EVALUATION: A KEY INGREDIENT FOR A SUCCESSFUL ATE PROPOSAL

Presented at the 2014 HI-Tec Conference
July 23, 2014

Presented by Krystin Martens

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Objectives

By the end of the session, you will

1. Know what evaluative elements should be included in a proposal and where

2. Understand how evaluation can be leveraged to strengthen a proposal
### Proposal Component

<table>
<thead>
<tr>
<th>Proposal Component</th>
<th>What you need to do</th>
<th>What you need to know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROJECT SUMMARY</strong> (1 page)</td>
<td>Prepare a 1-page project summary that specifically addresses the NSF Intellectual Merit and Broader Impacts criteria.</td>
<td>In addition to the NSF-wide Intellectual Merit and Broader Impacts criteria, the ATE program has additional ones, some of which are about evaluation, which are specified in the program solicitation. You are unlikely to have enough space to address all criteria, so focus on the ones most relevant to your proposal.</td>
</tr>
<tr>
<td><strong>PROJECT DESCRIPTION</strong> (5 pages total)</td>
<td>Develop a coherent narrative describing your work and relevant background. Sections include:  - Results from Prior NSF-Supported Projects  - National Context  - Objectives, Deliverables, Activities  - Timetable  - Management Plan  - Roles and Responsibilities of the PI, co-PI(s), and Other Senior Personnel  - Plan for Sustainability  - Evaluation Plan*  - Dissemination Plan</td>
<td>It is important that all elements of the project description, including the evaluation plan, convey a coherent, strongly aligned plan that supports your initial claims about the project’s Intellectual merit and Broader Impacts (see above).</td>
</tr>
</tbody>
</table>

*Results from Prior NSF Support and Evaluation Plan are the Project Description sections that must include evaluation elements. What should be included in these sections is described below. You may wish to include evaluation activities or deliverables in other areas, such as the Timetable and Management Plan, as appropriate.

For helpful information related to sustainability and dissemination, refer to ATE Central’s [Handbook](http://atecentral.org) and [Outreach Kit](http://atecentral.org).

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**Organized by proposal component**

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**RECIPE FOR: Successful ATE proposal**

**FROM THE KITCHEN OF:** EvaluATE

- ✔ Cover Sheet
- ✔ Project Summary
- ✔ Project Description
- ✔ References Cited
- ✔ Biographical Sketches
- ✔ Budget & Budget Justification
- ✔ Current & Pending Support
- ✔ Facilities, Equipment & Other Resources
- ✔ Supplementary Documents

Add a dash of evaluation and mix thoroughly.
Human Subjects

Exemption Subsection

Human Subjects Assurance Number

IRB App. Date (MM/DD/YY) pending

Project Summary

1-page overview of the proposal’s Intellectual Merit and Broader Impacts
Project Description

15-page narrative

Results of Prior NSF Support
Rationale
Goals, Objectives, Deliverables, Activities
Timetable
Management Plan
Roles and Responsibilities of the PI, co-PI(s), and Other Senior Personnel
Plan for Sustainability
Evaluation Plan
Dissemination Plan
Results of Prior Support

"specific outcomes and results including metrics to demonstrate the impact of the activities undertaken including evidence of the quality and effectiveness of the project's deliverables"

Project Description

Results of Prior NSF Support
Rationale
Goals, Objectives, Deliverables, Activities
Timetable
Management Plan
Roles and Responsibilities of the PI, co-PI(s), and Other Senior Personnel
Plan for Sustainability
Evaluation Plan
Dissemination Plan
Evaluation Plan

Read the solicitation carefully for details about evaluation expectations for your type of project.

