Elementary Civic Science Education: A Farm-Universe-Library Partnership
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Study Purpose
This community-engaged research (CER) project partners with community stakeholders as rich knowledge sources (Moll, 2019), in developing a locally relevant pedagogical approach for elementary environmental sustainability education. This study builds on previous research in environmental sustainability education by implementing and analyzing a civic science community-engaged partnership across a university teacher preparation course, regional farm, county soil & water conservation district, and public library. Findings have focus on the library event learning outcomes and future community engagement efforts. Implications for teacher education, policy, and practice are offered, including in community-based settings.

Theoretical Framework

Search Methods
• Searched ERIC EBSCO in Fall 2021 as an expanded search using terms “elementary school or primary school or grade school” AND “environmental sustainability or environmental impact or environmental importance” AND “children’s books or pictures or books or children’s literature.
• Criteria for inclusion: Article relevancy for review purpose to identify recent best practices for engaging elementary students in environmental sustainability curricula, particularly through curricular use of children’s literature.
With the above search criteria, there were 10 recent results from 2000-2018, with us to be particularly relevant for the purpose of the literature review.

Promising Practices
• When implementing environmental sustainability lessons across grade levels, teachers should connect learning to academic standards, check for evidence of prior learning, address misconceptions, engage in in-service through inquiry-based exploration of topic, and share learning via presentation.
• Children’s books and media may be supportive resources for engaging K-6 learners in rich discussions about environmental sustainability. Student led projects and research informed by instructional strategies, such as project-based and place-based education, have also produced meaningful discussions and learning around environmental sustainability.

Examples
• Meade (2010): Students introduced to environmental sustainability early in school context.

Positive Learning Outcome
• Napoli (2011): Integrating quality environmental sustainability literature into elementary curricula supported young readers in making positive changes in their world.
• Schroth (2010): Student engagement in environmental sustainability early in school context provided learning and discipline for later inquiry-based science lessons.

Challenges
• Schroth and Heifer (2017) Challenges integrating environmental sustainability education into curricula include identifying a good fit between content and grade level, state academic standards supporting sustainability education, materials to support meaningful lesson plans, and effective instructional methods.
• Merritt et al. (2018) Environmental sustainability education must be relevant to the region, community and students. Curricula cannot be packed to fit all school contexts.
• Schroth (2010): Difficulty and importance of forming a sense of agency in young students learning about sustainability issues. Play-based approaches to learning can be engaging, but subject to distraction.
• Plankis et al. (2016) Moderate a play-based approach with a critical ethical lens in examining environmental justice issues.

Justicia et al. (2014) Emphasized that teacher education programs need to be willing to learn from K-12 teachers in elementary environmental sustainability education, just as these programs did when partnering with a 6th grade class already engaging in environmental sustainability education.

Study Methods
• This study practices community engaged research (CER) shaping how data is collected and understood (Berman, 2008). Community engaged research is committed to “local, trans-local, and contextual analysis” leading to “social and institutional transformation” (Berman, 2008, p. 510). This study practices community-engaged research in that a primary focus is agency building (Berman, 2008, relationship building (Liu, n-r)), and “understanding the complexities of the human experience” more intimately (Bar & Swiecicki, 2020, p. 146).

Community Engaged Project
Three elementary teacher candidates (candidates) who completed a university teacher preparation course in creating integrating environmental sustainability education, studied the literature, and analyzed data from the library event setting. These candidates sought to engage their future students as part of the library’s outreach for Earth Day. The candidates shared authentic children’s books and sustainability educational materials to children in the library’s community outreach for Earth Day. Thus, this study encourages community engaged research (CER) in teacher education that develops local knowledge. In their experience (2016-2020), involving teachers, teacher candidates, faculty, and community partners in a reciprocal and ongoing work of CER is being implemented in a variety of ways, the partnership must be central.

References

Librarians: Effective Storytime Strategies
Librarians: Future Suggested Storytime Strategies
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