

Evaluation Expectations Expressed in NSF-ATE Program Solicitations:

An Analysis of Changes in de facto Evaluation Policy since 1993

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Evaluate|t|e

EVALUATION RESOURCE CENTER *for*
advanced technological education



THE EC
EVALUATION
C E N T E R



WESTERN MICHIGAN UNIVERSITY

EvaluATE's Mission

EvaluATE promotes the goals of the ATE program by partnering with projects and centers to

- strengthen the program's evaluation knowledge base
- expand the use of exemplary evaluation practices
- support the continuous improvement of technician education throughout the nation.

The ATE Program

“ With an emphasis on two-year colleges, the **Advanced Technological Education** program focuses on the education of technicians for the high-technology fields that drive our nation's economy. ”

www.nsf.gov/ate



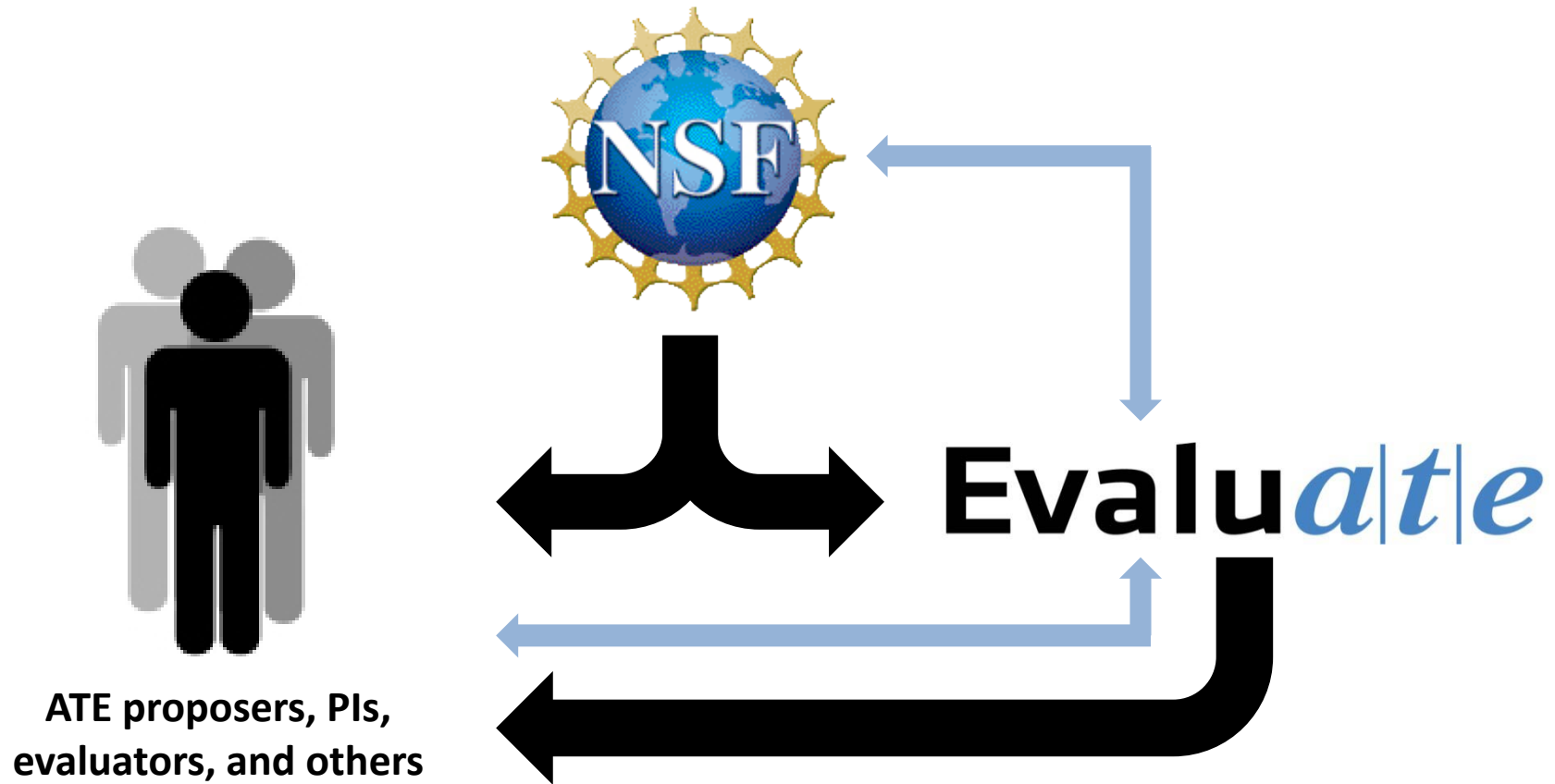
The ATE Program



“High-technology fields”

