

## NEWEST resources

Evaluate is always looking for additional ways to help ATE projects and centers improve their evaluation endeavors.

We have recently added new materials to our Web site. Find these at [www.evaluate-ate.org](http://www.evaluate-ate.org):

- Case studies of evaluation in ATE projects and centers from our work with the MTS program
- Examples of materials used to coordinate an annual meeting of the National Visiting Committee
- Fact sheet with findings from the Annual Survey—including trend analyses from 2006 to 2008

Evaluate has also heard your feedback about ways to improve our Web site. We are committed to making it more useful for you.

In the meantime, if you have trouble locating a resource, let us know.

Call (269) 387-5895 and ask for Lori, Stephanie, or Arlen.

or

Email: [lori.wingate@wmich.edu](mailto:lori.wingate@wmich.edu)

## Student Assessment: So Much To Do, So Little Time

**The news of the funding of a grant proposal generates a great deal of excitement for the grantee. Then reality sets in and the work begins. If one of the project goals was to improve student learning, the challenge of providing valid evidence regarding the efficacy of the grant can be daunting. The task of measuring student learning actually begins at the proposal writing stage.**

In writing the proposal, the answers to the following questions should be apparent:

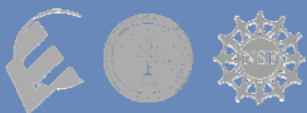
- Are the learning outcomes clearly stated and measurable?
  - ◆ Is the outcome defined by a few, well-focused statements that identify the anticipated learning that will take place in order to achieve the outcome?
  - ◆ Is the level of anticipated learning clear through the use of an action verb? (E.g., should students know about the concept or be able to apply it? Should they be able to evaluate the appropriateness of various alternative solutions related to the concept?)
- Do the teaching/learning strategies align with the level of learning anticipated? (E.g., if students should be able to apply a concept, are they given opportunities to demonstrate and get feedback related to the application of the concept?)
- Do the assessment methods support understanding of the learning that is taking place?

If these points are spelled out in the proposal, then the most critical part of the work has been done related to clearly assessing student learning. Unfortunately, in writing proposals, faculty spend more time and text articulating what THEY are going to do and why it is important than they do articulating WHY the teaching strategies would lead to specific, improved learning outcomes. The intended outcomes should drive the strategies and not the other way around.

In the limited amount of time that most grants are provided, faculty must hit the ground running with the implementation of their plans. Time spent on developing measurable outcomes and assessment strategies (other than the ubiquitous survey) enhances the usefulness of the findings of the project.



Gloria Rogers  
ABET Inc. Managing Director of  
ABET Inc. Managing Director of  
Professional Services  
of Professional Services



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## CENTER description

Evaluate's mission is to help ATE grantees obtain high-quality evaluations that advance the goals of projects, centers, and the overall ATE program.

What we do:

- assess the evaluation needs and capacities of ATE grantees
- collect and develop evaluation resources that address ATE evaluation needs
- engage in and support research on evaluation-related ATE issues
- build evaluation capacity among ATE grantees and evaluators by providing technical assistance and training

Evaluate is operated by the Western Michigan University Evaluation Center, a leader in developing the evaluation discipline and a long-time contributor to the improvement of National Science Foundation evaluations.

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## REAL QUESTIONS

## REAL ANSWERS

## I got the grant - how do I design the evaluation?

## General Evaluation Design

First, rather than thinking in terms of “how do we evaluate this project?” we recommend you begin by asking yourself what evaluative information will give you the information you’ll need to help you reach your project goals and achieve meaningful outcomes. For example, if the ultimate product of your work is going to require industry and/or college buy-in and input, the evaluation should attend to these matters early (e.g., by comparing the plans for the product with industry standards).

Second, you should make sure you are clear about who is the audience for the evaluation—is the evaluation intended to serve project development or to convince National Science Foundation or industry stakeholders of the project’s merit—or will it have multiple purposes/audiences? If the point of the evaluation is to feed you information so that you can improve the project, the evaluation may look more at your process and provide you recommendations. If the intent is for the evaluation to produce an overall judgment of your efforts, it will focus more on your impacts and provide a summative statement about the project.

We think it is useful to overlay the evaluation question(s) onto the project’s logic model. A logic model enables you to plot the project’s inputs/resources, outputs, and goals and convey how the components link together. It’s a graphic way to plot what you hope and expect to happen in the course of your work, given what you have to work with. A sample logic model, created for illustrative purposes only, can be

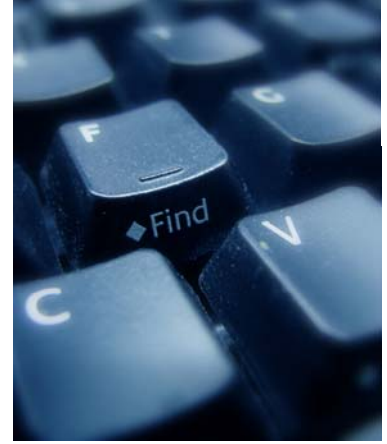
found at [www.evaluate.org/resources/design.html](http://www.evaluate.org/resources/design.html). A logic model can be elaborated by adding arrows to show how particular inputs and activities are expected to lead to certain outputs and outcomes.

