




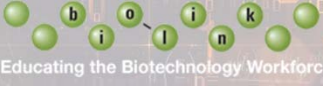



Meeting Requirements, Exceeding Expectations: Understanding the Role of Evaluation in Federal Grants

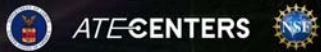
May 25, 2016
Webinar will begin at 3pm ET

CCTA | CENTERS COLLABORATIVE FOR TECHNICAL ASSISTANCE

The CCTA IS Led By

-  **National Center for Convergence Technology (CTC)** at Collin College in Frisco, TX (lead)
-  **South Carolina ATE National Resource Center (SCATE)** at Florence Darlington Technical College in Florence, SC
-  **Florida ATE Center (FLATE)** at Hillsborough Community College in Tampa, FL
-  **Bio-Link Next Generation National ATE Center for Biotechnology and Life Sciences (Bio-Link)** at City College of San Francisco in San Francisco, CA
-  **Networks Resource Center** at the Maricopa Community College District in Phoenix, AZ

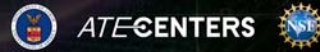
CCTA | CENTERS COLLABORATIVE FOR TECHNICAL ASSISTANCE



CCTA Purpose

- Respond to a request from the Department of Labor (DOL) to the NSF to have ATE Centers provide technical assistance services to DOL TAACCCT grantees
- Activities relevant for DOL grants, NSF grants and workforce-oriented programs of all kinds
- Deliverables
 - Topical webinars on existing and new solutions
 - Live/recorded with attendee Q&A
 - Identify and document best practices
 - Host convenings

CCTA | CENTERS COLLABORATIVE FOR TECHNICAL ASSISTANCE



TODAY'S PRESENTERS



Lori Wingate
Director of Research,
The Evaluation
Center at Western
Michigan University



Leslie Goodyear
Principal Research
Scientist,
EDC




Ann Beheler
Facilitator
PI, National CTC

CCTA | CENTERS COLLABORATIVE FOR TECHNICAL ASSISTANCE






Lori Wingate
Director



Evalu**ATE**
www.evaluate.org

Evaluation resource center for NSF's
Advanced Technological Education program
[webinars](#) | [resource library](#) | [newsletter](#) | [blog](#)




THE EC
EVALUATION
CENTER



W WESTERN MICHIGAN UNIVERSITY



This material is based upon work supported by the National Science Foundation under grant number 1204683. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the presenters and do not necessarily reflect the views of NSF.



Meeting Requirements **Exceeding Expectations**
Understanding the Role of Evaluation in Federal Grants

Overview

PART I: Evaluation Fundamentals

Commentary by Leslie Goodyear | Question Break

PART II: Evaluation Requirements and Expectations

Commentary by Leslie Goodyear | Question Break

PART III: Evaluation Staffing, Budgeting, and Utilization

Commentary by Leslie Goodyear | Question Break

Let's play

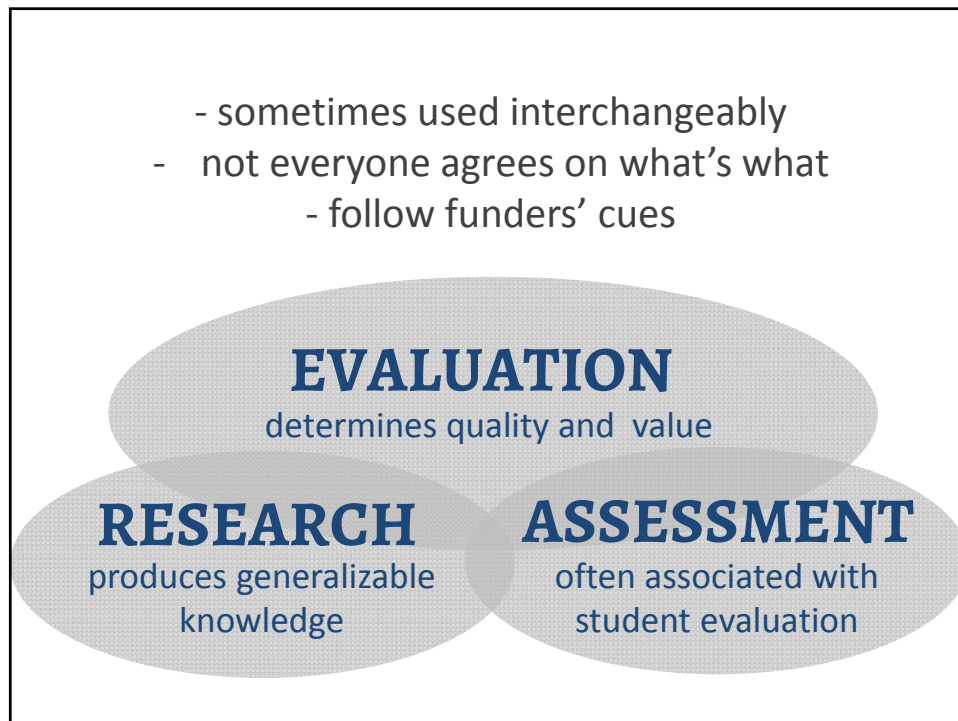
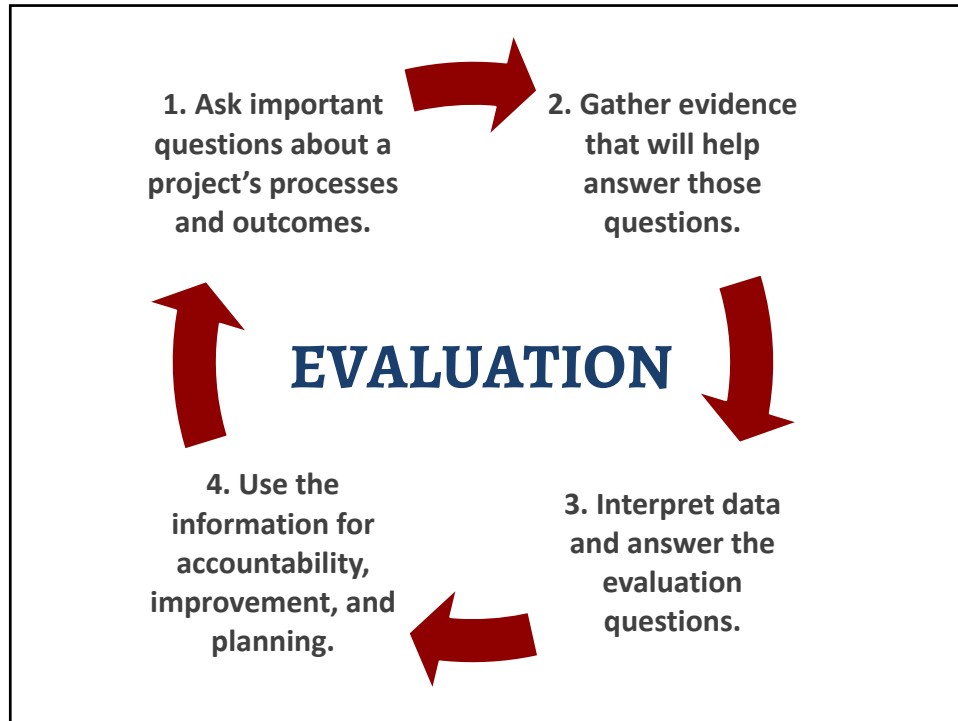
Two Lies and a Truth!

