similar mapping activities in climate literacy education can validate young people's lived experiences, fostering deeper discussions on the climate crisis and decision-making. These activities incorporate learners' cultural and social knowledge, reflecting diverse participation beyond formal or adult-led learning, including their everyday climate engagement.

Educators can encourage students to reflect on their choices and emotional responses to different places, exploring why certain locations evoke strong feelings and how they relate to broader environmental and social issues. Since learning is inherently social, educators should create opportunities for students to share experiences and collaborate on climate initiatives. From this angle, creating a collective map on Padlet (see Figure 1) could enable young people to learn from others' experiences and foster a sense of collective agency on issues that matter to them.

The Role of Local Contexts

The findings highlighted the importance of local contexts in shaping young people's understanding of climate issues. Participants began their learning journeys based on their environments, connecting local challenges to global concerns (Beckwith et al., 2022). For example, young people in grades 8 to 11 from diverse regions in Turkey and Bulgaria shared experiences of marine ecosystem degradation, wildfires, rising temperatures, drought, and urban issues such as pollution and waste management. Discussing these local challenges within the broader climate crisis helps students recognize their relevance and urgency, linking their immediate environment to global concerns. This approach is key for effective climate literacy education, encouraging critical reflections on their role in addressing global challenges (Häggström & Schmidt, 2020).

Place-based pedagogies, bringing the local context into focus, significantly enhance climate literacy. They connect students to local ecological and social issues, fostering a deeper understanding of their environments (Häggström & Schmidt, 2020). Dunkley (2018) emphasized the importance of space-time-aware learning experiences

in eco-pedagogy, highlighting how these encounters are key to developing an understanding the interrelation of nature and culture. This was evident through my data as many young participants reflected on school-led garbage collection projects where they practiced firsthand care to their local environments (Firinci Orman, 2024a; 2025).

Emphasizing Relational Understanding

Individuals with eco-literacy skills usually connect causes and effects, particularly between consumerist culture and the climate crisis. I explored how young people's daily actions reflect their critical awareness, demonstrating the intersection of local behaviors with global environmental issues. These insights are reflected in everyday decisions and practices that show a deeper understanding of climate challenges.

For instance, one participant reflected on how seemingly small, local actions—like purchasing a pair of jeans—can have far-reaching consequences (see Firinci Orman, 2024a). They described how consumption choices contribute to larger issues, such as the exploitation of child labor in South Asia or the environmental costs associated with the production and transportation of flowers. This example underscores the relational understanding of how local actions are interconnected with global environmental concerns.

Teaching climate literacy requires linking personal experiences to broader environmental contexts. For example, encouraging students to analyze their consumption habits fosters critical thinking and reflection (Keto & Foster, 2021). My findings show participants critically examining consumerism's role in the climate crisis, underscoring the need for education that connects local, global, and planetary perspectives (Firinci Orman, 2024a, 2025; Crouzé et al., 2024). Educators can deepen such discussions by prompting students to relate everyday choices—food, fashion, or transport—to larger environmental challenges.

Empowerment through Participation

Fostering responsive subjectivities in young people starts with their lived experiences and local contexts. (Häggström & Schmidt, 2020). Recognizing their agency across formal, informal, and non-formal participation is crucial. This includes institutional activities (e.g., school projects), peer-led initiatives (e.g., campaigns), and self-initiated actions reflecting environmental identity (e.g., vegetarianism, reducing consumption, signing petitions). The latter, or interpretive agency, links consumption habits to broader environmental issues, embedding climate activism in daily life. One participant highlighted low environmental awareness in their community, stressing the need for public education, especially among local authorities, to address green space shortages and urban challenges (Firinci Orman, 2024a). They argued that traditional classroom education is ineffective, advocating for popular media and social platforms to engage young people in environmental messaging.

Social media plays a key role in youth climate activism, especially where formal participation opportunities are limited (Firinci Orman, 2024a). Young people eagerly engage in everyday activism, influencing their communities in diverse ways (Firinci Orman, 2025). This highlights the need for educational frameworks that empower students beyond adult-directed initiatives, fostering self-organization and advocacy. Educators should create spaces for students to voice concerns, collaborate with their community, and push for sustainability, reinforcing that climate education must be transformative, not just informative (Rousell & Cutter-Mackenzie-Knowles, 2020).

Teaching climate literacy through artistic expression fosters critical agency (Misiaszek, 2022), with participatory projects like visual or digital climate narratives enabling students to share experiences and engage others through media, presentations, or art workshops (Beach & Smith, 2023).

Conclusions

My research on youth environmental citizenship highlights systemic barriers to eco-literacy in climate activism (Firinci Orman, 2024b), especially within traditional education (see Firinci Orman, 2024a, 2025). In some countries youth participation in environmental movements faces barriers, while activism takes diverse forms, from protests to ethical consumerism and everyday resistance (Firinci Orman, 2022, 2023,

2024a). Educators must address these constraints by fostering resilience and critical thinking through collective learning, digital tools, and context-sensitive approaches. Eco-literacy promotes systemic, sustainable solutions through place-based learning, participation, and critical reflection (Dunkley, 2016). Early youth eco-literacy integrates awareness, emotion, and agency, linking personal actions to broader climate issues. Participatory approaches nurture both individual agency and collective sustainability commitments.

