

**25th NSF EPSCoR National Conference – <http://nsfepscor2017.org>
Sunday, Nov 5, 2017-11-09
Pre-Conference Workshop Report Out**

**Indigenous Research: From our Paradigm Beyond CBPR
Dr. Lori Lambert - medical ecologist at MSU**

Family History: From the Wabanaki Federation on the Eastern coast of the United States;
Mi'kmaq

Paradigm: is a worldview, lifeways
Culture, ceremonies, etc.
How this paradigm affects the way that a subject is studied

Indigenous Paradigm
Not just one culture-many communities

Indigenous: from a place
Indigenous people have been colonized by a dominant society/group

Western view vs the Indigenous community view

Research on Indigenous Land:
No permission, no consultation, no indigenous involvement
Language of research is not presented in a way that can be easily understood
Changing image of Research:
Can a non-indigenous research conduct research in an indigenous communities?
Needs to be a partnership

Indigenous People have always be scientists and researchers
Methods are very similar between western science and indigenous science
Learned to hunt and grow food by watching animals and adapting their own methods
Structures/housing
Use of stars to navigate, Bison Cube Satellite
Medicine and pharmacology: plants to help with pain

Through a decolonizing lens:
Respect: the choices that you make; tailoring the research to the people that you are
working with; what role are you fulfilling; empowering the community?; strength-based
inquiry vs. weaknesses; focus on resilience

Relationships: how to gain information; methodology; enter the community with an understanding of culture and community; how will it benefit the people that you are trying to study; bring it back to the community

Resilience:

Reflection:

Reciprocity:

Conceptual framework:

Finding the truth in the situation; researcher demonstrates knowledge and understanding; bring it back to the community in a way that the community understands; follow community ethics

Methods of collecting data:

Stay for a long period of time to gain a better understanding of relationships and culture

Stories, songs, oral histories, ceremonies (who's involved? Not necessarily what happens during the ceremony)

Interview = stories = data

Need permissions to gather information about ceremonies

Dreams and songs - predicting the future; collect songs that have been lost to most of the community

Environmental data as told by the elders of the community

Use art to tell the story

Determine the knowledge to be gained from the qualitative data that you gather

Where is the data coming from?

Who does that data belong to? The tribe

Tribal IRBs from tribal colleges and from the community

Push to get indigenous research into old school western institutions

Research Proposal:

Problem statement, what needs to be solved in the community

Hypothesis, what could help to solve this problem

Data, from a strength-based inquiry

Work from the heart to get the community to help

americanindigenousresearchassociation.org

Support graduate students using indigenous research methods

Further explanation of indigenous research methodology

Q&A:

For more questions: lori.lambert@montana.edu

Principles apply to Western subcultures. How do you deal with funding agencies that want you to “helicopter” in to get data and then get out?

It depends on the funding agency. NSF will not fund food which is a detriment to indigenous research. The funding entities need to change.

How can institutions reconcile differences in methods?

Institutions need to be more accepting of indigenous research methods. Western scientific paradigm is embedded in universities and that needs to change.

How do you make sure that the institution rewards indigenous research without publication?

Make sure that the community is willing to co author publication. How much of the research is okay to publish? Really collaborate to make sure things are publishable.

How can indigenous student research chapters champion indigenous research?

Right researcher for the community. Make sure that the indigenous community benefits from the research-student's guide the research. Include the elders.

Have there been challenges in forming quantitative analysis of indigenous methods?

Lori is uncertain, works in qualitative research.

How do you dispel distrust about research and researchers?

Build relationships, have an event, buy the community members food. Make sure that money spent is put back into the community. Make them feel comfortable.

SciNation and Broader Impacts Group Holly Truitt & Leanna

spectrUM Discovery Area
SciNation

The story of how BIG changed their method:

2013: funding came together; \$1.5 million NHS grant to open new facility downtown; leadership intervention in science museums; move museums from nice to necessary; spectrUM exists to open up pathways to higher education and make STEM ed more accessible; there was a gap in curriculum that was being presented to rural tribal communities; relationships and communities matter

SciNation was implemented to fill the gap in spectrUM outreach - for the community by the community on the Flathead reservation

Co-creation is the fundamental idea behind education

Making sure that the curriculum you bring is made for the community

Leanna got involved because her field of study is tribal health and she was familiar with spectrUM in Missoula and some of their work on the Flathead reservation.