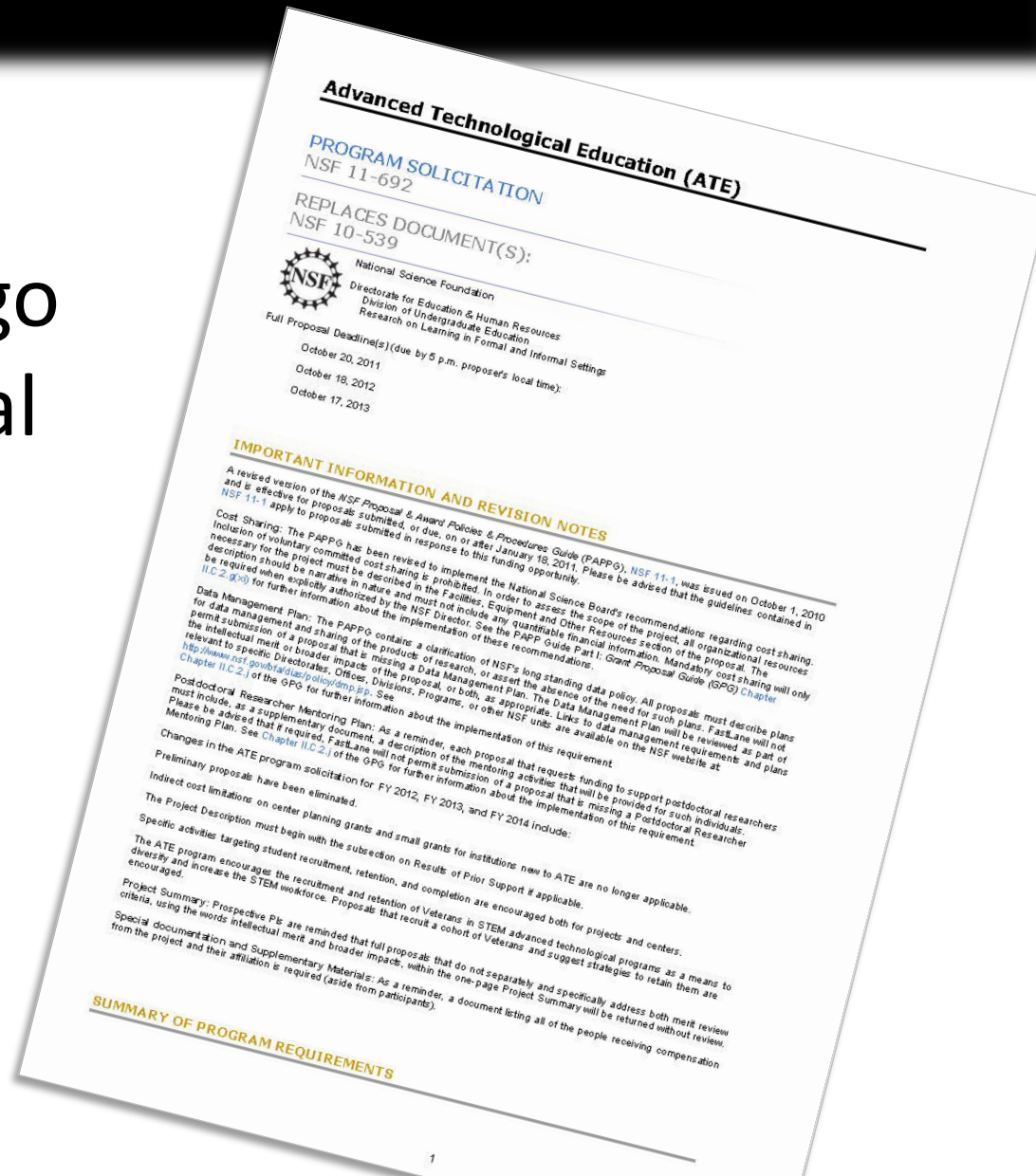
- Agricultural technology
- Biotechnology
- Chemical technology
- Cybersecurity
- Energy
- Marine technology
- Nanotechnology
- Telecommunications
- and more...

