

## Water Conservation & Youth Education

CODE220: Alexandra Guerrero, Payton Plummer, Tamiria Dixon



## why we are interested in this topic

Our group had an interest in education and its importance to shaping the world. How and what we are taught through our educational year reflects the action we take as adults and the way we see things. That's why our group decided to focus on the educational area of water conservation.

We have been working on the water crisis along the Southern American Bottom since the first semester of our freshman year. We have since then grown very passionate about influencing the new generation about good water practices so they can combat these wicked problems in their lifetime.



## Research Question

Do Elementary-age Children Who Receive Water Conservation Education Apply Water Conservation Practices at Home?



## Summary of Evidence

#### **Findings**

Environmental education at any young age-early childhood, childhood, adolescence-can positively shape environmental knowledge, attitudes, and, in many cases, behaviors

Interactive, experiential, and contextually relevant education works best

Behavior change is possible, but long-term maintenance remains a challenge

Holistic benefits beyond environmental outcomes

Equity, context, and design matter.

- Early Childhood Environmental Education: A Systematic Review of the Research Literature
- The article Promoting Youth Involvement in Environmental Sustainability for a Sustainable Future
- Impact of Educational Interventions on Early Adolescents' Attitudes and Behaviors Toward Water Conservation: A Systematic Review





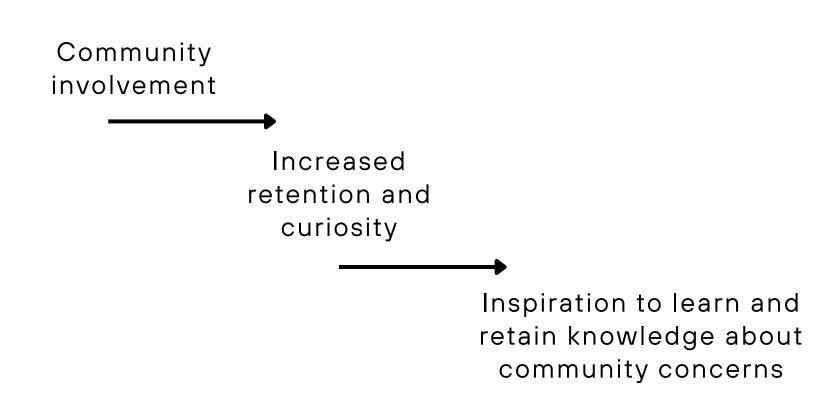
## Summary of Evidence

### **Research Articles**

#### **Emerging Themes**

- Exposing children to community increases advocacy
- Hands on and community engagement increases retention
- These experiences encompass qualities in youth such as collaboration and critical thinking

#### Significance to research question



Kids in Communities Study (KiCS) → Australian Early Development Census

## Summary of Evidence

## **Science Communication Articles**

#### **Article**

- "Learning about and Taking Action for the Environment: Child and Teacher Experiences in a Preschool Water Education Program."
- "Youth Engagement in Water Conservation: Educating and Empowering the Next Generation. Adi Partners in Development"
- "Does environmental education benefit environmental outcomes in children and adolescents? A meta-analysis"

