

ADVANCED TECHNOLOGICAL EDUCATION PROGRAM EVALUATION PROJECT LEVEL EVALUATION PRACTICES

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Abstract

This study analyzes project-level evaluation practices occurring in the Advanced Technological Education program of the National Science Foundation. Of special interest in this study were factors thought to affect the quality and utility of evaluations such as the cost of evaluations, who engaged in evaluation planning, and the use of external evaluators. The ATE program requires project-level evaluations and provides guidelines regarding what evaluations can and should do. The report closes with a discussion of discrepancies between expectations and project level actions and the apparent strengths and weaknesses of project evaluations. Suggestions are offered on how to improve these evaluation practices.

The 2006 Briefing Papers are prepared from survey census data collected in February and March 2006 from principal investigators (PIs) of ATE projects and centers.¹ Each surveyed project/center was currently funded by the ATE program and had been funded for at least one year prior to the survey. The response rate for this survey was 92 percent. All PIs were expected to complete the organizational management section, which described project and center evaluation characteristics and served as the basis for this report.

1. PROJECT-LEVEL EVALUATION

This brief focuses on project/center evaluation and is divided into 4 sections. This section, [Section 1](#), provides an overview of ATE expectations for evaluation and principal investigators' responses that describe how they meet those requirements—who conducts the evaluations, how much money is spent on evaluations, and the extent to which these evaluations vary by characteristics such as the type of grant and type of evaluator conducting the evaluation. [Section 2](#) describes PI perceptions of the utility of their evaluations and the extent to which PI perceptions of utility are related to the evaluation characteristics described in Section 1. [Section 3](#) focuses on the activities of external evaluators—PI satisfaction with these evaluators, the relationship between PI ratings and standards for sound program evaluations, whether the PIs view their evaluations as meeting ATE intellectual merit requirements, and PIs' characterizations of the attributes of their external evaluators. [Section 4](#) draws together findings reported in Sections 1 to 3 to identify strengths and weaknesses of project-level evaluations and to suggest changes that appear likely to improve on current evaluation practices.

The ATE program expects grantees to conduct “project-level” evaluations. Its annual grant solicitations (e.g., Program Solicitation NSF 05-530) set forward evaluation criteria that grant proposals are expected to address. For example, the 2005-2006 solicitation states three key questions to be answered by all who submit proposals. Two are identified as matters of “Intellectual Merit:” “Is the evaluation plan clearly tied to the project outcomes?” “Is the evaluation likely to provide useful information to the project and others?” The third relates to “Broader Impacts:” “Will the project evaluation inform others through the communication of results?”

Principal investigator survey responses show that once funded, most grantees evaluate their work. The large majority of principal investigators (87%) report their compliance with ATE evaluation requirements. Compliance is greatest among centers; 97 percent of centers and 84 percent of projects report evaluations of their grant work. Of those that evaluate, centers universally report hiring external evaluators with 20 percent also employing internal evaluators. Not only are projects less likely to conduct an evaluation, a smaller proportion, 76 percent, hire an external evaluator and 8 percent report relying solely on an internal evaluator (see Figure 1).

¹ This briefing paper is based on survey data from the 2006 survey of ATE projects and Centers. For a description of the survey's sampling method, response rates, and overall findings, refer to the *Advanced Technological Education Program Fact Sheet* (Coryn, Ritchie, & Gullickson, 2006) and *2005 ATE Technical Report: Processes, Procedures, and Results* (Coryn & Hanssen, 2005).

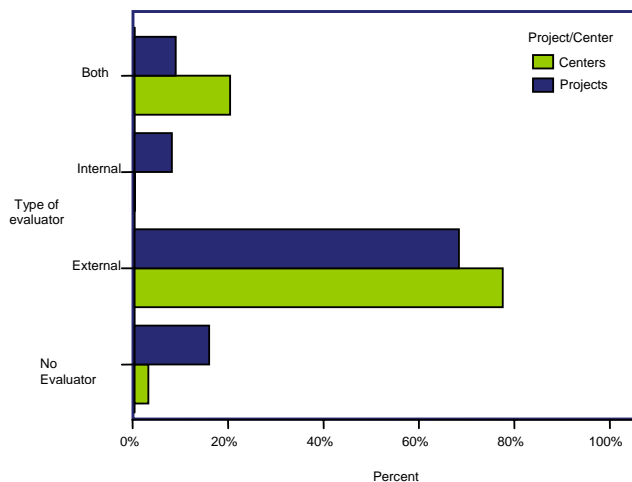


Figure 1.