Find your poll buttons

Which is the truth?

- a** A federal evaluation policy dictates the requirements for project-level evaluation.
- b** All federal grantseekers and grantees should be evaluation-literate.
- c** All federal grant programs require project-level evaluation.

systematic **EVALUATION**
the determination of something's quality,
value, or importance





A federal evaluation policy dictates the requirements for project-level evaluation.

But...

Some federal agencies have agency-specific guidance on evaluation (and research),



User-Friendly Handbook for Project Evaluation



Framework for Program Evaluation in Public Health



Common Guidelines for Education Research and Development

FALSE

All federal grant programs require project-level evaluation.

But...

There are good reasons to evaluate, even if you don't have to.

**Why some federal programs
require projects to be evaluated**

**Accountability
Improvement
Evidence**

Why you should evaluate your project if *even you don't have to*

**Accountability
Improvement
Evidence**

Leadership Capacity Building for Faculty. The vitality and growth of the ATE community is closely linked to industry trends and needs as well as the acumen of the PIs and their institutions who educate technicians. As such, faculty must: 1) work with their institutional administration, 2) effectively manage both programs and project-oriented activities, 3) maintain industry connections that include local, statewide, and national economic development efforts, and 4) maintain and cultivate networks with other grantees across the nation. Activities that foster these efforts include:

- Identifying and nurturing faculty and their administrators for the purpose of developing and implementing a new curriculum
- Identifying and nurturing faculty and their administrators for the purpose of identifying and implementing a new curriculum
- Identifying and nurturing faculty and their administrators for the purpose of identifying and implementing a new curriculum

Official document that explains grant opportunity, its requirements, and how to apply

Program Solicitation

Funding Opportunity Announcement

Request for Proposal

Program Announcement

Notice of Funding Availability

Teacher Preparation. The preparation of future teachers who will facilitate student learning in mathematics and science and cultivate an interest in technological careers is an important component of the ATE program. Projects should provide leadership and support in developing effective proposal writing skills, providing guidance on ways of surveying area industry to determine industry needs as well as identifying and nurturing faculty and their administrators for the purpose of identifying and implementing a new curriculum.

Teacher Preparation projects must involve both two-year and four-year institutions and should include service or post-professional programs. These projects provide leadership and support in developing effective proposal writing skills, providing guidance on ways of surveying area industry to determine industry needs as well as identifying and nurturing faculty and their administrators for the purpose of identifying and implementing a new curriculum.

The project's evaluation should include the following: (a) the number of two-year and four-year institutions that participate in the program; (b) the number of two-year and four-year institutions that participate in the program; (c) the number of two-year and four-year institutions that participate in the program; (d) the number of two-year and four-year institutions that participate in the program; (e) the number of two-year and four-year institutions that participate in the program; (f) the number of two-year and four-year institutions that participate in the program; (g) the number of two-year and four-year institutions that participate in the program; (h) the number of two-year and four-year institutions that participate in the program; (i) the number of two-year and four-year institutions that participate in the program; (j) the number of two-year and four-year institutions that participate in the program; (k) the number of two-year and four-year institutions that participate in the program; (l) the number of two-year and four-year institutions that participate in the program; (m) the number of two-year and four-year institutions that participate in the program; (n) the number of two-year and four-year institutions that participate in the program; (o) the number of two-year and four-year institutions that participate in the program; (p) the number of two-year and four-year institutions that participate in the program; (q) the number of two-year and four-year institutions that participate in the program; (r) the number of two-year and four-year institutions that participate in the program; (s) the number of two-year and four-year institutions that participate in the program; (t) the number of two-year and four-year institutions that participate in the program; (u) the number of two-year and four-year institutions that participate in the program; (v) the number of two-year and four-year institutions that participate in the program; (w) the number of two-year and four-year institutions that participate in the program; (x) the number of two-year and four-year institutions that participate in the program; (y) the number of two-year and four-year institutions that participate in the program; (z) the number of two-year and four-year institutions that participate in the program.

Business and Entrepreneurial Skills Development for Students: In addition to technical skills and disciplinary content, students entering the industry environment need skills that allow them to understand and work effectively in a business environment. Many companies have a global presence, and students need to understand that the global economy affects them as employees. Another sector of the industry is composed of small start-up companies, and these have different attributes than large established firms. Students need to understand these attributes and differences to be effective employees.

Employers often expect employees to possess knowledge, skills and competencies in a specific technical area and to demonstrate professional, industry related, and entrepreneurship acumen. Entrepreneurship skills can be developed in students in technician education programs by having them take selected business courses, by engaging students in problem-based learning using projects of interest to local industry, working with local economic investment organizations and by developing incubator programs that provide experiences for students to interact with entrepreneurs. Projects are encouraged that:

Leadership Capacity Building for Faculty: The vitality and growth of the ATE community is closely linked to industry trends and needs as well as the acumen of the PIs and their institutions who educate technicians. As such, faculty must: 1) work with their institutional administration, 2) effectively manage both programs and project/partner activities, 3) maintain industry connections that include local, statewide, and national economic development efforts, and 4) maintain and cultivate networks with other grantees across funding agencies. Activities that foster these skills might include:

- Mentoring programs that train faculty to mentor other grantees. Activities are expected to lead to new PIs acquiring skills needed to successfully manage, complete, evaluate, terminate and sustain their projects as well as fostering leadership skills that may lead them to become mentors at a future time;
- Identifying and training faculty and their administrators for the purpose of developing and implementing a new curriculum in an advanced technological area to educate technicians for local industry needs; and
- Outreach activities that reach faculty and their institutions to educate them about the value and potential impact of working with the program and its community. These efforts could include providing information on funding opportunities, developing effective proposal writing skills, providing guidance on ways to survey area industry to determine industry needs, as well as finding and working with local workforce investment boards and other entities.

