

Engaging Indigenous Communities in Citizen Science

Eliza Jane Reilly¹, Jonathon Richter², Denielle Perry³

¹ National Center for Science and Civic Engagement & Stony Brook University

² Salish Kootenai College

³ Northern Arizona University

eliza.reilly@stonybrook.edu, jonathon_richter@skc.edu,
denielle.perry@nau.edu

Abstract. Invited panel at iLRN 2018 presented by the National Center for Science and Civic Engagement (NCSCE) and Montana Transcending Barriers: Connecting Indigenous and Western Knowledge Consortium.

Keywords. Civic engagement

1 Description of Presentation

The National Center for Science and Civic Engagement (NCSCE) has launched a new initiative, funded by the Keck Foundation, to advance durable and equitable collaborations between indigenous communities and local educational organizations. The aim of this initiative is twofold: to provide engaging, inquiry-based learning opportunities around environmental and health challenges of immediate relevance and interest to indigenous youth and their communities, and to transcending perceived conflicts between “traditional” and “western” scientific knowledge. During this Invited Guest Panel presentation, members of this “Transcending Barriers to Success: Connecting Indigenous and Western Knowledge” consortium (Hawaii, Alaska, California, Arizona, and Montana) will present an overview of the project and highlights of their respective statewide efforts. The panelists hope to engage the Immersive Learning Research Network conference attendees in conjuring immersive learning possibilities related to these rich, diverse, and compelling community contexts.

A goal of this presentation is to leverage this project and NCSCE’s national community of innovative STEM educators as a catalyst for deeper engagement with members of the iLRN community who have expertise in these multimodal digital exhibits that are increasingly integrated with physical presentations (cultural artifacts, land, water). These are a new form of “immersive learning” space now popularly called “[X-Reality](#)”.

2 Montana Transcending Barriers: Connecting Indigenous and Western Knowledge

Montana Transcending Barriers: Connecting Indigenous and Western Knowledge is organized around Salish Kootenai College's Tech4Good outreach projects and partners with the Confederated Salish and Kootenai Tribes' Natural Resources Department, the EAGLES Youth program, Native Teaching Aids, Riparian Games, the Watershed Education Network, and The University of Montana's SpectrUM Discovery Center, Broader Impacts Group, and Flathead Lake Biological Station.

3 The National Center for Science and Civic Engagement

The National Center for Science and Civic Engagement (NCSCE) is a dynamic and inclusive network of innovative educators committed to advancing STEM capacity and civic engagement. Its signature program SENCER (Science Education for New Civic Engagements and Responsibilities) helps educators connect civic issues to STEM content by encouraging a multidisciplinary and project-based approach to formal curriculum and out-of-school learning, actively engaging students in authentic real-world problem-solving that fosters transferable skills for citizenship and career success. Since 2001, the educational work of NCSCE has been supported by the National Science Foundation and a range of other public and private foundations. It now serves more than 500 formal and informal educational institutions, reaching over 6,000 educators, administrators, and community-based representatives through symposia, leadership programs, consultations, and online resources, impacting hundreds of thousands of students. NCSCE supports institutional collaborations across sectors, including the academy, government, and NGOs. NCSCE develops regional leadership through nine SENCER Centers for Innovation (SCIs), offering expertise, local support for members of the SENCER community, and meetings and workshops to complement national professional development symposia.

4 Presenters

Dr. Eliza Jane Reilly, executive director of NCSCE and project PI, Research Professor at Stony Brook University

Jonathon Richter, Lead Instructor and Dept Chair, Media Design, Film, & Television, Salish Kootenai College

Denielle Perry, Assistant Professor, School of Earth Sciences and Environmental Sustainability, Northern Arizona University