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Evaluate CONDUIT

EVALUATION RESOURCE CENTER for
advanced technological education

WESTERN MICHIGAN UNIVERSITY

CENTER news

The annual ATE survey is around the corner! This year, the survey will be open from February 15-March 15. We've shortened the survey by about one-third. In our upcoming webinar, we'll provide an overview of the survey and guidance on how to use survey data for project-level evaluation. Download a review copy of the survey here: evaluate.ate.org/annual_survey/survey_2012/.

Seven ATE evaluators led roundtable discussions at our evaluation workshop during the 2011 ATE PI [pre]Conference. From guidance on working with a small sample size to understanding the context when evaluating regional centers, the materials are now posted on our website. Locate them here: evaluate.ate.org/events/October_2011/.

Did you know the materials from our past webinars are located in one convenient space? You probably visited each webinar event listing when you registered. You can check back at each event listing to locate all related resources—the slides, a link to the recording, and any supplementary handouts. Here you can find our list of past events: evaluate.ate.org/events/pastevents.

Conduit editor: Stephanie Evergreen

Being an Informed Consumer of External Evaluation Services

Any homeowner who has hired a contractor knows the challenge of purchasing complex services. How can ATE PIs secure proper, feasible, useful, accurate, and affordable external evaluation? A few specific considerations can help PIs be informed consumers of contracted evaluation.

Determine your Specific Needs Hold early, explicit conversations about the evaluation purpose. Think about data collection, analysis, and reporting as activities distinct from evaluation. Some may be easily handled internally and others require expertise beyond your team, but many may be cross-purposed. Consider whether you need formal reports from your external evaluator. They are costly and may not add value to your work. Most importantly, establish internal consensus regarding “how the project works to turn money into outcome” so everyone is evaluating the same project operation plan.

Plan for Securing Evaluation Services Involve your external evaluator in project design and proposal writing, but understand the implications. ATE proposals should have an evaluator named and many evaluators will develop evaluation plans “on spec,” but they may expect a memorandum of understanding that assures they will get the contract if the proposal is funded.

Make a Purposeful Selection Use the ATE Evaluator Directory, but investigate qualifications, professional memberships, and examples of past work. Get recommendations from respected and similar sources. Think about geographic location and consider the relative advantages of individual consultants, small companies, larger firms, and universities, as they bear on your needs. Importantly, reconcile where on the subject-methods expertise continuum you need your evaluator to be—specific STEM expertise, complex analytic methods, or something in between.

Force Honest Conversations about Money People get nervous talking about money but clarify costs, deliverables, and expectations before engaging an evaluator. Recognize that your evaluation will be budget-constrained. ATE projects typically allocate around 8% of their costs to evaluation, which includes instrument development, data collection and analysis, reporting, and project management. Go into negotiations knowing what you need and roughly how much you want to spend, expect detailed explanations of estimates, and get a scope of work before contracting.

ATE PIs who apply the same purposeful approach to securing an external evaluator as they would to hiring a contractor to remodel a kitchen will maximize their likelihood of success with these potentially challenging undertakings.

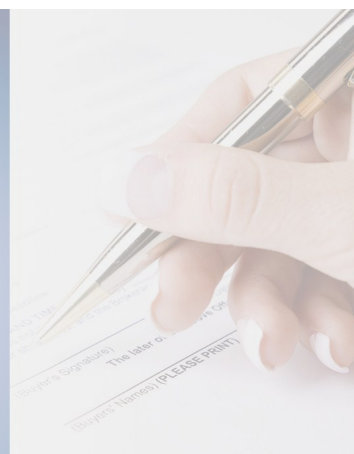


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In this issue

- 2 Real Questions, Real Answers 2 ATE Survey Terminology 3 Annual Survey Data Snapshots 3 Mainstreaming Evaluation 4 Upcoming Events



ATE SURVEY terminology

Collaboration

The survey has a few items about who “collaborated” with your ATE grant and the assistance they provided. One of the purposes of these questions is to find out how much monetary value was added to the ATE program. Therefore, the term “collaborator” in this context refers strictly to groups that provided financial or in-kind support (e.g., materials, space, time) to your ATE grant and were not funded by the grant. For example, if you have an advisory panel whose members contribute a significant amount of time (i.e., days not hours) to the grant and their time is paid for by their employers, you would estimate the value of their time and report that as the value of the collaboration.