Teacher Preparation: The foundation for advanced technological education is grounded in strong mathematics, science, and technology education in K-12 schools. The preparation of future teachers who will foster the student learning in mathematics and science and motivate an interest in technological careers is an essential component of the ATE program. ATE teacher preparation projects help to prepare a K-12 teaching workforce that is skilled in teaching science and mathematics, understands the technological workplace, and is able to teach to solving real world technology related problems using design processes and principles. Projects should focus on Technological Literacy, (TE) (<http://www.teacoconnect.org>)

Teacher Preparation projects must be implemented in two-year institutions and should aim to increase the number, quality, and diversity of prospective K-12 science, mathematics, and technology teachers in graduate or paraprofessional programs. These projects are expected to improve the prospective teachers' technological understanding, provide them with experiences to use in engaging students in real world technological problems; improve their understanding of the modern workplace; and strengthen their preparation in science and mathematics. These projects are expected to build on existing research literature on teacher preparation. Two-year colleges have the unique advantage of having technology faculty who work with the high performance workplace, who work with mathematics and science faculty in developing a

The project's evaluation plan must measure the effectiveness of efforts to recruit prospective students into two-year teacher preparation programs, enhance their understanding of advanced technology, and enhance their ability to teach the technological literacy of their students. Project leaders should conduct longitudinal studies that track students beyond the grant period. Evaluation should measure the number who graduate with credentials, find positions in K-12 schools, and demonstrate successful performance in the classroom.

Business and Entrepreneurial Skills Development for Students: In addition to technical skills and disciplinary content, preparing the industry environment need skills that allow them to understand and work effectively in a business environment. Many companies have a global presence, and students need to understand that the global economy affects them as employees. Another sector of the industry is comprised of small start-up companies, and these have different attributes than large established firms. Students need to understand these attributes and differences to be effective employees.

Employers often expect employees to possess knowledge, skills and competencies in a specific technical area and to demonstrate professional, industry related, and entrepreneurship acumen. Entrepreneurship skills can be developed in students in technician education programs by having them take selected business courses, by engaging students in problem-based learning using projects of interest to local industry, working with local economic investment organizations and by developing incubator programs that provide experiences for students to interact with entrepreneurs. Projects are encouraged that



GRANTS.GOVSM

1,717 grant opportunities

25 federal agencies

We'll look at examples from





Comments



Leslie Goodyear, Ph.D.

- Principal Research Scientist at EDC
- Former NSF program officer in the Division of Research on Learning

Questions?



Lori
Wingate

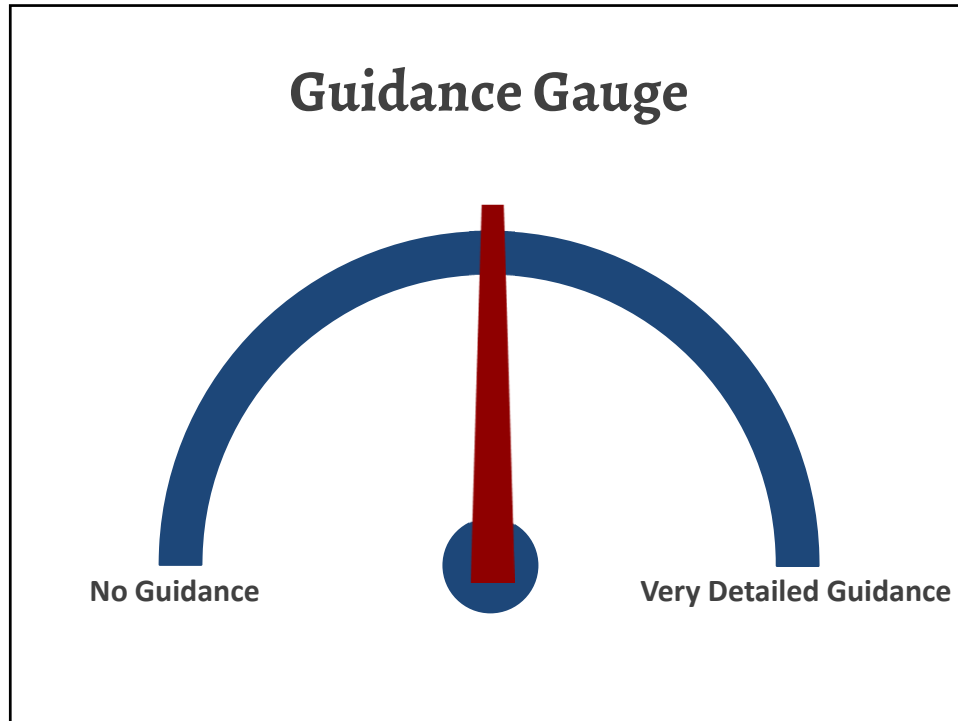
Leslie
Goodyear

Overview

PART I: Evaluation Fundamentals
Commentary by Leslie Goodyear | Question Break

PART II: Evaluation Requirements and Expectations
Commentary by Leslie Goodyear | Question Break

PART III: Evaluation Budgeting, Personnel, and Utilization
Commentary by Leslie Goodyear | Question Break



Leadership Capacity Building for Faculty: The vitality and growth of the ATE community is closely linked to industry trends and needs as well as the acumen of the PIs and their institutions who educate technicians. As such, faculty must: 1) work with their institutional administration, 2) effectively manage both programs and project/center activities, 3) maintain industry connections that include local, statewide, and national economic development efforts, and 4) maintain and cultivate networks with other grantees across funding agencies. Activities that foster these skills might include:


- Mentoring programs that link experienced ATE PIs with new grantees. Activities are expected to lead to new PIs acquiring skills needed to successfully manage, complete, evaluate, disseminate and sustain their projects as well as fostering leadership skills such that they may become mentors at a future time.
- Identifying and mentoring faculty and their administrators for the purpose of developing and implementing a new curriculum in an advanced technological area to educate technicians for local industry needs; and
- Outreach activities that reach faculty and their institutions to educate them about the value and potential impact of working with the ATE Program and its community. These efforts could include providing information on funding opportunities, developing effective proposal writing skills, providing guidance on ways of surveying area industry to determine industry needs as well as finding and working with local workforce investment boards and other entities.