Types of Evaluators Used by Projects and Centers

A minority of grantees allocates evaluation resources in the amount recommended—NSF recommends allocation of 5 to 10 percent of the project budget to evaluation (Frechtling, 2002, p. 24). Seven percent of projects and 3 percent of centers reported spending more than 10 percent of their annual budgets on evaluation. The large majority of both projects and centers (69% and 74% respectively) spent 5 percent or less of their budgets. Three percent appears to be the approximate median, with nearly half below and half above for the 2 groups. While all center PIs reported some expenditure of funds for evaluation, approximately one-sixth (16%) of project PIs who stated their project does evaluation reported no spending on evaluation in the previous 12 months.

Projects and centers that used only external evaluators tended to spend the largest proportion of their budgets for evaluation, averaging 5 percent and 4 percent respectively. When an internal evaluator was used alone or in conjunction with an external evaluator, an average of 2 percent was spent. The typical center is nearly three times the size of a typical project and, correspondingly, the average annual center spending for evaluation is nearly three times that of projects (\$19,205 versus \$7,423).

The evaluation plan most often is prepared by an evaluator, 68 percent for centers and 49 percent for projects. But, as Table 1 shows, the principal investigator also is identified as the person primarily responsible for this plan in a substantial proportion of cases. As those figures also show, the proportion of project principal investigators who prepared the evaluation plans is nearly twice that of centers.

Table 1.
Who Writes Evaluation Plans for Projects and Centers?

	Internal		External		PI		Other	
	N	P	N	P	N	P	N	P
Projects	7	7%	44	42%	39	37%	16	15%
Centers	3	9%	20	59%	7	21%	4	12%

Nearly all PIs report that their evaluation plans were “followed” or “followed precisely” (86% for projects and 88% for centers) and reported conformance to the plan was greater when an external evaluator was involved (Tables 2-3). But conformance appears not to be related to who prepared the plan.

Table 2.
Extent to Which Evaluation
Plans Were Followed by Grantees

	Not Followed		Somewhat Followed		Followed		Followed Precisely	
	N	P	N	P	N	P	N	P
Projects	2	2%	13	12%	73	67%	20	19%
Centers	0	0%	4	12%	26	77%	4	12%

Because ATE requires an annual written report on grant progress (FastLane), we anticipated that all grantees would require a written report from their evaluator as an important ingredient for the annual report. While most grantees who evaluate their work do receive an annual written report, 27 percent, of projects and 18 percent of centers reported that they had not received a written report in the previous 12 months. In the case of projects, the issue becomes larger since an additional 16 percent of projects did not conduct evaluations. Thus, more than 40 percent of projects did not receive a written evaluation report in the past year.

Table 3.
Extent to Which Evaluation
Plans Were Followed by Types of Evaluators

	Not Followed		Somewhat Followed		Followed		Followed Precisely	
	N	P	N	P	N	P	N	P
External	0	0%	13	11%	80	70%	21	18%
Internal	1	10%	2	20%	7	70%	0	0%
Both	1	6%	2	11%	12	67%	3	17%
Total	2	1%	17	12%	99	70%	24	17%

Table 4 shows that approximately 60 percent of grantees received an annual written report when an individual evaluator, either external or internal, was used. For projects, the rate dropped slightly when external and internal evaluators were used together. But among the 7 centers that used both internal and external evaluators,

all reported receipt of a written report in the past 12 months.

Table 4.

