Digital Technologies in the POSOH Project: Tools for Reflection and Capacity Building Through Leadership Development in American Indian Communities of Northeast Wisconsin

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POSOH Project
Place-Based Opportunities for Sustainable Outcomes and High-Hopes
Main Questions

- What is the importance of local capacity in science education for contemporary US American Indian communities?
- What is the intersection between local capacity and sustainable development in indigenous rural contexts?
- What is the potential of educational media to improve science education for American Indian students?
Culturally Relevant Pedagogy

• Student learning from the development of intercultural competence,

• Promotion of sociopolitical consciousness, and transformative teaching practices that lead to social justice in education

• Promote academic achievement and rigor in education

Source: Gloria Ladson-Billings’ framework (1995)

FORMS OF LOCAL CAPACITY

• Teachers’ abilities to serve rural/tribal youth creating positive impact

• Students take initiative to generate knowledge and implement change locally

• Increased interest in science and sustainability-related careers

• Community access to educational resources to support students and families.

• Teachers and students produce artifacts that update cultural, and local dialogues and knowledge in sustainability.
Educational Digital Media

- increases the quality of artifacts
- promotes interaction among education, tribal communities, and local/regional industry
- supports participants to deliver local, cultural, and scientific knowledge
- improves how technology is used in science inquiry and learning
The POSOH Project
Place-based Opportunities for Sustainable Outcomes and High-Hopes

5-year USDA funded project awarded to University of Wisconsin-Madison and College of Menominee Nation and Sustainable Development Institute.

1) Reflective tool for teachers
2) Students engaging in science and environmental education beyond the classroom.
3) Communicating contributions of indigenous science in western science

Multifaceted and systemic approach working across public and tribal schools, colleges, universities, and involving communities and culture-keepers.
POSOH’s APPROACH

- Strengthen teaching and learning environments
- Engage students in meaningful and rigorous science learning
- Create opportunities for community education to complement formal science education
- Support tribal sovereignty, educational self-determination, cultural self-representation and identity

70% Teachers increased abilities to serve rural/tribal youth

POSOH Progress to date

34% High School students increased ability to impact science education in the community

60% Teachers increased scientific and cultural content knowledge
Instructional media used as an evidence and inquiry tool in science units

“Artifacts” create alternative spaces outside and inside classrooms and worktable settings

Educational Digital Media creates evidence of negotiated cross-cultural learning processes
Decolonizing Local Capacity:
Articulating multi-contextual teacher’s views
Promoting Indigenous Students Self-representation and reengagement with Science Education
Articulate POSOH’s model of community science education, using digital media artifacts

Create dissemination media networks in schools and community outlets

Expand digital media libraries connected to opportunities for internships/externships

Advance a relevant model for other US Native Tribal communities

http://posohproject.org
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