MID-LIFE PROJECT EVALUATION
setting the stage for continued funding

ATE PI CONFERENCE | OCTOBER 2015 | WASHINGTON DC

PRESENTED BY
Lori Wingate, EvaluATE
Kirk Knestis, Hezel Associates
Celeste Carter, NSF

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IN YOUR FOLDERS

- Slide handout
- Worksheet
- Results from NSF Prior Support checklist
- Feedback survey
- Evaluation sessions at the conference

OBJECTIVES

1. **UNDERSTAND** the fundamentals of Intellectual Merit and Broader Impacts
2. **IDENTIFY GAPS** in evaluation data that need to be addressed in order to make a strong case for new funding
3. **FILL GAPS** with low-cost, high-impact evidence
4. **CREATE** a persuasive Results from Prior NSF Support section for proposals
AGENDA

1. Demystifying Intellectual Merit and Broader Impacts
   BREAK @ ~2:15
2. Using a logic model to identify gaps in evidence
3. Filling evidence gaps
4. Creating a persuasive Results from Prior NSF Support section

CELESTE CARTER

demystifying INTELLECTUAL MERIT & BROADER IMPACTS
NSF CRITERIA:
INTELLECTUAL MERIT & BROADER IMPACTS

• Every NSF ATE project should make a difference in terms of both merit criteria
• Every proposal is reviewed against both merit criteria
• Results from Prior Support must be explicitly described in terms of both merit criteria

NSF CRITERIA:
INTELLECTUAL MERIT & BROADER IMPACTS

• Evaluation of every project must examine implementation and impact in terms of both merit criteria
• Activities proposed—then implemented and evaluated—will typically fall into two categories defined by the merit criteria

NSF DEFINITIONS

Intellectual Merit
Potential to advance knowledge and understanding

Broader Impacts
Potential to benefit society or advance desired societal outcomes
REAL PROJECT ACTIVITIES

<table>
<thead>
<tr>
<th>Intellectual Merit</th>
<th>Broader Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>The activity is about contributing to greater understandings of STEM technician training...</td>
<td>The activity is about the improvement, capacity building, or preparation of some STEM innovation...</td>
</tr>
<tr>
<td>...generally RESEARCH</td>
<td>...generally DEVELOPMENT</td>
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</tbody>
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REAL PROJECT ACTIVITIES

- Activities described in a proposal will be influenced by factors in the real world
- The purpose of “research and development” makes responsive, purposeful changes an OK thing
- Evaluation strategies must accommodate—and document—such changes at the activity level

REAL PROJECT ACTIVITIES

Intellectual Merit
- tested the initial efficacy of a student-led, project-based course, which was formerly didactic
- published results and lessons learned in peer-reviewed journal

Broader Impacts
- increased retention of female students in course sequence by 25%
- created agreements with 3 local employers for program that places 50 students per year in paid internships
ACTIVITY 1
identifying your project’s
Intellectual Merit  Broader Impacts
With A PARTNER, use worksheets in your folders

Evaluate BLOG
Enhance your project’s dissemination and share lessons learned in just 300-500 words
www.evalu-ate.org/blog

USING A LOGIC MODEL
to identify gaps in evidence

www.evalu-ate.org
INPUTS
are the resources brought to bear on a project

ACTIVITIES
the things a project does

OUTPUTS
are the tangible results of activities (things you can see and count)
OUTCOMES are the changes brought about through project activities and outputs.

SHORT-TERM outcomes are typically changes in knowledge, skills, and attitudes.

MID-TERM outcomes are typically changes in practice or behavior.
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Setting the Stage for Continued Funding

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LONG-TERM
outcomes are typically changes in social or economic conditions

ACTIVITY 2

1 Review your achievements related to INTELLECTUAL MERIT. If you have evidence of those achievements, describe the evidence briefly on a BLUE sticky note.

2 Review your achievements related to BROADER IMPACTS. If you have evidence of those achievements, describe the evidence briefly on a PINK sticky note.

3 Place your blue and pink EVIDENCE NOTES under the logic model headings where you think they fit best.

INTELLECTUAL MERIT: Advances in Knowledge

- We adapted a peer-mentoring model for engaging underrepresented minority students directly in data collection and analysis—an approach not documented in the literature.
- We have had two papers accepted for publication on both the design and the results of this study.

BROADER IMPACTS: Benefit to society and contributions to desirable societal outcome

- Mentored former community college students who have transferred to local 4-year college to research the causes for high dropout rates among first-generation, minority students through in-person and mobile technology-based qualitative data collection techniques.
- Too early for graduation data, but enrollment data show that 50% of students are on track to graduate within 3 years, compared with 15% prior to elimination of remedial courses at our college and 10% of students nationally who take remedial courses.
FILLING EVIDENCE GAPS
with low-cost, high-impact data

crafting a persuasive description of
RESULTS FROM PRIOR NSF SUPPORT

RESULTS FROM PRIOR NSF SUPPORT
specific outcomes and results
including metrics to demonstrate
the impact of the project

- Intellectual Merit
- Broader Impacts
FOLLOW THE RULES
Do not exceed 5 pages

FOLLOW THE RULES
Make it the first section of the proposal

FOLLOW THE RULES
Identify the prior project’s
• title
• NSF award number
• period of support
FOLLOW THE RULES
Use these exact, distinct headings:
• Intellectual Merit
• Broader Impacts

FOLLOW THE RULES
Include complete bibliographic citations for all publications
—may go in References

SUGGESTIONS
Provide a brief factual account of what the project did, created, and who was engaged
SUGGESTIONS

Describe the project’s Intellectual Merit and Broader Impacts, with as much evidence as possible

SUGGESTIONS

Be forthright about what didn’t work and lessons learned

SUGGESTIONS

Describe how the current proposal is building on results from prior work
SUGGESTIONS

Describe what aspects of previously funded work are being sustained without NSF support.

FOR MORE INFORMATION

Read Lori’s blog on this topic: www.evalu-ate.org/blog/wingate-oct2015

with links to helpful RESOURCES

for understanding and writing about Intellectual Merit and Broader Impact.