As climate crises escalate, inclusive, dialogical practices are vital. Centering youth voices helps shape sustainable solutions that bridge local and global challenges. Equipping young people with critical, action-oriented skills empowers them to lead in building a resilient, sustainable future (Crouzé et al., 2024).

References

- Beach, R., & Smith, B. E. (2023). *Youth Created Media on the Climate Crisis*. Routledge.
- Beckwith, L., Smith, M.B., Hensengerth, O., Nguyen, H., Greru, C. & Warrington, S. et al. (2023) Youth participation in environmental action in Vietnam: Learning citizenship in liminal spaces. *The Geographical Journal*, 189, 329–341. <https://doi.org/10.1111/geoj.12479>
- Börner, S., Kraftl, P., & Giatti, L. L. (2021). Blurring the ‘-ism’ in youth climate crisis activism: Everyday agency and practices of marginalized youth in the Brazilian urban periphery. *Children’s Geographies*, 19(3), 275–283. <https://doi.org/10.1080/14733285.2020.1818057>
- Capra, F. (1997). *The web of life: A new scientific understanding of living systems*. Anchor Books.
- Crouzé, R., Godard, L., & Meurs, P. (2024). Learning democracy through activism: The global climate strike movement and Belgian youth’s democratic experience in times of environmental emergency. *Social Movement Studies*, 23(1), 56–71. <https://doi.org/10.1080/14742837.2023.2184792>
- Dunkley, R. A. (2016). Learning at eco-attractions: Exploring the bifurcation of nature and culture through experiential environmental education. *The Journal of*

- Environmental Education*, 47(3), 213–221.
<https://doi.org/10.1080/00958964.2016.1164113>
- Dunkley, R. A. (2018). Space-timeScapes as ecopedagogy. *The Journal of Environmental Education*, 49(2), 117–129.
<https://doi.org/10.1080/00958964.2017.1417223>
- Firinci Orman, T. (2022). Youth’s everyday environmental citizenship: An analytical framework for studying interpretive agency. *Childhood*, 29(4), 495–511.
<https://doi.org/10.1177/09075682221107750>
- Firinci Orman, T. (2023). Enacting everyday environmental citizenship: Youthful interpretations of belonging and empowerment. *Youth and Globalization*, 5(2), 327–351. <https://doi.org/10.1163/25895745-bja10032>
- Firinci Orman, T. (2024a). Exploring youth eco-literacy through lived experiences. ‘When you purchase a pair of jeans, you bear the burden of child labor in South Asia.’ *The Journal of Environmental Education*, 1–15.
<https://doi.org/10.1080/00958964.2024.2345354>
- Firinci Orman, T. (2024b). Exploring the lived experiences of youth in the context of climate change: A geo-social and performative approach to study environmental citizenship. In S. Spišák (Ed.), ECQI2024. *Participation, collaboration and co-creation: Qualitative inquiry across and beyond divides. Congress Proceedings.* (pp. 154–161). Helsingin yliopisto. https://storage.googleapis.com/smooty-1220.appspot.com/uploads/4112/1718106409_ECQI2024Proceedings.pdf
- Firinci Orman, T. (2025), Everyday Activism Performances and Liminal Political Positionings of Early Youth in Bulgaria: Learning to Be Environmental Subjects. *Youth*. 2025; 5(1), 1-25. <https://doi.org/10.3390/youth5010025>
- Häggström, M., & Schmidt, C. (2020). Enhancing children’s literacy and ecological literacy through critical place-based pedagogy. *Environmental Education Research*, 26(12), 1729–1745. <https://doi.org/10.1080/13504622.2020.1812537>
- Kallio, K. P. (2018). Citizen-subject formation as geosocialization: A methodological approach on ‘learning to be citizens’. *Geografiska Annaler: Series B, Human Geography*, 100(1), 81–96. <https://doi.org/10.1080/04353684.2017.1390776>
- Kallio, K. P. (2021). Topological mapping: Studying children’s experiential worlds through spatial narratives. In L. Moran, K. Reilly, & B. Brady (Eds.), *Narrating*

- childhood with children and young people. Studies in childhood and youth.* Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-55647-1>
- Keto, S., & Foster, R. (2021). Ecosocialization – An ecological turn in the process of socialization. *International Studies in Sociology of Education*, 30(1–2), 34–52. <https://doi.org/10.1080/09620214.2020.1854826>
- Misiaszek, G. W. (2022). An ecopedagogical, ecolinguistical reading of the Sustainable Development Goals (SDGs): What we have learned from Paulo Freire. *Educational Philosophy and Theory*, 54(13), 2297–2311. <https://doi.org/10.1080/00131857.2021.2011208>
- Pitman, S. D., & Daniels, C. B. (2020). Understanding how nature works: Five pathways towards a more ecologically literate world – A perspective. *Austral Ecology*, 45(5), 510–519. <https://doi.org/10.1111/aec.12883>
- Rousell, D., & Cutter-Mackenzie-Knowles, A. (2020). A systematic review of climate change education: Giving children and young people a ‘voice’ and a ‘hand’ in redressing climate change. *Children’s Geographies*, 18(2), 191–208. <https://doi.org/10.1080/14733285.2019.1614532>