Holly: Images of programming. Technology and workforce development.

Leanna: What opportunities do we have on the reservation and what do we want to accomplish? How does this become the community's? SciNation has environmental and wildlife biologists, educators, and the university to build capacity and make the things people were already doing more impactful.

Holly: Finding shared purpose and finding an organization that has resources but no community ties.

Leanna: Lack of understanding about tribal communities. Bringing spectrUM's resources to tribal members made the collaboration work. Tribal role models make STEM careers more attainable. Professionals, students, and near-peer role models are important to the process.

Holly: Programs from SciNation; build relationships; start with the Science learning tent; meal sites provided a place to integrate more science into kids' days

Leanna: Non-school based opportunities to get kids interested in science. During the summer there are meal sites that give children the opportunity to get breakfast, lunch, and dinner. The summer feeding program supported bringing science activities to the kids coming to get meals. Lake County Fair just added some small science activities.

Holly: Needed something to encourage the use of technology on the reservation.

Leanna: Making includes a lot of the things that people do on a daily basis, for survival, for entertainment, etc. There are lots of people in tribal communities that are making things for traditional purposes or for livelihood purposes. Inspiring kids to make things. A good way to get kids interested in cultural preservation. Technology and traditional crafts meet. Tried to modify the maker truck idea for the Salish and Kootenai tribes on the reservation.

Holly: The maker truck is to be owned by the community on the reservation. It builds capacity for co-creation between spectrUM and the Flathead reservation. SciNation and spectrUM planning to put on a tech festival that integrates technology and storytelling.

Questions for the audience:

“To what end?” What is the change you’re trying to create in the world?

What is the gap between what you’re doing and the change that you want to enact?

Who do you need to invite to the table to help close the gap?

Q&A:

Q: How do you document impact?

A: Grants allow us to do evaluation. When there are making activities that have a cultural components keep kids interested for longer than other activities. Timing how long kids stay at activities and evaluating changes in thought. Return of results to the tribal communities. Transparency is key to the process of evaluation.

Q: How do you keep the process moving forward even when certain people don’t want to put in the work?

A: Collective impact. spectrUM provides the backbone for the programs. Someone with funding and the ability to provide legwork is essential. More communication is always better! No one person can be the backbone. From the community perspective it is about identifying the people who have the passion to stick with the project.

Q: What are you trying to accomplish with programming?

A: By doing community based work, we promote the opportunities that are local. If we can give everyone a pathway where they are fully actualized, all of society benefits. Students will be able to get hands on activities in their communities. Trust that people will be able to see the need where they are at. Expand the workforce on the reservation.

Crafting Resource-Rich Collaborations

Jeff Hooker - Chief Dull Knife College

Tribal College History:

Many tribal colleges were not acknowledged

People were expecting help to come from the government

Research was supported to a certain point at tribal colleges

Grants are difficult to get as a non-accredited universities

Why Research at a Tribal College?

Difficulty in reaching out to minority institutions.

Engage new and older students - nurture interest in students

Build confidence in faculty and students

Make sure that research is having an impact on the tribal community

Provides a different perspective when it comes to environmental issues

Tribal colleges are able to stay at home, save money, and get an education more tailored to them

Networks are expanded beyond the reservation

Research Projects at Chief Dull Knife College

Tongue River Sediment Survey - Microbial Diversity

West Nile Virus Research

Ground Water Analysis

Alternative Energy Systems

Computer Aided Garden Drip System

Greenhouses for Native Plant Research

GIS and Ethnographic Mapping

Zebrafish Research

High Altitude Ballooning - 2017 Solar Eclipse

Wallops Island

First Nations Rocketry Competition

Working with a tribal college provides fresh eyes that have cultural relevance as far as the research that they have done. Students need compact research opportunities to experience a four year university. Mini-experiences allow students to create networks and encourage them to consider further education.

Q&A:

Q: How long does it take from discussion to travel to the partner university?

A: Not long at all. No bureaucracy to deal with, it usually just comes down to cost.