Teacher Preparation: The foundation for advanced technological education is grounded in strong mathematics, science, and technology education in K-12 schools. The preparation of future teachers who will facilitate student learning in mathematics and science and cultivate an interest in technological careers is an important component of the ATE program. ATE teacher preparation projects help prepare a future K-12 teaching workforce that is skilled in teaching science and mathematics, understands the technological workplace, and can prepare students to use a variety of approaches to solving real world technology related problems using design processes and principles (Standards for Technological Literacy, ITEA, <http://www.iteaconnected.org>)


Teacher Preparation: The project's evaluation plan must measure the effectiveness of efforts to recruit prospective K-12 teachers, transfer those students into four-year teacher preparation programs, enhance their understanding of advanced technologies used in the workplace, and enhance their ability to improve the technological literacy of their students. Project leaders should also be prepared to contribute to longitudinal studies that track students beyond the grant period, in order to measure the number who graduate with teaching credentials, find positions in K-12 schools, and demonstrate successful performance in the classroom.

Business and Entrepreneurial Skills Development for Students: In addition to technical skills and disciplinary content, students entering the industry environment need skills that allow them to understand and work effectively in a business environment. Many companies have a global presence, and students need to understand that the global economy affects them as employees. Another sector of the industry is comprised of small start-up companies, and these have different attributes than large established firms. Students need to understand these attributes and differences to be effective employees.


Employers often expect employees to possess knowledge, skills and competencies in a specific technical area and to demonstrate professional, industry related, and entrepreneurship acumen. Entrepreneurship skills can be developed in students in technician education programs by having them take selected business courses, by engaging students in problem-based learning using projects of interest to local industry, working with local economic investment organizations and by developing incubator programs that provide experiences for students to interact with entrepreneurs. Projects are encouraged that:




“ **Evaluation Plan.** The application must describe an evaluation plan to review and determine the **quality and effectiveness** of the training project grant.



Occupational Safety and Health Training Project Grants
—Centers for Disease Control and Prevention



“ **Evaluation Plan:** Based on the theory of change and the desirable outcomes of the proposed revolution, enumerate appropriate **indicators of success** related to accomplishing the **goals and objectives** and a **timeframe** to seek measurable change.



Formation of Engineers: Revolutionizing Engineering and Computer Science Departments
—National Science Foundation



The **[evaluation] plan** should describe the evaluation design, indicating: (1) what **types of data** will be collected; (2) **when** various types of data will be collected; (3) what **methods** will be used; (4) what **instruments** will be developed and when; (5) how the data will be **analyzed**; (6) when **reports** of results and outcomes will be available; and (7) how the applicant will **use the information** collected through the evaluation to monitor progress of the funded project and to provide accountability information ...



Innovative Approaches to Literacy Program
—U.S. Department of Education

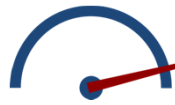


Performance Evaluation Describe a **data collection plan**, aimed at describing the **measures, methods, techniques, and tools** used to evaluate the project and whether it achieved its anticipated outcomes, that includes, at minimum:

- Identification of **specific data** on participants and other data that the grantee plans to use, and **how the data** will be collected for analysis
- Plans for how the grantee will **document the lessons learned**, both positive and negative
- Plans to **identify the most effective TA models** and how they were implemented and could potentially be replicated
- Plans for **involving program participants** in evaluation activities
- Plans **for how the data will be used** to inform program delivery



Women in Apprenticeship and Nontraditional Occupations
Technical Assistance Grants
—U.S. Department of Labor



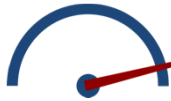
Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline
- 8 Personnel
- 9 Budget
- 10 Plan for use of results



**Learn more by checking out
related resources**

—links on the final slide




Evaluation Plan Elements

- 1 Evaluation questions**
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline
- 8 Plan for use of results
- 9 Personnel
- 10 Budget

Identify what aspects of the project will be evaluated

i *Evaluation Questions Checklist for Program Evaluation*

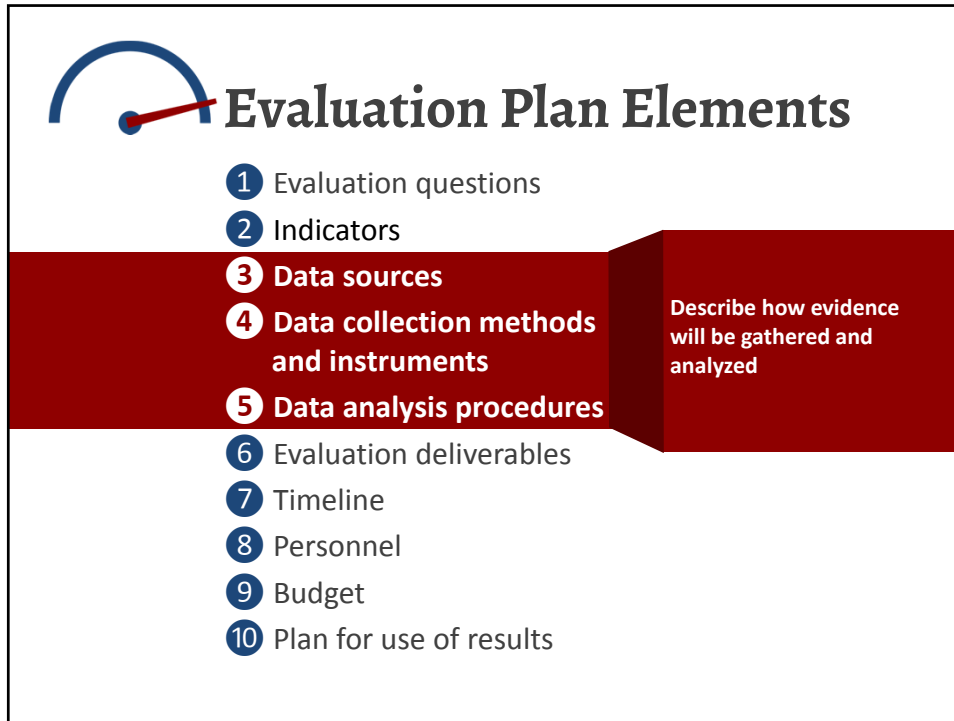


Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators**
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline
- 8 Personnel
- 9 Budget
- 10 Plan for use of results

Identify what will be measured in order to answer the evaluation questions

i *Criteria for Selection of High-Performing Indicators: A Checklist to Inform Monitoring and Evaluation*

