

# **Collaborative Research in Native Communities: Cutting Edge Science & Capacity Building**

**American Indian Center of Chicago  
East-West Chicago  
East-West Keshena  
Northwestern University**

**National Academy of Sciences  
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# Collaborative Research

- | Title: The Cultural Context of Native-American Science Education
- | NSF Grant: #REC-0529650
- | Program type: Research on Learning and Education (ROLE)
- | Project period: 9/1/05-8/31/08

# The Challenge

- | ERIs had never received federal funding for research
- | NSF looking for assurance that all levels of project would be administered well
- | Sometimes tenuous relationship (at best) between researchers/institutions and Indigenous communities

# Northwestern's Initial Response

Several alternatives considered:

- | Adjunct appointments for ERI researchers
- | Northwestern handles administrative matters on behalf of the ERIs
- | Help ERIs hire staff already skilled in managing federal research funds

## Northwestern's Final Response

- | Northwestern's principal investigator (PI) contacted the provost and asked for support.
- | Northwestern's provost wrote a letter of commitment, volunteering support to its partners on budgets, accounting practices, annual reports, etc.

# Proposal Support

- | Guiding a collaborator through NSF's prospective new awardee questionnaire, sharing sample policies.

## Award Support

- | 3 meetings at Northwestern's campus
- | 2-3 conference calls
- | Listserv created
- | Ad hoc support provided by pre- and post-award offices

# Knowledge Transfer from NU to ERIs

- | Federal terms (based on Northwestern departmental training materials)
- | NSF terms
- | Specific award terms
- | Sample reports
- | Cash management - assist East-West University in using FastLane for preparation and submission of the quarterly federal cash transaction report of grant expenditures

## Feedback from Northwestern's PI

- | Overall success
- | Meets Northwestern goal of increasing diversity by opening up opportunities
- | Problem with coordination due to spatial separation (but would have had similar problems working w/established institutions)

# Feedback from NSF Program Manager

- | Science is spectacular
- | Initially thought it would have been better administratively as a subcontract
- | Realizes it is extremely difficult for new awardees to comply with federal regs – assistance from an established institution is crucial
- | Pleased with current level of administrative support and collaboration

# Response from AIC: Administration

- | Northwestern has been critical in developing the technical knowledge needed to administer federal research grants.
- | Have developed the policies and procedures in compliance with NSF and research standards.
- | Have become familiar with all aspects of grant management including reporting and fastlane management.

\*\*\* In Menominee, project has Tribal IRB approval.

# Response from AIC: Conducting Research

- | Have developed local community capacity to design & conduct clinical interviews (structured & open-ended)
- | Have developed community members knowledge and ability to collect video data
- | Have developed community members knowledge and ability to conduct field observations.
- | Are currently developing community members knowledge and ability to conduct quantitative and qualitative analysis (including statistical analysis, and use of qualitative software like Nvivo)

## Response from AIC: New Scientists

- | Perhaps the most powerful outcome of this project thus far is the impact it has had on community members to pursue higher levels of education.
  - New PhD applicants
  - New Masters applicants
  - New BA applicants
  - Former high school drop-outs returning to school

## Response from AIC: New Educators & STEM ed in Community

- | Developing a good group of adults from a range of perspectives (parents, teachers, elders, disciplinary experts, etc...) who are well informed and motivated to conduct research and address issues of STEM education in community.
- | Incredible effective teacher training, involved in the design of program, design of research probes, design of assessment, data analysis, and write-up of findings.

## Response from AIC: Moving Forward

- | Since this submission of the first NSF ROLE grant the AIC has submitted 2 additional research grants (1 to NIH and 1 to NSF)
- | Submission of NSF Synthesis & Workshop grant.
- | Working on submission of an ISE grant as a subcontractor.

# Response from AIC: Making Change in Community

- The most important issue that comes from this project is the contribution it makes to the self-determination and vitality of Native peoples.
- This project, although focused on middle school students, really works on a systems level of bringing change to the community.

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