Receipt of Evaluation Reports in the Past 12 Months by Type of Grant and Type of Evaluator

Grant Type	Evaluator Type	Yes		No	
		N	P	N	P
Projects	External	66	62%	20	19%
	Internal	6	6%	4	4%
	Both	5	5%	5	5%
Centers	External	21	62%	6	18%
	Internal	0	0%	0	0%
	Both	7	21%	0	0%

2. PRINCIPAL INVESTIGATORS' PERCEPTIONS OF EVALUATION'S USEFULNESS

Section 1 noted that ATE requires its grantees to address two questions that focus on the use of evaluation to increase the intellectual merits of the grant work completed; both focus on evaluation usefulness. Evaluation usefulness, utility, is routinely identified as the most important attribute of evaluation. As stated in *The Program Evaluation Standards* (JCSEE, 1994), evaluation utility refers to evaluations that are informative, timely, and influential. To determine whether grantees view their evaluations as useful and simultaneously assess whether evaluations are viewed to be useful in some regards but not others, ATE PIs were asked to rate the merit of their evaluations on five criteria: "During the past 12 months, how useful has your project/center evaluation been for each of the following purposes?"

- Project planning (e.g., input at regular staff meetings based on feedback regarding project needs, process, and outcomes)
- Project improvement (formative feedback to guide project implementation)
- Project output (determination of who has been served and in what ways)
- Project accountability (confirmation that project work and products are being accomplished)
- Project effectiveness (evidence of quality of work and quality of products, improvement in student knowledge and skills)

Principal investigators rated their evaluations highly on all five utility criteria (Table 5). Those high ratings suggest PIs generally are quite satisfied with their evaluations. That is, they believe their evaluations meet the intellectual merit criteria set forward by ATE.

Despite the uniformly high average rating for utility, the five ratings do reveal some differences. First, centers and projects view the utility of evaluations differently (Table 5). Centers tend to rate usefulness higher on all criteria. Second, centers tend to give much stronger ratings of evaluation usefulness for what may be termed *product* evaluation. Product evaluation focuses on such matters as project outputs, effectiveness, and accountability. Note also that centers rate the product evaluation aspects much more highly than they rate usefulness for planning. Those differences are much smaller for projects and, notably, project PIs rated evaluation of outputs lowest of all the five criteria.

Because the five criteria were consistent in their overall averages and proved to be highly correlated, we created a total usefulness score as the sum of the separate utility ratings. This total score is highly consistent with individual usefulness scores—the five usefulness ratings correlate from 0.81 to 0.91 with the evaluation usefulness total score. Given the very high consistency between individual utility ratings and total scores and the substantial increase in reliability provided by a total score, we used the total evaluation usefulness score as our operational definition of evaluation utility. As was true for the individual criteria, the evaluation usefulness total score was larger for centers than for projects.

Table 5.
Descriptive Statistics of Evaluation Usefulness by Centers and Projects

	Projects		Centers	
	M	SD	M	SD
Usefulness for project planning	3.88	0.93	4.12	1.09
Usefulness for project improvement	3.97	0.89	4.35	0.77
Usefulness for project output	3.82	0.94	4.47	0.56
Usefulness for project accountability	4.10	0.88	4.59	0.55
Usefulness for project effectiveness	4.16	0.86	4.50	0.66
Evaluation usefulness (total)	19.93	4.5	22.03	3.63

Note. 1 = Not Useful; 2 = Minimally Useful; 3 = Somewhat Useful; 4 = Useful; 5 = Essential to our Work

To gain a better sense of what most influences grantees with respect to utility ratings, we correlated the total utility score criterion with 6 variables described in Section 1 that were thought to be important contributors to utility. These included annual expenditure for evaluation, the proportion of the annual award spent for evaluation, whether or not the project/center had an external evaluator, whether an external evaluator developed the evaluation plan, adherence to the evaluation plan, and whether or not the project/center had received a written evaluation report within the past

12 months.² Table 6 displays the descriptive statistics for the criterion (i.e., evaluation usefulness total score) and 6 predictors of evaluation usefulness (i.e., variables 2-7 in Table 6).