1. Identify evaluator and briefly describe his/her experience/expertise
2. Describe the evaluation plan
3. Show integration with other elements of the proposal as appropriate (e.g., biosketch, logic model, data management plan)

1-3 pages of your 15-page narrative
Evaluation Plan

1. Identify evaluator and briefly describe his/her experience/expertise
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ATE Program Solicitation

“ The funds to support an evaluator independent of the project or center must be requested... ”
Finding an Evaluator

Other ATE PIs
ATE Evaluator Directory
American Evaluation Association’s Evaluator Directory
Universities in your region

Evaluation Plan

1. Identify evaluator and briefly describe his/her experience/expertise

2. Describe the evaluation plan

3. Show integration with other elements of the proposal as appropriate (e.g., biosketch, logic model, data management plan)
### Evaluation Plan

2. Describe the evaluation plan:
   a. Evaluation focus
   b. Data collection plan
   c. Analysis and interpretation
   d. Reporting schedule and projected uses

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#### a. Evaluation Focus

Align the evaluation’s focus with the project’s intended outcomes
Logic Model

Helpful for focusing a project on outcomes and planning the evaluation

Logic Model Example

The Green Energy Technology (GET) Institute at Midwest Community College

<table>
<thead>
<tr>
<th>Activities</th>
<th>Outputs</th>
<th>Short-Term Outcomes</th>
<th>Mid-Term Outcomes</th>
<th>Long-Term Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty workshops</td>
<td>Trained faculty</td>
<td>Increased student knowledge &amp; skills in green tech</td>
<td>Graduates enter green tech careers</td>
<td>Increased regional economic vitality</td>
</tr>
<tr>
<td>Follow-up support</td>
<td>Modules</td>
<td>Increased student interest in green tech careers</td>
<td>Regional demands for green technicians are met</td>
<td>Enhanced national capacity for sustainable development</td>
</tr>
<tr>
<td>Guest lectures</td>
<td>Model curriculum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field trips</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campus-wide activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissemination</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>
Logic Model Example

The Green Energy Technology (GET) Institute at Midwest Community College

**Activities**
- Faculty workshops
- Follow-up support
- Guest lectures
- Field trips
- Campus-wide activities
- Dissemination

**What activities will be supported by your project?**

**Outputs**
- Trained faculty
- Modules
- Model curriculum

**What tangible outputs will be generated from these activities?**

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Logic Model Example

What do your project’s beneficiaries need to know or be able to do?

- Increased student knowledge & skills in green tech
- Increased student interest in green tech careers
- Community colleges adopt curriculum

Logic Model Example

What should people do differently because of your project?

- Graduates enter green tech careers
- Regional demands for green technicians are met
Logic Model Example

The Green Energy Technology (GET) Institute at Midwest Community College

How are your project’s long-term goals aligned with the ATE program?

Long-Term Outcomes
- Increased regional economic vitality
- Enhanced national capacity for sustainable development

Activities
- Faculty workshops
- Follow-up support
- Guest lectures
- Field trips
- Campus-wide activities
- Dissemination

Outputs
- Trained faculty
- Modules
- Model curriculum

Short-Term Outcomes
- Increased student knowledge & skills in green tech
- Increased student interest in green tech careers
- Community colleges adopt curriculum

Mid-Term Outcomes
- Graduates enter green tech careers
- Regional demands for green technicians are met

Long-Term Outcomes
- Increased regional economic vitality
- Enhanced national capacity for sustainable development

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Long-Term Outcomes
- Increased regional economic vitality
- Enhanced national capacity for sustainable development
Logic Model + Evaluation

Activities   Outputs
Whom did you reach? (who, how many)
What were participants’ reactions to the activities?
What is the quality/utility of the activities and products?

Logic Model + Evaluation

How did the activities affect participants’ knowledge, skills, abilities, or attitudes?
Logic Model + Evaluation

To what extent did participants change their behavior because of what they learned?

Logic Model + Evaluation

What is the cumulative effect of the project’s outcomes?
What aspects of the project are sustainable?
What was transformative about the project?
Evaluation Plan

2. Describe the evaluation plan:
   a. Evaluation focus
   b. **Data collection plan**
   c. Analysis and interpretation
   d. Reporting schedule and projected uses

b. **Data Collection Plan**

**What** information do you need?

**How** will you collect it?

From **whom**?

