

DEVELOPING SUSTAINABILITY RELATED ATTITUDES AND 21ST CENTURY SKILLS THROUGH INFORMAL LEARNING OPPORTUNITIES

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Abstract

Informal learning environments, like libraries and museums, are known to improve student achievement and motivation (Bartels 2001). A meta-analysis reports on the strong positive effects of after-school programs on feelings and attitudes and school performance (Durlak et al, 2007). When working on after-school programs, middle and high school students may develop skills like communication, collaboration, creativity, critical thinking, information literacy, and digital literacy. Such a program was offered by a 501c(3) organization as an informal learning opportunity. As part of this program, high school student volunteers living in the United States (US) designed and delivered learning experiences for elementary and middle school students living in rural regions in India. Adult volunteers supervised and helped coordinate these events that were delivered virtually on WhatsApp and Zoom. This brief provides preliminary observational results to answer the questions: How effective were the informal learning opportunities (a) in changing environmental sustainability related attitudes and behaviors and (b) in gaining 21st century skills for student volunteers in the US and the students from rural India.

Methodology and Findings

In this in-progress mixed methods research study, data is being collected from high school student volunteers living in the US, and the elementary and middle school students in rural regions of India through observations, surveys, and interviews. Preliminary analysis of observational data reveals the learning gained from participating in the after-school programs offered by the 501c(3) organization. The learning experiences designed and developed by the high school student volunteers are geared towards promoting water conservation, reducing energy use, recycling, and other sustainability related topics. All these experiences may promote changes in attitudes and behaviors towards environmental sustainability among the student volunteers living in the US who organize the events and also among the Indian students who participate in these informal educational programs.

In addition, several other events are organized by the high school student volunteers, such as spelling competitions, debates, and show-and-tell that promote English language learning among the Indian students. These activities help volunteers and attendees gain confidence in speaking to a large audience, conducting online research, using digital tools to create infographics, and connecting with others on web conferencing platforms. These may promote the development of 21st century skills like communication, collaboration, critical thinking, creativity, information literacy, and digital literacy.

At present, observational data is being collected along with artifacts that showcase the efforts of the high school student volunteers and the achievements of students in India. In the second phase of this multi-year research project the Attitudinal Learning Instrument (Watson et al., 2018) will be administered to explore attitudinal learning about environmental sustainability. Next, all participants will be interviewed to understand their experiences and how they were able to develop 21st century skills through these after-school programs.

References

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