Table 6.
Descriptive Statistics of Evaluation Usefulness Criterion and Predictor Variables

	<i>M</i>	<i>SD</i>	<i>r</i> ^a
Criterion Variable			
1. Evaluation usefulness (total)	20.39	3.86	
Potential Indicators of Evaluation Usefulness			
2. Annual expenditure for evaluation	\$10,574	\$1,079	.14
3. Proportion of award spent for evaluation	4.08%	4.94%	.17
4. External evaluator only	0.80	0.40	.06
5. External evaluator developed the evaluation plan	0.46	0.50	.14
6. Evaluation adheres to evaluation plan	4.00	0.66	.47
7. Received written evaluation report within past 12 months	0.76	0.03	.31

Note. ^a Each correlation coefficient is a bivariate correlation between the predictor and the criterion variable

Of the 6 potential contributor variables, 2 (indicators 6 and 7 in Table 6) correlated greater than .2 with the criterion. Only indicator 6, “Evaluation adheres to the evaluation plan,” individually accounted for more than 10 percent of the variance in the criterion ($r_{1,6}^2=0.22$). When all 6 variables were incorporated into a regression on the criterion, the set of variables accounted for 34 percent of the criterion variance (adjusted $R^2 = .34$). As was true for the bivariate correlations, adherence to evaluation plans and received written evaluation report within the past 12 months contributed most substantially to the estimation of PIs’ perceptions of the utility of evaluation. These findings suggest that adhering to the evaluation plan and concretely communicating evaluation findings to the project are important measures of evaluation utility—more important than who does it or how much money is spent on evaluation.

3. CHARACTERISTICS OF EXTERNAL EVALUATORS AND EXTERNAL EVALUATIONS

External evaluators play a dominant role in most ATE evaluations, either alone or in tandem with internal

² The *evaluation planning* predictor was in reference to external evaluators specifically and dichotomously coded (i.e., as a reference point) as 1 = external evaluator and 0 = other (e.g., internal evaluator, project PI); *adherence to evaluation plan* ranged from 1 to 4, where 1 = not at all and 4 = followed precisely; and *received written evaluation report* was dichotomously coded as 1 = yes and 0 = no.

evaluation support. Their use is encouraged to reduce conflict of interest and bias concerns and to increase evaluation credibility and objectivity. Because external evaluators play such a large role, the survey was designed specifically to address external evaluators and the roles they play in increasing the usefulness of evaluations. Seventeen individual items focused on these matters. One addressed the frequency of interaction between the evaluation and the grantee, and 16 focused on evaluator characteristics.

Expecting that frequent contacts between the evaluator and the grantee would increase use of evaluation information, ATE PIs were asked how frequently they interact with their external evaluator. Figure 2 shows a considerable spread in frequency of contact. Centers tend to interact on a more frequent basis than projects. Approximately two-thirds (70%) of the centers interact with their evaluators at least monthly. Just one-third (31%) of projects interact that often, and approximately 10 percent of projects interact with their evaluator once a year or less (Figure 2).

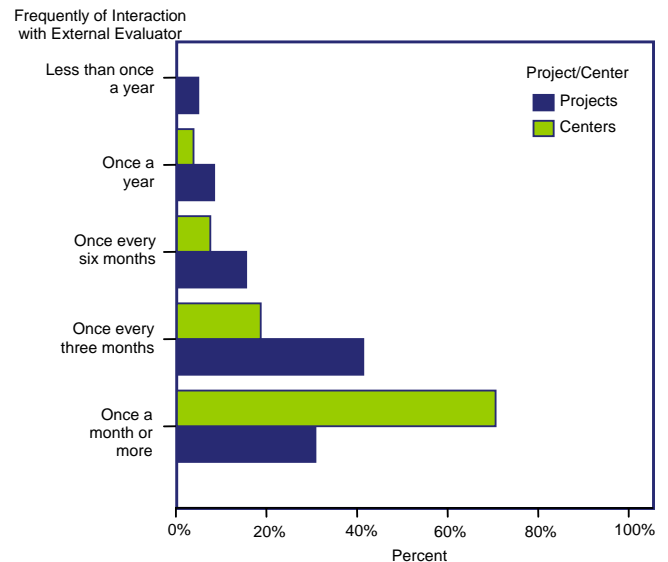


Figure 2.
Frequency of Interaction With External Evaluators

Sixteen Likert-type items were used to assess PIs’ perceptions of their external evaluators. Individual ratings were scaled from 1 to 5, where 1 = strongly disagree to 5 = strongly agree.

Analysis of those PI views of evaluators was addressed from four perspectives.

