**Draft Outline for PRIME Proposal**

**Proposal would address PRIME goals 1 and 3 and be “Full Scale”:**

1) Explore innovative new approaches for determining the impact and usefulness of evaluation of STEM education proposals with or programs with appropriate rigor

3) Increase the capacity of and infrastructure for researchers and evaluators by increasing the number of individuals who can produce conceptually sound and methodologically appropriate evaluations of STEM education.

Ours would be a full-scale project which go for 3 years with budget limitation of $800,000 ($266,666/yr)

**Addressing the Requirements (on pg. 4 of NSF announcement)**

1. Specify the methodologies to be researched or developed either by pursuing new areas or by translating and applying existing approaches in creative and innovative ways.
   1. Our proposal needs to describe the development of IEF and the value of the IEF based on our experience in the workshops and the evaluation data.
   2. One goal of our proposal is to “ground” the framework through research on its application in different American Indian STEM environments
   3. Another goal is to adapt/expand the framework based on the research findings to facilitate its dissemination and use
   4. Our proposition is that IEF will result in tribal/AIAN ownership of evaluation and contribute to better more rigorous evaluation practice
   5. We propose to address this through case studies employing mixed-methods in communities that apply essential elements of IEF. (two years for case-studies)
   6. Research question we address:
      1. How does using the essential elements of the IEF result in:
         1. an increased sense of ownership of the evaluation process
         2. a evaluation design that integrates well into the tribal/community setting
         3. an evaluation that effectively assesses the contribution of the program in meeting outcomes (rigor)
         4. use of the evaluation findings for both formative improvements and a summative assessment
2. Specify the theoretical underpinnings from one or more education and social science disciplines that will drive the research and development.
   1. Karen Kirkhart’s arguments that IEF conforms to evaluation theory
   2. Literature related to effectiveness of using culturally relevant approaches when working in AIAN communities (Linda Smith, articles on other native approaches to research)
3. Specify the settings or context where the evaluative research will occur such as geographical location, time span, population, etc.
   1. We need to identify three case study sites that are willing to work with us to research the implementation of IEF. The conditions the case study sites must meet are:
      1. Familiar with the IEF (some individuals attended training)
      2. Do an on-site training in IEF with a larger group of project/college stakeholders
      3. Have one or more STEM projects that are in initial stages that can incorporate IEF to do evaluation.
      4. Be willing to have researchers do a pre-survey/interviews regarding attitudes towards evaluation.
      5. Be willing to have researchers observe aspects of the evaluation implementation and document implementation practices
      6. Be willing to have researchers do post-surveys/interviews regarding attitudes to evaluation
   2. Possible areas (from Richard’s notes)

NWIC (JLF & RN conducted IEF workshop on site)

\* Sisseton-Wahpeton (Tom Wilkie, VP of Academic Affairs, went to Rapid City workshops and at least two other staff went to MSP workshops)

\* NM Indian Education Division grantees using IEF (RN provided 2-day training on IEF)

Tohono O’odham (several TOC staff at Tucson Workshop

Navajo Technical College (L. Isaac, Dean of Student Services was at Tucson Workshop)

\* Sinte Gleska (Sherry Red Owl involved w/ Todd County Schools)

Sitting Bull College (Linda Jones, Frank Cloud went to Billings workshop; Linda is Korean-Indian biologist working on Native medicinal plants)

\* = stronger candidates for partnering

1. Identify the desired outcomes of the research and development such as potential products and the audiences/communities who will find them useful.
   1. An IEF that is grounded through implementation research
   2. Increase capacity in application of IEF through:
      1. Training in case study sites
      2. Train the trainer workshop in year 3 that incorporates the findings of the research in a revised IEF to facilitate capacity building at the community level
   3. A conference jointly sponsored with AEA for government/foundation funders and AIAN STEM project leaders focusing on use of IEP and how it could be integrated into funding RFPs and recognition of cultural competent evaluation practice
2. Outline creative strategies for engaging communities of practitioners, evaluators researchers, and STEM content experts for co-design of approaches and effective dissemination of program outcomes
   1. I think our community engagement in the application of IEP in the three case study sites should address this
   2. Co-design of on-line evaluation course incorporating IEP with instructors at OLC
   3. Post-doctoral mentoring
3. Identify an evaluation plan that describes whose outside feedback on the work will be obtained (external evaluation, advisory board, etc.)
   1. We convene another exciting Advisory Board (perhaps get quotes from interviews Mary did with past AB members)
   2. External evaluation plan (perhaps the pre-/post assessments in the case studies can be done by EE)