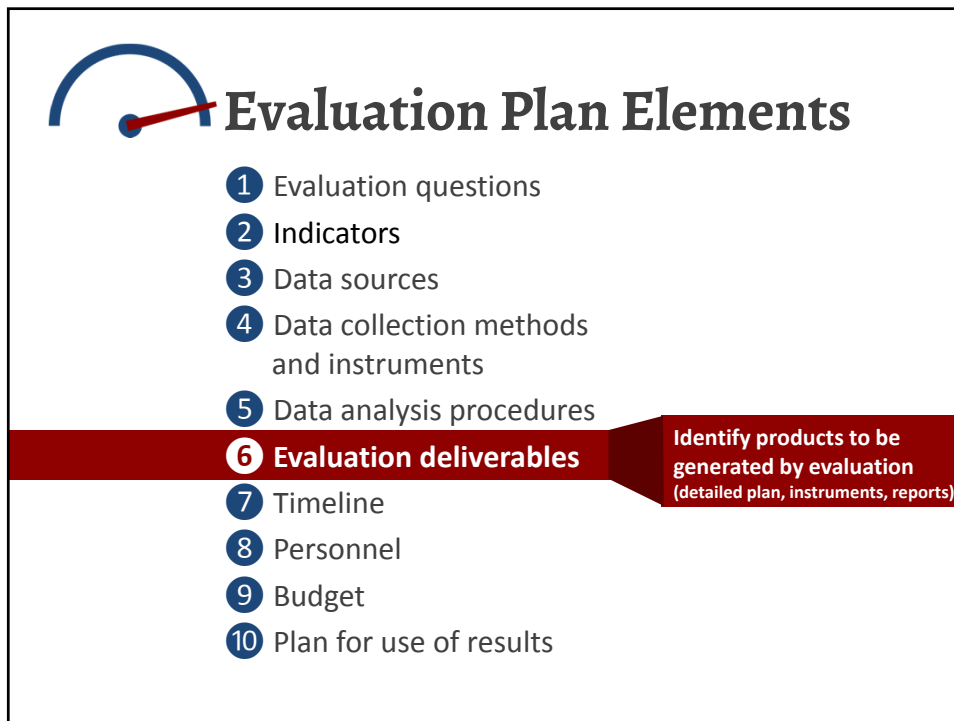


Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources**
- 4 Data collection methods and instruments**
- 5 Data analysis procedures**
- 6 Evaluation deliverables
- 7 Timeline
- 8 Personnel
- 9 Budget
- 10 Plan for use of results

Describe how evidence will be gathered and analyzed

This diagram features a blue arc with a red needle pointing to the right, positioned above the title. A red horizontal bar highlights items 3 through 5. A red callout box on the right side of the bar contains the text 'Describe how evidence will be gathered and analyzed'.

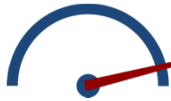


Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables**
- 7 Timeline
- 8 Personnel
- 9 Budget
- 10 Plan for use of results

Identify products to be generated by evaluation (detailed plan, instruments, reports)


This diagram features a blue arc with a red needle pointing to the right, positioned above the title. A red horizontal bar highlights item 6. A red callout box on the right side of the bar contains the text 'Identify products to be generated by evaluation (detailed plan, instruments, reports)'.



Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline**
- 8 Personnel
- 9 Budget
- 10 Plan for use of results

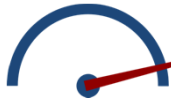
Show how evaluation activities align with project activities and milestones



Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline
- 8 Personnel**
- 9 Budget
- 10 Plan for use of results


Identify who will be responsible for which aspects of the evaluation



Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline
- 8 Personnel
- 9 Budget
- 10 Plan for use of results**

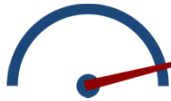
Include a line item for evaluation that matches the scope of work



Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline
- 8 Personnel
- 9 Budget
- 10 Plan for use of results**

Demonstrate intention and commitment to use results for improvement and sharing lessons learned




Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline
- 8 Personnel
- 9 Budget
- 10 Plan for use of results

Tailor these elements to your specific project!

i Evaluation Planning Checklist for NSF-ATE Proposals
10 Helpful Hints and 10 Fatal Flaws: Writing Better Evaluation Sections in Your Proposals



Evaluation Plan Elements

- 1 Evaluation questions
- 2 Indicators
- 3 Data sources
- 4 Data collection methods and instruments
- 5 Data analysis procedures
- 6 Evaluation deliverables
- 7 Timeline
- 8 Personnel
- 9 Budget
- 10 Plan for use of results

Details about data collection and analysis will probably receive the most scrutiny

Let's play

Be the Reviewer!

Get ready to use your poll buttons

Which data collection description is better?

a	b
<p>The evaluation will utilize an accepted mixed-methods design (Cook & Campbell, 1979). Quantitative and qualitative measures of performance will be used in both a formative and summative manner to gauge the merit and worth of the grant initiative. This mixed-methods approach has proven useful in utilizing both quantitative and qualitative performance indicators in a single research design (Frechtling & Sharp, 1997). It is also consistent with the best practices and recommendations for rigorous scientifically-based research.</p>	<p>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.</p>

Data Collection Planning Matrix

Evaluation Question: How has the project impacted enrollment in renewable energy programs and courses?

Indicator	Data Source	Method	Responsible Party	Timing	Analysis Plan
Change in course enrollment numbers	Institutional research database	Review of institutional and departmental records	Project PI	End of each semester	Comparison of enrollment numbers over time (start 2 years prior to project start)
Opinions of faculty and career center staff about the project's impact	Participating faculty Career center advisors Career center director	In-person interviews	External evaluator	Annually	Inductive coding of interviews to identify themes
Students' reports about why they enrolled	Enrolled students	Web survey	Instructors (instructions provided by evaluator)	Beginning of each semester	Descriptive statistics and inductive coding



Data Collection Planning Matrix

Leadership Capacity Building for Faculty: The vitality and growth of the ATE community is closely linked to industry trends and needs as well as the acumen of the PIs and their institutions who educate technicians. As such, faculty must: 1) work with their institutional administration, 2) effectively manage both programs and project/center activities, 3) maintain industry connections that include local, statewide, and national economic development efforts, and 4) maintain and cultivate networks with other grantees across funding agencies. Activities that foster these skills might include:

- Mentoring programs that link experienced ATE PIs with new grantees. Activities are expected to lead to new PIs acquiring skills needed to successfully manage, complete, evaluate, disseminate and sustain their projects as well as fostering leadership skills such that they may become mentors at a future time;
- Identifying and resourcing faculty and their administrators for the purpose of developing and implementing a new curriculum in an advanced technological area to educate technicians for local industry needs; and
- Outreach activities that reach faculty and their institutions to educate them about the value and potential impact of working with the ATE Program and its community. These efforts could include providing information on funding opportunities, developing effective proposal writing skills, providing guidance on ways of surveying area industry to determine industry needs as well as finding and working with local workforce investment boards and other entities.