1. Do individual item responses suggest PIs’ satisfaction with their evaluators, and are there

substantive differences between project and center PIs on these items?

2. Do PIs give their evaluators high marks in matters that the evaluation profession views as important to conducting sound evaluations?
3. Do PIs view their evaluators as helping them address ATE's Intellectual Merit and Broader Impact criteria?
4. Do PIs respond in consistent ways that identify particular evaluator attributes or issues?

Individually and collectively, the items show PI satisfaction with their evaluators (Table 7). For items 1 to 11, the average rating was 4 or higher (4=Agree, 5=Strongly Agree). For 3 of the remaining 5 items (13-15), a neutral position of 3 could be considered the most positive response. For the lowest rated item (16) "Takes an adversarial role" is actually a strong positive response on the part of the PIs. When reverse coded to create agreement alignment with the other items, its average is 4.39. Also, as was true regarding utility criteria, center PIs consistently rated their external evaluators more highly than did project PIs.

To assess whether the high ratings should be viewed as affirmation of sound evaluations, the individual items and their average ratings were viewed in terms of *The Program Evaluation Standards* (Joint Committee, 1994). The program evaluation standards provide a particularly good comparison basis because they were reached through extensive study, testing with input from major national and international education organizations of both researchers and practitioners, and have been certified as American National Standards for educational evaluation practices. Strong linkages were identified for many standards, including Program Documentation (A1), Defensible Information Sources (A4), Valid Information (A5), Justified Conclusions (A10), Evaluator Credibility (U2), Report Timeliness and Dissemination (U6), and Evaluation Impact (U7).

PIs rate their evaluators most highly in understanding their centers/projects and lending credibility to the project. Both are important attributes of good evaluations (cf., Standards A1 Program Documentation and U2 Evaluator Credibility). Also, for the item "Collects information that accurately reflects how project/center is doing," ties concretely to standards A1 Program Documentation and A4 Defensible Information

Table 7.
Principal Investigator Ratings of External Evaluator Characteristics

Item	Scale	Item Stem	Projects		Centers		Total	
			M	SD	M	SD	M	SD
1	1	Understand how our project/center operates	4.40	0.60	4.67	0.48	4.47	0.58
2	1	Lends credibility to our project/center	4.37	0.73	4.67	0.48	4.45	0.69
3	1	Collects information that adequately reflects how our project/center is doing	4.32	0.66	4.67	0.48	4.40	0.64
4	1	Uses a variety of methods to obtain data about the quality of outcomes	4.20	0.76	4.48	0.58	4.27	0.72
5	1	Provides timely feedback of information for project/center improvement	4.17	0.89	4.44	0.85	4.24	0.88
6	1	Provides evidence, based on data, about the quality of outcomes	4.10	0.75	4.22	0.75	4.13	0.75
7	1	Helps us understand/interpret evaluation findings	3.95	0.74	4.33	0.62	4.05	0.73
8	2	Is flexible with respect to changes in project/center	4.26	0.59	4.52	0.51	4.32	0.58
9	2	Is an advocate for our project/center	4.21	0.89	4.56	0.51	4.30	0.82
10		Provides encouragement/support/feedback for project/center staff/faculty	4.21	0.77	4.59	0.50	4.31	0.73
11		Provides us with advice and guidance that has been counterproductive	4.14	0.95	4.22	0.93	4.16	0.94
12	2	Helps us present evaluation findings to internal/external stakeholders	3.53	1.04	4.26	0.66	3.71	1.01
13		Takes "hands off" stance toward our project/center activities	2.48	1.11	2.07	1.11	2.38	1.12
14		Provides too little time or assistance	2.31	1.07	2.04	1.22	2.24	1.11
15		Demands too much time	2.07	0.97	2.11	1.22	2.09	1.03
16		Takes on an adversarial role with project/center personnel	1.68	0.91	1.41	0.69	1.61	0.86

Note. Not all PIs responded to all items. As a result, individual item sample sizes range from 79 to 84. One center PI did not respond to 1 item, but all 27 responded to all the other items. Overall, the sample *n* ranged from 106 to 111.

Sources. Especially for centers, the item statistics suggest the evaluators work closely and compatibly together.