**When**?
Data Collection Plan: Example 1

<table>
<thead>
<tr>
<th>WHAT?</th>
<th>HOW?</th>
<th>WHO?</th>
<th>WHEN?</th>
</tr>
</thead>
<tbody>
<tr>
<td>...The evaluation will utilize an accepted <strong>mixed-methods</strong> design (Cook &amp; Campbell, 1979). Quantitative and qualitative measures of performance will be used in both a <strong>formative</strong> and <strong>summative</strong> manner to gauge the merit and worth of the grant initiative. This <strong>mixed-methods</strong> approach has proven useful in utilizing both <strong>quantitative</strong> and <strong>qualitative</strong> performance indicators in a single research design (Frechtling &amp; Sharp, 1997). It is also consistent with the <strong>best practices</strong> and recommendations for <strong>rigorous scientifically-based research</strong>....</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Data Collection Plan: Example 2**

**WHAT?** Project staff will administer an end-of-workshop survey to obtain participants’ feedback, including both ratings and open-ended comments. The external evaluator will conduct interviews with participants six months following the workshop to determine the extent to which they applied the workshop content. She also will interview a random sample of students at the end of each semester to learn how their knowledge and perceptions of green energy technology were impacted.

**WHAT data will be collected?** Project staff will administer an end-of-workshop survey to obtain participants’ feedback, including both ratings and open-ended comments. The external evaluator will conduct interviews with participants six months following the workshop to determine the extent to which they applied the workshop content. She also will interview a random sample of students at the end of each semester to learn how their knowledge and perceptions of green energy technology were impacted.
Data Collection Plan: Example 2

**HOW will the data be collected?**

Project staff will administer an end-of-workshop **survey** to obtain participants’ feedback, including both ratings and open-ended comments. The external evaluator will conduct **interviews** with participants six months following the workshop to determine the extent to which they applied the workshop content. She also will **interview** a random sample of **students** at the end of each semester to learn how their knowledge and perceptions of green energy technology were impacted.

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**WHO will provide the data?**

Project staff will administer an end-of-workshop **survey** to obtain **participants’** feedback, including both ratings and open-ended comments. The external evaluator will conduct **interviews** with participants six months following the workshop to determine the extent to which they applied the workshop content. She also will **interview** a random sample of **students** at the end of each semester to learn how their knowledge and perceptions of green energy technology were impacted.
Data Collection Plan: Example 2

**WHEN will the data be collected?**

Project staff will administer an *end-of-workshop* survey to obtain participants’ feedback, including both ratings and open-ended comments. The external evaluator will conduct interviews with participants *six months following the workshop* to determine the extent to which they applied the workshop content. She also will interview a random sample of students at the *end of each semester* to learn how their knowledge and perceptions of green energy technology were impacted.

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**Data Collection Matrix**

<table>
<thead>
<tr>
<th>Goal</th>
<th>Evaluation Question</th>
<th>Indicator</th>
<th>Method</th>
<th>Data Source</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ interest in green tech careers increases</td>
<td>To what extent did students’ interest in green tech careers increase because of the project?</td>
<td>Change in course enrollment numbers</td>
<td>Review of institutional and departmental records</td>
<td>Project personnel</td>
<td>End of each semester</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students’ intent to pursue green tech job</td>
<td>In-class survey in retrospective pre-post format</td>
<td>Students in technician education courses</td>
<td>End of each semester</td>
</tr>
<tr>
<td>Opinions of faculty and career center staff</td>
<td></td>
<td>Interviews</td>
<td>Sample of faculty/staff</td>
<td>Annually</td>
<td></td>
</tr>
<tr>
<td>Number/quality of employment interviews</td>
<td></td>
<td>Interviews</td>
<td>On-campus recruiters</td>
<td>Each visit</td>
<td></td>
</tr>
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Tips for Data Collection:
- Build a body of evidence
  - Multiple data sources
    - Qualitative + quantitative data
  - Embed data collection into regular project activities
- Use existing data whenever possible
- Use existing instruments when/if they match your needs
Evaluation Plan

2. Describe the evaluation plan:
   a. Focus of the evaluation
   b. Data collection plan
   c. **Analysis and interpretation**
   d. Reporting schedule and projected uses

---

c. Analysis & Interpretation

How will you make sense of the data?
What sorts of comparisons will be made?
What counts as “success”?
c. Analysis & Interpretation

Analysis
Organizing, transforming, and describing data

Interpretation
Making sense of analyzed data so that conclusions can be made about a project’s quality, progress, and/or impact
c. Analysis & Interpretation

Interpretation requires comparisons, e.g., with
- targets
- past performance
- national benchmarks
- other sites

Evaluation Plan

2. Describe the evaluation plan:
   a. Focus of the evaluation
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d. Reporting & Projected Uses

ATE-Specific INTELLECTUAL MERIT Criterion

“Is the evaluation likely to provide useful information to the project and others?”