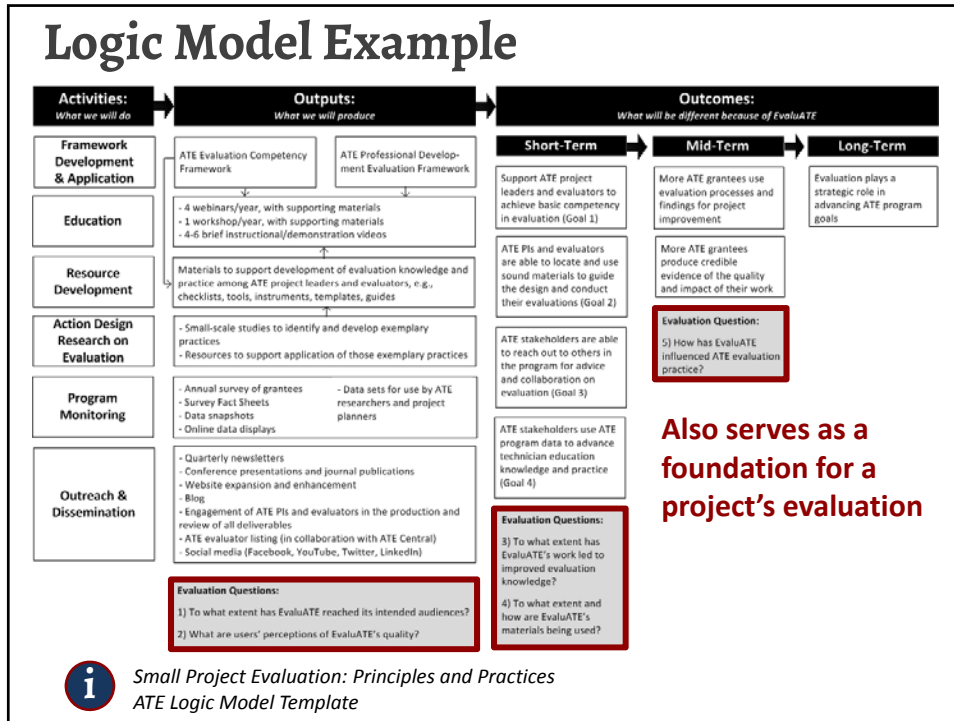
Teacher Preparation: The foundation for advanced technological education is grounded in strong mathematics, science, and technology education in K-12 schools. The preparation of future teachers who will facilitate student learning in mathematics and science and cultivate an interest in technological careers is an important component of the ATE program. ATE teacher preparation projects help prepare a future K-12 teaching workforce that is skilled in teaching science and mathematics, understands the technological workplace, and can prepare students to use a variety of approaches to solving real world technology related problems using design processes and principles (See Standards for Technological Literacy, ITEA, <http://www.itea.org>)

Teacher Preparation projects are expected to increase the number, quality, and diversity of prospective K-12 science and mathematics teachers in professional programs. These projects are expected to improve the science and mathematics content knowledge and experiences to use in engaging students in real world technology projects, improve their understanding of the modern workplace, and strengthen their preparation in science and mathematics. These projects are expected to build on the extensive research literature on teacher preparation.

“logic model”
Visual representation of a project's inputs, activities, outputs, and outcomes and the logical progression of how resources translate into impact

Business and Entrepreneurial Skills Development for Students: In addition to technical skills and disciplinary content, students entering the industry environment need skills that allow them to understand and work effectively in a business environment. Many companies have a global presence, and students need to understand that the global economy affects them as employees. Another sector of the industry is composed of small start-up companies, and these have different attributes than large established firms. Students need to understand these attributes and differences to be effective employees.

Employers often expect employees to possess knowledge, skills and competencies in a specific technical area and to demonstrate professional, industry related, and entrepreneurship acumen. Entrepreneurship skills can be developed in students in technician education programs by having them take selected business courses, by engaging students in problem-based learning using projects of interest to local industry, working with local economic investment organizations and by developing incubator programs that provide experiences for students to interact with entrepreneurs. Projects are encouraged that:



Leadership Capacity Building for Faculty. The vitality and growth of the ATE community is closely linked to industry trends and needs as well as the acumen of the PIs and their institutions who educate technicians. As such, faculty must: 1) work with their administration, 2) effectively manage both programs and project-center activities, 3) maintain industry connections that inform program development, and 4) maintain and cultivate networks with other grantees across the country.

Monitoring programs that link experienced ATE PIs with new grantees. Activities are expected to lead to new PIs acquiring skills needed to successfully manage, coordinate, assess, communicate and align their projects as well as fostering leadership skills such that they may become market-ready entrepreneurs and program managers.

Identifying and mentoring faculty and their administrators to address the needs of their institutions in an advanced technological area to educate technicians for local industry needs, and

Outreach activities that reach faculty and their institutions to educate them about the nature and potential impact of working with the ATE Program and its components. These efforts are expected to include provision of information on the program, developing effective relationships with industry, and identifying and addressing local industry needs as well as finding ways to address them.

“theory of change”

“formative evaluation”

“summative evaluation”

“process evaluation”

“outcome evaluation”

“impact evaluation”

“external evaluator”

“internal evaluator”

The project's evaluation plan must measure the effectiveness of efforts to recruit prospective K-12 teachers, transfer those students into the workforce, and ensure that those students are prepared to contribute to the workforce. The project should also be prepared to contribute to the workforce by ensuring the number of graduates with teaching credentials, and positions in K-12 schools, and demonstrate successful performance in the classroom.

Business and industry partners need to understand that the global economy affects them as employees. Another sector of the industry is comprised of small start-up companies, and these have different attributes than large established firms. Students need to understand these attributes and differences to be effective employees.

Employers often expect employees to possess knowledge, skills and competencies in a specific technical area and to demonstrate those skills and disciplinary content, students entering the workforce. Entrepreneurship skills can be developed in students in technical courses, by engaging students in problem-based learning using projects that are relevant to the industry, and by developing incubator programs that provide support to small businesses.

EPA Program Evaluation Glossary
Community Solutions Evaluation Glossary App

Comments



Leslie Goodyear, Ph.D.

- Principal Research Scientist at EDC
- Former NSF program officer in the Division of Research on Learning

Questions?