While the PI ratings suggest that evaluators are performing in ways that produce sound evaluations, aspects of those ratings appear to be problematic. The positive regard for evaluators is so strong as to raise questions about the relationship between the principal investigators and the evaluators. For example, the Overview for standard U2 on evaluator credibility states this:

When conducting an evaluation, evaluators should maintain a pattern of consistent, open, and continuing communication and approachability with their clients and other stakeholders while offering expertise and maintaining *impartiality* [emphasis added]. (Joint Committee, 1994, p. 31).

It is impartiality that emerges in the ratings as a potentially serious concern. For example, the PIs' low mean score (1.61) for the item "Takes on an adversarial role with project/center personnel" clearly shows that PIs do not view their evaluators as adversaries, and the high mean (4.3) for the item "Is an advocate for our project/center" confirms that evaluators are strongly viewed as advocates for the project/center and are not a neutral/impartial third party. The prime reasons for using external evaluators (i.e., removal of conflict of interest, bias reduction, increase in objectivity and credibility) are all placed at risk by such advocacy. Indeed, if impartiality of the evaluators is compromised, then other aspects of the standards (e.g., Valid Information) are necessarily at risk as well.

PI responses regarding evaluators' services with regard to intellectual merit and broader impacts were not as positive as for other criteria. As indicated by its inclusion in the ATE solicitation as an important criterion of intellectual merit, ATE expects evaluations to be clearly tied to the project outcomes. One item, "Provides evidence, based on data, about the quality of outcomes," directly addressed this matter and the wording of two others (Collects information that accurately reflects how project/center is doing, and Uses a variety of methods to obtain data about the quality of outcomes) also relate strongly to this criterion. All three ratings are high, 4.13 or greater, with the most direct question receiving the lowest rating. Yet clearly, PIs view other attributes of their evaluators to be stronger. The most direct indicator of intellectual merit is fully

half a standard deviation lower than the items receiving the PIs' highest ratings.

Similarly, the third evaluation criterion included in the ATE solicitation regarded broader impacts and asked the question, "Will the project evaluation inform others through the communication of results?" The one item that dealt directly with that matter (# 12) "Helps us present evaluation findings to internal/external stakeholders" was rated lowest among the positively worded items in the list. This suggests that PIs view their evaluators as least able/responsive in matters of broader impact.

To address the fourth question—"Do PIs respond in consistent ways that identify particular evaluator attributes or issues?"—the 16 items were subjected to factor analysis from which 2 factors emerged.³ Factor 1 consisted of 8 items. Because items that loaded heavily on this factor all were items that are strongly supported by *The Program Evaluation Standards* as sound evaluation practices, we named it "Sound Evaluation." Factor 2 consisted of 3 items, all of which relate directly to the evaluator's willingness and actions to be helpful to the project. This factor was named "Evaluator as Helper." These 2 factors were then used to create 2 scale scores for each respondent by summing the respective item ratings for each respondent. Individual items included in the 2 scales are identified in Table 7. Resulting scale means, standard deviations, and reliabilities for the scales are shown in Table 8. Additionally, Table 8 provides similar descriptive statistics for evaluation usefulness, since the characteristics of that variable differ slightly for the restricted population of evaluators (i.e., external evaluators).

Table 8.
Scale Scores for Sound Evaluation,
Evaluator as Helper, and Evaluation Utility Total Score

Scale	Potential Range	<i>M</i>	<i>SD</i>	<i>α</i>
Sound evaluation	8-40	33.55	5.96	.875
Evaluation as helper	3-15	12.30	1.85	.596
Evaluation usefulness	5-25	20.49	3.73	.898

Note. Cronbach's α is a measure of the scale's internal consistency.

These two scales, along with the variable created to address frequency of interaction with the evaluator—interacting once a month or more (dichotomously-coded as 1 = evaluator interacts once a month or more and 0 = interacts less often), were regressed on evaluation usefulness.⁴ Of the 3 predictors, only the sound evaluation scale accounted for

³ Exploratory factor analysis (EFA) indicated that the item correlations were adequate for conducting factor analysis (Kaiser-Meyer-Olkin = .846), that these two components accounted for nearly 50 percent of the total variation, and all items loaded on their respective factors $\geq .50$.