ATE-Supported Program

According to the ATE solicitation, grants for program development and improvement support work to “enhance a curriculum in multiple ways, producing a coherent sequence of classes, laboratories, and work-based educational experiences.” If you have a degree or certification program that would not have existed without support from the ATE program or one that is significantly different because of ATE, then you have an ATE-supported program and we are interested in how many students are impacted by that program and at what education level (e.g., 2-year, 4-year).

REAL QUESTIONS

REAL ANSWERS

How do I handle a small sample size?

Be strategic.

At our preconference workshop this past October, two ATE evaluators addressed the question of handling small sample sizes. See the handouts from Eboni and Josh, posted here: evalu-ate.org/events/October_2011/

Eboni Zamani-Gallaher’s strategies are in a handout called *Evaluating with Small Sample Sizes*. In it, Eboni suggests:

- Tell the story—consider collecting qualitative data, which are more amenable to different sampling strategies and aren’t usually intended to produce generalizable conclusions.
- Try to gather data on everyone—a census, rather than a sample. Just remember to limit data analysis to descriptive statistics, rather than inferential.
- Be upfront about the limitations—document your sampling strategies, decisions, and criteria.
- See it as an opportunity to keep evaluation costs low—a large study without sufficient resources can underpower results.

Josh Morrill discussed a related topic, with a handout called *Small Projects/Small Budgets*. Josh reiterates that small evaluations can be successful and useful so long as they are focused on describing progress toward grant goals.

He also offers other suggestions for maximizing a small evaluation budget—like *not* using student research assistants! Often, the time and effort needed for oversight and training can become expensive. Together, the ideas from these two ATE evaluators can help make the most of a small sample

size, whether due to a small population or a small evaluation budget.

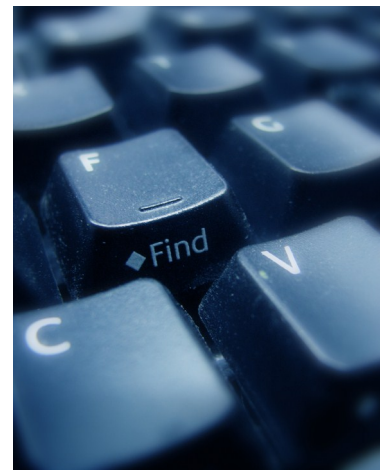
A few other points should be considered when handling the data from a small sample. Be careful about protecting the confidentiality of your respondents. In small samples, too much disaggregation can actually identify your respondents, even if you don’t name them. For example, when reporting demographics, take care not to get so fine-tuned that the one African-American female in the class is essentially identified. In other words, be careful not to end up with subgroups with just a few members. A recent blog post from ACET, Inc. further explains this issue: www.acetinc.com/blog/2011/12/02/reporting-and-small-ns/

Similarly, when reporting on small sample sizes, hesitate to report percentages. Doing so can be misleading, as it tends to overstate the results. If you must report percentages, be sure to include the number of respondents as well, like this “Among the survey respondents, 75% (n=9) said they were satisfied with the project’s accomplishments.” Reporting in this way can at least let a reader better understand the true size of the subgroup represented by the statistic.

Small sample sizes can be both a challenge and an opportunity. Following the suggestions provided here can help evaluators think strategically about how to handle and report on small samples.

FEATURED RESOURCE

Annual Survey Data Snapshots



The NSF ATE solicitation explains that grants must address how they will make a broader impact. The solicitation notes that one way is through increasing participation by traditionally underrepresented groups.

To assist with the assessment of progress on that topic, we have developed data snapshots on the participation of female students and students of color within the ATE program, as reported by ATE PIs on the annual ATE survey.

The snapshots show that, in 2011, 24% of students in ATE-supported programs were female and 45% were people of color.