Lori
Wingate



Leslie
Goodyear



Overview

PART I: Evaluation Fundamentals

Commentary by Leslie Goodyear | Question Break

PART II: Evaluation Requirements and Expectations

Commentary by Leslie Goodyear | Question Break

PART III: Evaluation Staffing, Budgeting, and Utilization

Commentary by Leslie Goodyear | Question Break

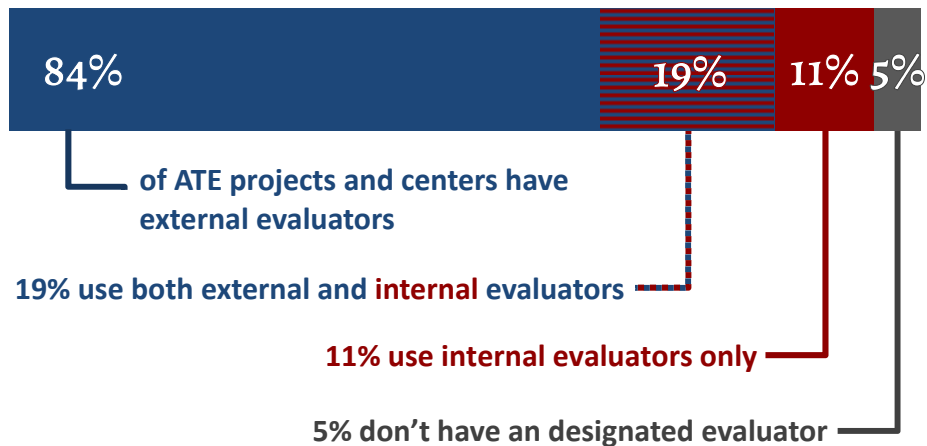
Evaluation **Staffing** and Budgeting

“**Evaluation:** All projects and centers carry out evaluative activities. 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.



Advanced Technological Education Program
— National Science Foundation

Evaluators in the ATE Program



Locating an Evaluator



Check the American Evaluation Association's Evaluator Directory
If already funded, post an RFP in the "Career" section of AEA's website



Check with university-based evaluation centers in your region



Ask for recommendations from colleagues or other program grantees

Evaluation Staffing and **Budgeting**

“ **Evaluation:** All projects and centers carry out evaluative activities. 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.**”



Advanced Technological Education Program
—National Science Foundation

Evaluation Budgeting Rule of Thumb

10%

**of the cost of conducting the project
should be allocated to evaluation**



Small Project Evaluation: Principles and Practices

Evaluation Utilization

- 1** Use results to inform for continuous project improvement
- 2** Share results with project participants, partners, and other stakeholders
- 3** Report on project success and lessons learned in annual reports to funders
- 4** Incorporate evaluation results into new funding proposals



Results from Prior NSF Support



specific outcomes and results including metrics to demonstrate the impact of the project



Broader Impacts

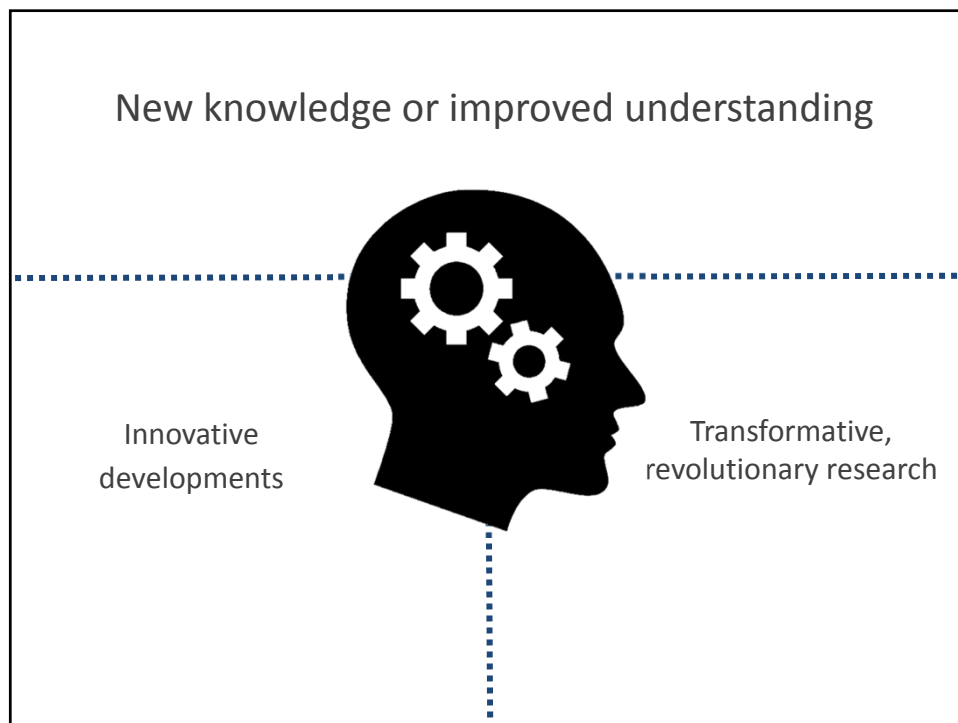
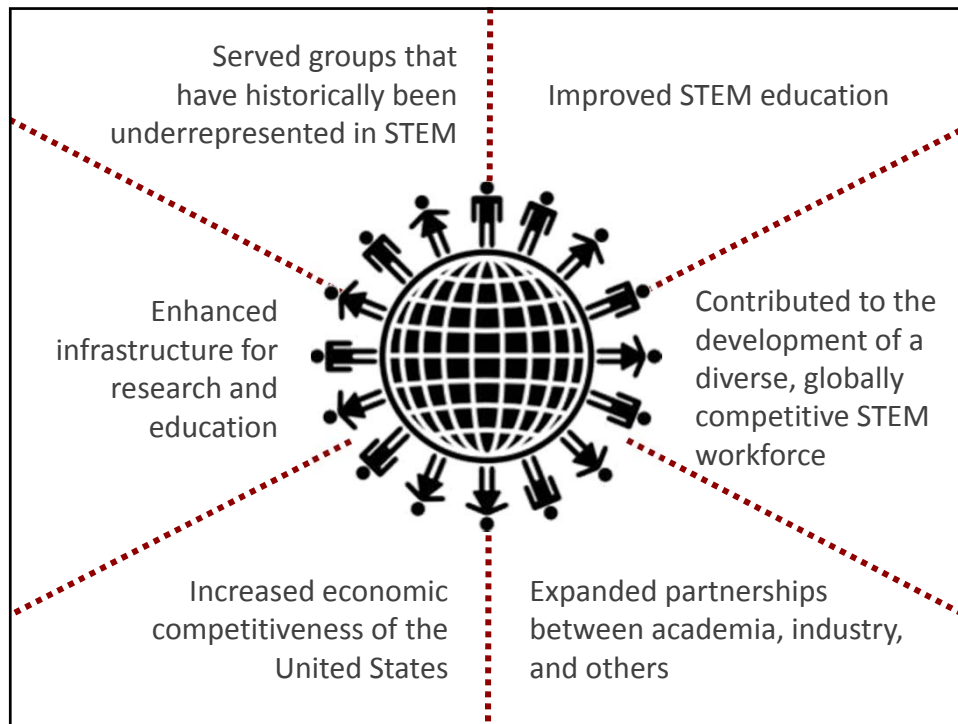
Benefits to society; contributions to the achievement of desired societal outcomes