⁴ The model was fitted using OLS multiple regression.

substantial variance. It accounted for 43 percent of the variance ($r = 0.65$) in the evaluation usefulness score.

4. WHAT DOES THIS MEAN? SUMMING UP

The ATE program is on record in expecting its grantees to evaluate. There is substantial, though not full compliance with that expectation. Centers more fully comply; nearly all centers hire evaluators and have engaged in evaluations and receive written reports in the past 12 months. Center PIs also view their evaluations as more useful and rate their evaluators more highly.

Both center and project PIs give their evaluations high marks in terms of utility and their evaluator's high marks in terms of compliance with practices viewed as important for sound evaluations. In matters related to ATE's dictates that each project and center evaluation provide evidence of both intellectual merit and broader impacts, the PI responses are positive but more conservative.

PIs view the evaluation plan as important to their projects. Evaluators regularly prepare the evaluation plan, but PIs frequently play a major role in creating the evaluation plan. Most grantees adhere to the evaluation plan in the conduct of local (project or center) evaluations, and the extent to which PIs view the plan as being followed is a good predictor of perceived evaluation utility.

Despite the strong positive attributions PIs give to their evaluators and evaluations, the indicators also raise several questions and concerns. The fact that 16 percent of projects do not have evaluators and fully 40 percent of projects did not receive a written report in the past 12 months suggests that evaluation is not a matter of importance to a large proportion of projects. That concern is heightened by the low proportion of budget spent by projects and centers, with the bulk of the grantees spending at or below the NSF recommended minimum for evaluations. [Anecdotal information suggests that some principal investigators' evaluation budgets are cut during initial negotiations with NSF where project PIs sometimes are encouraged to evaluate only at the end of the project.]

The very high ratings that PIs give regarding the evaluator's advocacy for their project raise questions about evaluators' impartiality and ultimate evaluation validity. For centers in particular, the findings suggest a "cozy" relationship between the evaluators and the PIs.

One question raised by the findings is whether internal evaluators should be engaged more often in concert with external evaluators. The findings from this study suggest that the combination may help keep evaluation costs low while possibly improving the evaluators' responsiveness to reporting needs.

One might say it is a "no brainer" to argue the importance of the evaluation plan. Yet, the findings reported here add to the importance of that evaluation plan because it is followed closely, regardless of who prepared it, and is linked to PIs' perceptions of evaluation utility. It would do no harm to note its importance to proposal developers and encourage careful attention to creating that plan.

For projects especially, we note that some projects budgeted for evaluations but did not fund evaluation work during the past 12 months. We encourage ATE to push more strongly for evaluations that are integral to projects—ensuring that all projects include evaluations and that those evaluations are conducted on a regular basis, with frequent interactions and reports to the principal investigator and other key stakeholders. Since project evaluations are intended primarily to serve project needs, evaluations that are conducted just at the end of a project do not improve the project and only minimally provide accountability for it—and perhaps provide support for continuation of NSF funding.

We encourage ATE to work with grantees and evaluators to take steps that help evaluators maintain impartiality in their evaluations. Such impartiality is essential to strong evaluations and ultimately, we think, to maintenance of high productivity and standards for the program.

Perhaps most importantly, we note that PIs strongly value their evaluations. This, we think, is due in part to the support and emphasis that the ATE program places on evaluation. We encourage continuation in those regards.

REFERENCES

- Coryn, C. L. S., & Hanssen, C. E. (2005). *2005 ATE technical report: Processes, procedures, and results*. Kalamazoo: Western Michigan University, The Evaluation Center.
- Coryn, C. L. S., Ritchie, L. A., & Gullickson, A. R. (2006). *Advanced Technological Education Program fact sheet*. Kalamazoo: Western Michigan University, The Evaluation Center.
- Frechtling, J. (2002). *The 2002 user friendly handbook for project evaluation*. Arlington, VA: National Science Foundation.

Joint Committee on Standards for Educational Evaluation. (1994). *The program evaluation standards: How to assess evaluation of educational programs* (2nd ed.). Thousand Oaks, CA: Sage.

National Science Foundation. (2005). *Advanced Technological Education program solicitation* [NSF 05-530]. Arlington, VA: Author.

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