To ensure the project is really evaluated and not just described, we recommend establishing success indicators for each output or outcome in your model (resources may dictate how much you can do here). Success indicators can be both a target for your work and a comparison for your evaluation.

Evaluators often use the established indicators to determine how data can be collected to inform the project’s progress toward each indicator. We have found it helpful to complete a worksheet, detailing each indicator, its corresponding data, where the data will come from, and who will be responsible for securing them. Worksheets for identifying indicators and determining what data will be collected to inform each indicator is available at [www.evaluate.org/resources/design.html](http://www.evaluate.org/resources/design.html).

Clearly, you will have to make choices about where to focus your evaluation resources. Our suggestion is that you highlight the paths in the logic model that will answer your most pressing questions and focus on those data collection methods that will yield the most useful and credible evidence to determine the success of the program or provide information that will aid in making improvements during implementation.

## Featured Resource Case Examples of ATE Evaluations



Need an example student exit survey to use in your project? How about a sample interview protocol for your project's lead teachers? Evaluation|te just added nine ATE-specific evaluation resources to our Web site: [www.evalu-ate.org/resources](http://www.evalu-ate.org/resources).

The case summaries of ATE evaluations were written by participants in an NSF evaluation capacity-building project led by The Evaluation Center at Western Michigan University from 1998-2004. Following a three-week summer evaluation institute, the participants continued their evaluation training by serving as

evaluation interns with ATE projects and centers, working under the guidance of a mentor at The Evaluation Center.

The cases describe their evaluations and lessons learned, and several include actual plans and instruments.

Now available on the Evaluation|te Web site under the Materials Development and Program Improvement Resources sections, cases include descriptions and models of the following:

- Developing project-specific surveys

- Planning an evaluation with the Program Evaluation Standards in mind
- Evaluating a curriculum module, a capstone seminar, and a materials development project
- Assessing student impact
- Interviewing project stakeholders

We invite you to review them as examples of evaluation work and adapt their instruments for your needs. The variety of cases offer rich lessons in the many ways high-quality evaluation can be carried out in ATE projects and centers.



## Annual Survey News

*Conduit* editor, Stephanie Evergreen, shares findings from the annual survey and updates on the revision of the survey for 2010.

The results are in! This year 150 respondents completed the annual survey. We heard from 31 centers and 119 projects, giving an overall response rate of 97 percent. Your diligence helps ensure reliability in the data from year to year. Thank you so much.

Evaluation practices have continued to increase, according to your reports. Of responding grantees, 97 percent use an evaluator (up from 89 percent in 2007 and 86 percent in 2006). Evaluation activities consumed, on average, 7 percent of your budgets, also a slight increase from previous years.

In 2009, you also:

- Enabled the articulation of 23,000 students

- Developed more than 2,500 curriculum materials
- Delivered more than 4,300 professional development activities
- Served at least 60,000 students
- Received more than \$27 million in monetary and in-kind support from collaborators

The version of the survey you most recently completed has not changed since 2006. As many of you know, at Evaluation|te we are engaged in a process of rethinking and redesign-

ing the survey to make it more useful to grantees.

To reach that end, we have conducted three interactive webinars with project and center staff to gather your ideas about how the survey can be designed better. We also have received numerous emails from grantees in response to our request for feedback on survey improvement.

At the time of this writing, we are putting your suggestions into a draft of a new and improved survey. We will soon ask for your feedback once more, to provide input on the redesign. By the time of the PI conference we will have a new survey for you, one we hope is more streamlined, intuitive, and useful.

*For more survey results, go to [www.evalu-ate.org/reports.html](http://www.evalu-ate.org/reports.html)*

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## Upcoming Events: HI-TEC & Assessment Workshop

*Title:* Demonstrating Value for Technology Programs, Session B3

*When:* Tuesday, July 21, 3:30 PM – 5:00 PM

*Where:* HI-TEC Conference

Both educators and their business/industry stakeholders will benefit from this session, which will focus on preparing the key role evaluation plays in designing of grant proposals and implementing funded grants.

The session will provide techniques for writing compelling project summaries and statements of intellectual merit as well as provide tips and practice on how to create goals and objectives using the “SMART” criteria.

The session concludes with useful methods to gather and present evidence of project success through data collection and evaluation.

Peter Saflund and the Evaluation team will present. Check [www.highimpact-tec.org](http://www.highimpact-tec.org) for information about how to register for this conference.

*Title:* Developing Evidenced-Based Assessment Processes: Keep it Simple

*When:* Tuesday, October 20

*Speaker:* Gloria Rogers, Managing Director, Professional Services at ABET, Inc.

**Register NOW  
for support in  
your proposal  
development!**

*Where:* TIME Center, Baltimore

Designed to help grantees convert learning goals into evidence-based outcomes and meaningful

assessment processes, attendees will write measurable learning outcomes, develop rubrics, and choose among assessment methods. Helpful tips will be given on how to present results.

Gloria Rogers, the 2008 Fellow of the American Society of Engineering Education, has been an external evaluator and developed an interactive CD ROM, “Assessment Planning Flowchart” to aid program assessment plan development.

For more information, send an e-mail to <patricia.negrevski@wmich.edu.>