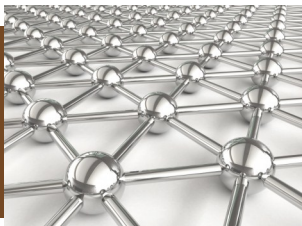
In both the *Women in ATE* and *People of Color in ATE* snapshots, averages are broken down by discipline and summarized across the ATE program. They show a wide range across the disciplines of

participation by women (ranging from 7% to 79%) and people of color (ranging from 9% to 65%).

ATE grantees and evaluators are welcome to download and use the snapshots to describe and assess their own progress toward broader impact in these areas.

Access the snapshots for 2011 and 2010 on our website at evalu-ate.org/annual_survey/reports/.

Need a custom snapshot? We can do that! Send your request to lori.wingate@wmich.edu.



Mainstreaming Evaluation

Amy Gullickson shares more lessons learned from her dissertation on evaluation use at four ATE centers.

In the last *Conduit* I discussed how the ATE centers I studied created and maintained relationships with a wide range of stakeholders to get specific evaluative feedback. To make the information exchange in those relationships feasible, the staff at each center were continually developing, systematizing, and streamlining processes for getting and using evaluative information. Here are some of their ideas you could adapt.

Advisory councils. Use technology (like Skype or GotoMeeting) for quarterly meetings with no travel costs. Schedule in-person meeting times and locations to tie in with regional or national conferences.

Stakeholders. Create options that make it easy for stakeholders to give

feedback, like 1-2 question surveys via email. Offer web-based services, like resume and job posting, or products, like curriculum modules. Require users to register to access the product or service, then contact them later for evaluative information. Ask specific questions at strategic opportunities. Six to nine months before a workshop ask what skills potential participants are interested in learning and plan the workshop accordingly. During a workshop or event, provide formal and informal opportunities for feedback to improve the event in progress. At the end of the event, ask what could be done to improve the next event and what was the most beneficial part of the event. Follow up six months to a year later to see what, if

any, long-term impact occurred as a result of the event.

Data collection, dissemination, and use. Use Zoomerang or SurveyMonkey. These web-based services provide a place for evaluators and staff to create surveys, cache surveys and data, enter responses from paper surveys, and produce basic data analysis. On workshop applications, include skill items with a self-rating scale, then repeat those items on the end-of-program evaluation to generate pre-post data. Have administrative support in place so that feedback can be compiled and given to the staff to make program changes. Schedule time during planning and after events to review evaluation data, agree on improvements, and set up a plan to make sure those improvements are put in place.

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Upcoming Events

ATE Survey Orientation What You Need to Know to Get Good Information Into and Out of the Survey

January 18 | 1-2:30 PM ET

In this webinar, EvaluATE staff will help ATE grantees prepare for the upcoming annual ATE survey. We will review changes for 2012 (the 2012 questionnaire is about one-third shorter than the 2011 version!), address frequently asked questions (both substantive and technical), and clarify definitions. We'll also discuss how to use the information grantees report on the survey for other purposes (e.g., internal, formative evaluation, and annual reporting to NSF) and use aggregate results for benchmarking grant progress against other ATE projects and centers. We'll feature NSF Program Officer Dave Campbell and ATE PI Dan Hull.

Review the survey questions prior to the webinar: evalu-ate.org/annual_survey/survey_2012/

Send questions about the survey ahead of time to stephanie.evergreen@wmich.edu

Reducing the Outcomes Angst A step-by-step approach to identify what to measure

March 21 | 1-2:30 PM ET

Deciding what to measure (and what not to measure) towards gathering evidence of impact can be a daunting task, but it doesn't need to be. In this webinar, Lana Rucks, an ATE external evaluator, will provide a step-by-step approach for making the decisions around what should be measured as an indication of impact. Using an actual ATE project as a framework, attendees will learn how the varying aspects of evaluation (e.g., logic modeling, operationalizing variables, triangulation, etc.) come together in the real world. Regardless of whether you are in the planning phase or already started the implementation of your project, you'll walk away knowing how to better communicate the story of your project/center's impact.

Register at
www.evalu-ate.org/events
Hosted by our friends at MATEC