When and what types of reports will be issued?

How will results be shared?
d. Reporting & Projected Uses

Information from the evaluation will be needed for
- annual reports to NSF
- annual survey of grantees
- reports to advisory groups

Evaluation Plan

1. Identify evaluator and briefly describe his/her experience/expertise
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Evaluation: A Key Ingredient for a Successful ATE Proposal
2014 HI-Tec Conference

Project Description

Results of Prior NSF Support

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Evaluation Plan
Dissemination Plan

References

Include references to pertinent evaluation literature in your evaluation plan section

References


Francisco: Berna-Kolker.


Bio Sketch

Get one for your evaluator

Follow 2-page NSF format

Include with Supplementary Documents

Budget Justification

The funds to support an evaluator independent of the project or center must be requested and the requested funds must match the scope of the proposed evaluative activities.
Raise your hand...

On average, what percentage of ATE budgets is spent on evaluation?
A. 2%
B. 8%
C. 15%
D. 24%

Budgeting for Evaluation

10%
rule of thumb
Budgeting for Evaluation

8% reality

Evaluation Budget Components

- Time
- Travel
- Materials and other expenses
- Institutional indirect/overhead costs
Time

How many days does the evaluator need to spend in order to generate the needed evaluation deliverables and services?

Travel

Will the evaluator need to travel to
- attend the ATE PI conference, advisory committee meetings, or special project events?
- collect data from participants?
- meet with project staff to plan the evaluation or discuss results?
Materials and other expenses

Examples:
- Materials (e.g., paper for surveys, reports)
- Copying
- Incentives
- Survey hosting

Institutional Indirect/Overhead

Percentage of direct costs
Varies by organization
Budget & Budget Justification

Under “Other Direct Costs” identify
- evaluator’s daily rate
- time committed to the project
- travel costs
- materials costs
- institutional indirect/overhead, if applicable
Supplementary Documents

- A **commitment letter** from your evaluator
- Your evaluator’s **biosketch**
- **Data Management Plan (REQUIRED)**
  (data collection for the evaluation should be addressed in this plan)

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**Data Management Plan**

1. **Types of data**
   - Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam fermentum erat vel aliquam.
   - Phasellus aliquam condimentum nunc. Nulla molestie sem vitae tellus.
   - Sed ut odio.

2. **Standards to be used for data and metadata format and content**
   - Phasellus euismod, nunc vel gravida, tellus nunc rhoncus nunc, nec commodo velit.
   - Nullam at tellus tellus.
   - Euismod lectus in lacinia, dictum eget dui.

3. **Policies for access and sharing**
   - Nulla ac justo in nisl.
   - Phasellus eget nibh at tempus.
   - Nulla ut dui.

4. **Provisions for privacy, confidentiality, security, and intellectual property**
   - Nulla ac justo in nisl.
   - Phasellus eget nibh at tempus.
   - Nulla ut dui.

5. **Policies and provisions for re-use, re-distribution, and production of derivatives**
   - Nulla ac justo in nisl.
   - Phasellus eget nibh at tempus.
   - Nulla ut dui.

6. **Plans for archiving data preserving access**
   - Nulla ac justo in nisl.
   - Phasellus eget nibh at tempus.
   - Nulla ut dui.

2 pages max—titled “Data Management Plan”

Goes in as a supplementary document

May include only the statement that no detailed plan is needed, as long as the statement is supported by a clear justification

Rachel Bowers of ATE Central
www.atecentral.net
www.evalu-ate.org

Resource Library
Evaluator Directory
Events (including pending and past webinars)
Newsletters

Thank You