

Environmental Education: Expanding Access Here, There, and Everywhere

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BACKGROUND

- Environmental education (EE) offers a multitude of benefits ranging from individual welfare to broader cultivation of environmental stewardship.
- Expanding access will yield broad and profound benefits for communities historically deprived of such opportunities. And, we need a broad range of perspectives to address the climate crisis most efficiently and inclusively.
- However, the barriers to environmental education disproportionately impact underrepresented communities.

RESEARCH QUESTION

What are the barriers to environmental education and what strategies can be employed on a small scale to increase access?

INTERNSHIP/METHODS

- I interned with Fiddleheads Forest School, an outdoor preschool, at the University of Washington Botanic Gardens.
- Throughout the Summer, I learned how to create nature-based curricula and the general elements and importance of EE.
- I conducted 6 informational interviews with experts in the field and asked questions about the barriers various communities face and the solutions to alleviate them.
- I completed a literature review to acquire background information, specifically on how the barriers impact underrepresented groups.



Figure 1. I produced a Nature Busy Box, which aims to expand on existing curricula to include environmental elements (i.e., on the right is the nature alphabet activity). This box contains 10 environmental-based activities, geared toward 4-6 year-olds.

BARRIERS ← RESULTS → SOLUTIONS

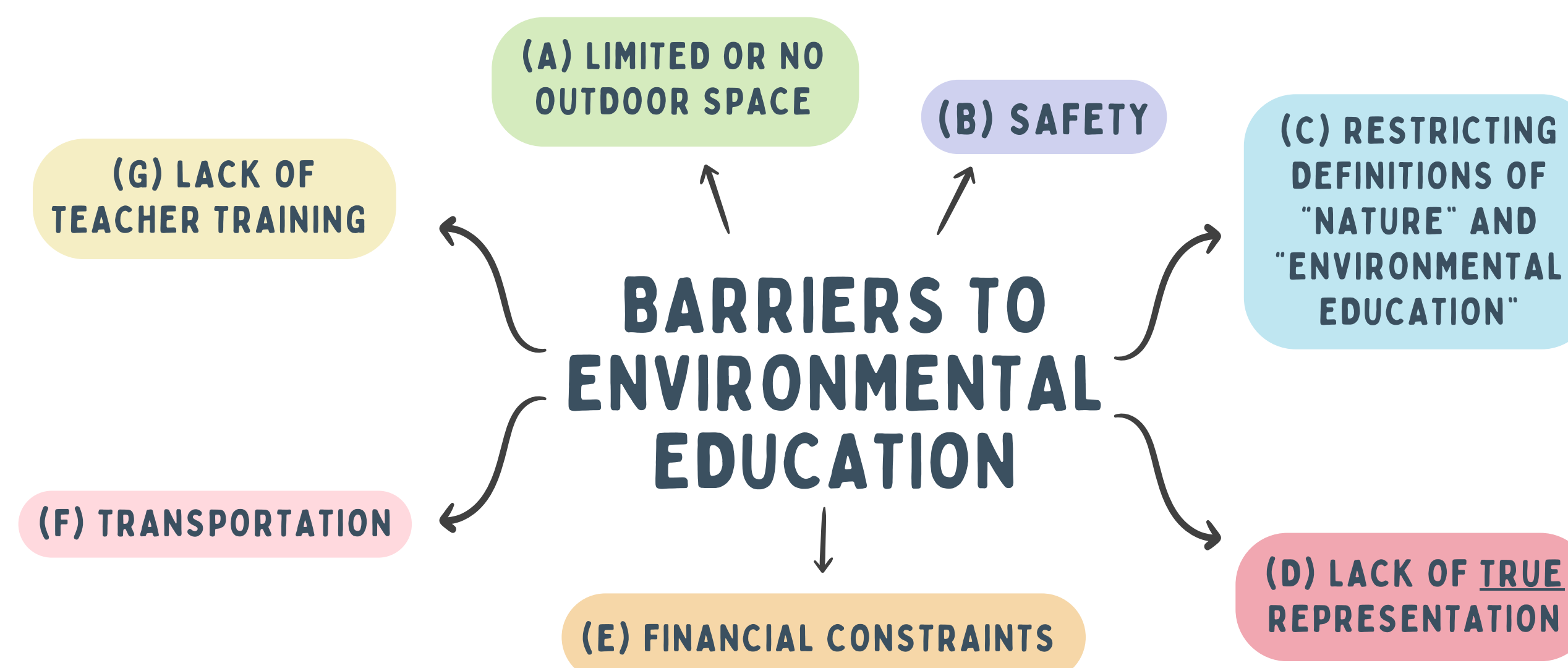


Figure 2. Barriers to environmental education. This mind map shows the main barriers including (a) limited or no outdoor space, (b) safety (e.g., environmental health hazards and feeling unsafe and/or uncomfortable in any given space), (c) restricting definitions of “nature” and “environmental education” (e.g., excluding urban environments in our conversations around nature), (d) lack of true representation (e.g., representation not accurately reflected in outdoor spaces), (e) financial constraints (e.g., lack of outdoor resources, lack of gear, etc), (f) transportation (e.g., not being able to attain transportation to outdoor spaces), and (g) lack of teacher training (e.g., teacher biases negatively impacting how students learn).

- These barriers extend across many communities, each facing unique challenges respective to their cultural and historical backgrounds.
- True representation is reflected in depictions and in practice.
- People aren’t likely to participate, or feel safe, in outdoor settings if they don’t see anyone who looks like them or shares similar experiences to them (Finney 2014).
- Our restricting definitions of “nature” leave out urban characteristics leading people to believe that they need to travel to nature in order to reap the benefits. Our language plays a role in how we think about and apply these terms.

Table 1. The following solutions address the aforementioned barriers. Multiple solutions respond to more than one barrier and many of them work more effectively when applied simultaneously.

Solutions/Barriers Addressed	Implementation/Examples
Expanding Existing Curriculum B C D E F G	Supplementary class materials that include environmental elements (See Figure 1).
Community Engagement B C E F	Community-led programming and meeting people where they’re at (e.g., community gardening events, community-led hikes, etc.)
Increase Anti-racism + DEI Teacher Training B C D G	Identify the specific needs of your teachers and community. Utilize online resources (e.g., websites, blogs, and platforms, etc). Infuse anti-racism and DEI principles into teaching.
Actively Increase Diversity in Outdoor Spaces B C D	This includes engaging diverse communities in outreach and outdoor activities, hiring leaders from various backgrounds, and ensuring the relevance of educational materials.
Expand Definitions of “Nature” and “Environmental Education” C F	Incorporating urban characteristics in our definitions expands their applicability to a wider array of communities and individuals.
Advocate For and Support Environmental Justice Efforts A B D	Educate yourself on local environmental injustices; connect with community members, activists, and organizations; participate in community action; and be persistent!

NEXT STEPS

- The solutions should be prioritized based on your specific community needs, however, the solutions are most effective when implemented concurrently with one another.
- While this research primarily focuses on small-scale solutions, the barriers identified impact communities on a much larger scale. In order to fully combat issues of equity in environmental spaces, large-scale, structural changes will be necessary.
- Future of Busy Box (Figure 1): The box will be given to a Seattle public school at the end of the year. I intend to follow up with the school to gather feedback from teachers regarding what was effective and what may need improvement.

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