## **Evidence of improvement**

- education
- age differences in research
- activity type

#### **LONG TERM IMPACT**

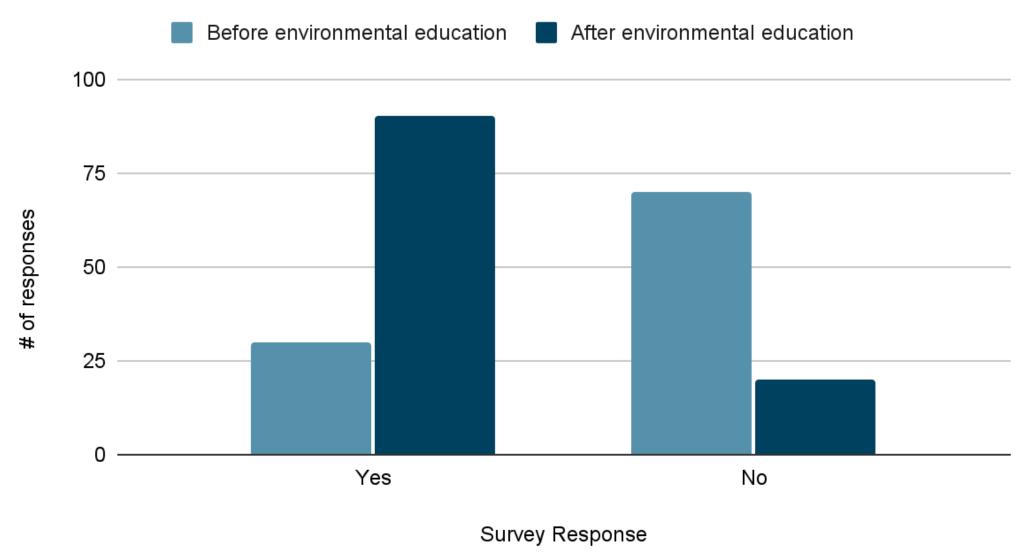
- Building sustainable habits
- Preserves future access
- Encourages innovation



## Proposed Experiment

Survey children before and after a water conservation or environmental education course, asking if they apply water conservation practices in their home.

#### Do you apply water conservation practices in your home?



SIUE



Water conservation is essential throughout our research to prove our hypothesis. We were able to gather information that supports our question, yes. Kids who were taught in some form of water education in conversation through schools or programs showed they practiced habits in school and outside, too, at home.

From our research, we learned more about the factors that play a role in educating kids to take care of our environment, and how teaching them also helps them teach others around them. As we come to reflect on what we learn and information we found we notice that there isn't that many articles and information directly into the top of teaching young children about water conservation and most of our information had to do with schools and programs on other sides of the world.

# Summary & & Reflections

## References

Trott, C. D., Weinberg, A. E., Frame, S. M., Jean-Pierre, P., & Even, T. L. (2023). Civic science education for youth-driven water security: A behavioral development approach to strengthening climate resilience. *International Journal of Behavioral Development*, 48(2), 145-155.

<a href="https://doi.org/10.1177/01650254231188661">https://doi.org/10.1177/01650254231188661</a> (Original work published 2024)

Goldfield et al. "Findings from the Kids in Communities Study (KiCS): A Mixed Methods Study Examining Community-Level Influences on Early Childhood Development." *PLOS ONE*, vol. 16, no. 9, 1 Sept. 2021, p. E0256431, https://doi.org/10.1371/journal.pone.0256431.

Alexandra

Van de Wetering, J., Leijten, P., Spitzer, J., & Thomaes, S. (2022). Does environmental education benefit environmental outcomes in children and adolescents? A meta-analysis. *Journal of Environmental Psychology*, 81, 101782. <a href="https://doi.org/10.1016/j.jenvp.2022.101782">https://doi.org/10.1016/j.jenvp.2022.101782</a>

adi Partners in Development (2024, June 5). Youth Engagement in Water Conservation: Educating and Empowering the Next Generation. Adi Partners in Development. <a href="https://www.adi-international.org/youth-engagement-in-water-conservation/">https://www.adi-international.org/youth-engagement-in-water-conservation/</a>

Melinda G. Miller, et al. "Learning about and Taking Action for the Environment: Child and Teacher Experiences in a Preschool Water Education Program." *Children, Youth and Environments*, vol. 24, no. 3, 2014, pp. 43–57. *JSTOR*, <a href="https://doi.org/10.7721/chilyoutenvi.24.3.0043">https://doi.org/10.7721/chilyoutenvi.24.3.0043</a>. Accessed 4 Nov. 2025.

Reckner et al. "Impact of Youth Education on Green Stormwater Infrastructure Recommendations to Increase Equity and Resilience in Marginalized Communities." *Journal of Water Resources Planning and Management*, vol. 150, no. 9, Sept. 2024, <a href="https://doi.org/10.1061/jwrmd5.wreng-6315">https://doi.org/10.1061/jwrmd5.wreng-6315</a>.