Intellectual Merit

Advances in knowledge and understanding



EvaluATE Winter 2016 newsletter: Revisiting Intellectual Merit and Broader Support



Advice from EvaluATE blog contributor, Amy Germuth



State goal

As part of this project, **our goal was to increase the number of women who successfully earned an associate's degree in welding.** To this end, we began a targeted recruiting campaign focusing on women who were about to complete or had recently completed other related programs such as pipefitting and construction and developed a brochure for new students that included positive images of women in welding. We used funding to develop the Women in Welding program and support team building and outreach efforts by them. Institutional data reveal that since this project was started, the number of women in the welding program has almost tripled from 12 (2006-10), of which only 8 graduated to 34 (2011-16), of which 17 have already graduated and 5 have only one semester left. Even if the remaining 17 were not to graduate, the 17 who already have is double the number of female students who graduated from the program between 2006 -10."



Getting Ready to Reapply: Highlighting Results of Prior Support

Advice from EvaluATE blog contributor, Amy Germuth



Identify target audience

As part of this project, our goal was to increase the number of women who successfully earned an associate's degree in welding. To this end, we began a targeted recruiting campaign focusing on **women who were about to complete or had recently completed other related programs such as pipefitting and construction** and developed a brochure for new students that included positive images of women in welding. We used funding to develop the Women in Welding program and support team building and outreach efforts by them. Institutional data reveal that since this project was started, the number of women in the welding program has almost tripled from 12 (2006-10), of which only 8 graduated to 34 (2011-16), of which 17 have already graduated and 5 have only one semester left. Even if the remaining 17 were not to graduate, the 17 who already have is double the number of female students who graduated from the program between 2006 -10."



Getting Ready to Reapply: Highlighting Results of Prior Support

Advice from EvaluATE blog contributor, Amy Germuth



Describe impact with evidence

As part of this project, our goal was to increase the number of women who successfully earned an associate's degree in welding. To this end, we began a targeted recruiting campaign focusing on women who were about to complete or had recently completed other related programs such as pipefitting and construction and developed a brochure for new students that included positive images of women in welding. We used funding to develop the Women in Welding program and support team building and outreach efforts by them. **Institutional data reveal that since this project was started, the number of women in the welding program has almost tripled from 12 (2006-10), of which only 8 graduated to 34 (2011-16), of which 17 have already graduated and 5 have only one semester left. Even if the remaining 17 were not to graduate, the 17 who already have is double the number of female students who graduated from the program between 2006 -10.**



Getting Ready to Reapply: Highlighting Results of Prior Support



Results from Prior NSF Support

ADDITIONAL TIPS

- Focus on outcomes
- Include as much evidence as possible
- Describe how the current proposal is building on results from prior work
- Be forthright about what didn't work and lessons learned



Intellectual Merit and Broader Impacts: Identifying Your Project's Achievements and Supporting Evidence

Comments



Leslie Goodyear, Ph.D.

- Principal Research Scientist at EDC
- Former NSF program officer in the Division of Research on Learning


Questions?


Lori
Wingate



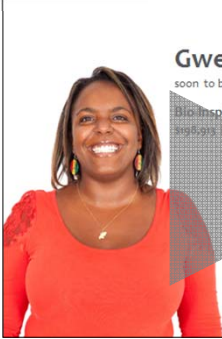
Leslie
Goodyear



 Resources		
TOPIC	RESOURCE	LINK
Evaluation Questions	<i>Evaluation Questions Checklist for Program Evaluation</i>	http://bit.ly/eval-questions
Indicators	<i>Criteria for Selection of High-Performing Indicators: A Checklist to Inform Monitoring and Evaluation</i>	http://bit.ly/indicator-eval
Integrating Evaluation into Proposals	<i>Evaluation Planning Checklist for NSF-ATE Proposals</i>	http://bit.ly/planningChecklist
	<i>10 Helpful Hints and 10 Fatal Flaws: Writing Better Evaluation Sections in Your Proposals</i>	http://bit.ly/hints-flaws
Data Collection Planning	<i>Data Collection Planning Matrix</i>	http://bit.ly/data-matrix
Logic Models	<i>Logic Model Template for ATE Projects and Centers</i>	http://bit.ly/ate-logic
Evaluation Terminology	<i>EPA Program Evaluation Glossary</i>	http://bit.ly/epa-evalgloss
	<i>Community Solutions' Evaluation Glossary App</i>	http://bit.ly/cs-gloss
Evaluation Planning, Budgeting, and Staffing (and more on logic models and evaluation questions)	<i>Small Project Evaluation: Principles and Practices:</i>	http://bit.ly/2016-mar
Communicating Evidence of Prior NSF Support	<i>EvaluATE's Winter 2016 newsletter: Revisiting Intellectual Merit and Broader Support</i>	http://bit.ly/winter16news
	<i>Getting Ready to Reapply: Highlighting Results of Prior Support</i>	http://bit.ly/germuth_dec15
	<i>Intellectual Merit and Broader Impacts: Identifying Your Project's Achievements and Supporting Evidence</i>	http://bit.ly/wingate-oct15



Webinar: Small Project Evaluation: Principles and Practices



Gwen Generickson
soon to be a new ATE project principal investigator
Inspired Solutions to Human Challenges
2015-2016

This is a fictional project. Any resemblance to actual persons or projects is purely coincidental.

Webinar included demonstrations of:

- Evaluation budget development
- Logic model development
- Evaluation question development
- How to divide internal and external evaluation tasks

Check out the recording, plus slides and resource handout!
www.evalu-ate.org/webinars/2016-march/