Communication of Evaluation Expectations within ATE



Program Solicitation

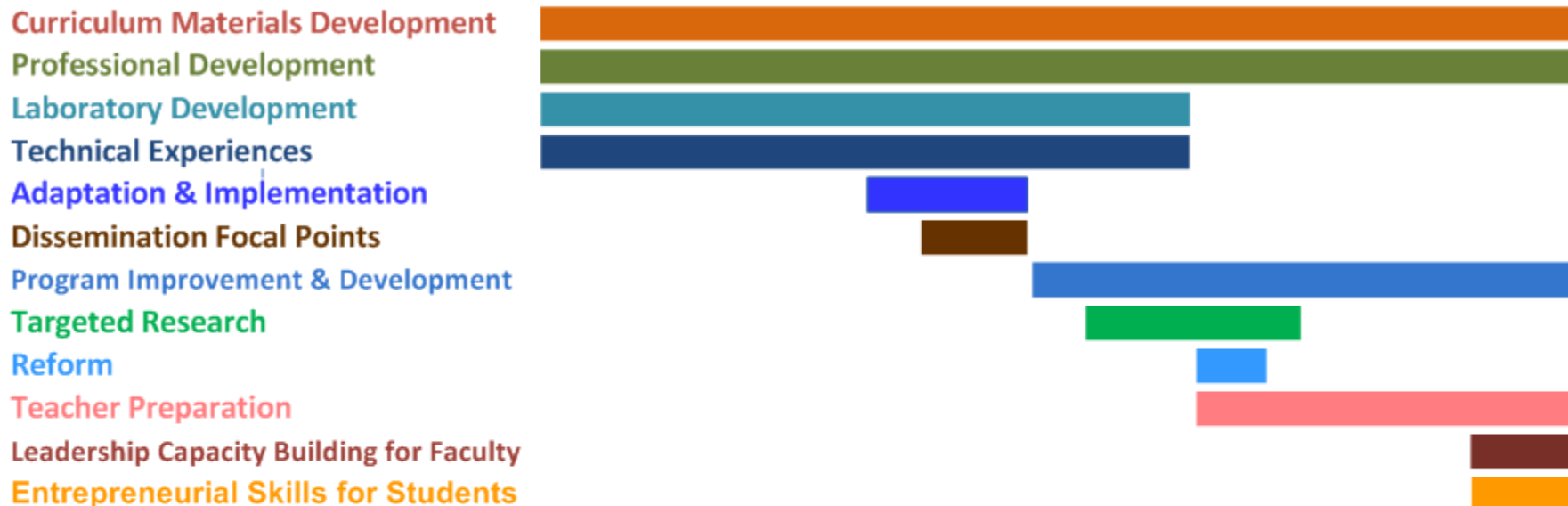
- What's funded
- What needs to go into the proposal
- Review criteria



ATE Program Foci

'93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11

PROJECTS



CENTERS



ARTICULATION PARTNERSHIPS



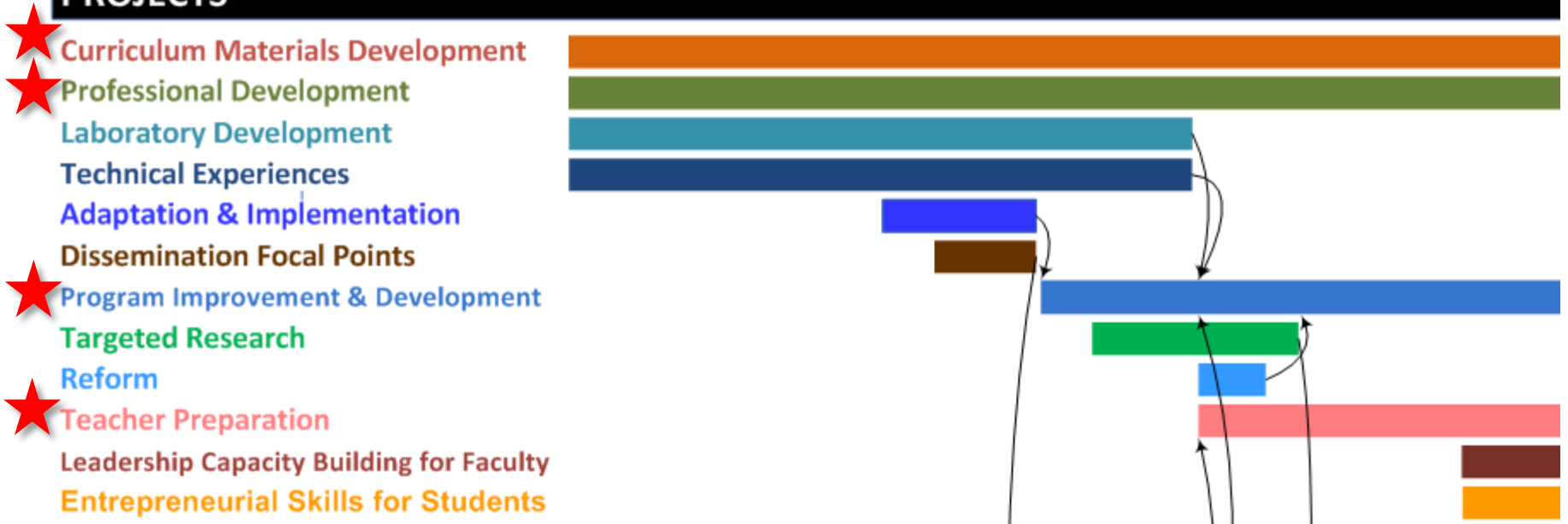
TARGETED RESEARCH



ATE Program Foci

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Evaluation Elements

'93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11

PROJECTS

Curriculum Materials Development

Measures of increased student learning

Input from industry

Impact on faculty

Evaluation activities are "deep and broad"

Professional Development

Demonstrate changes in teaching practice

Demonstrate use in classrooms

Perceptions of technical careers

Program Improvement & Development

Claims & evidence

Goal achievement



CENTERS

National Centers

Assessment of student learning

Alignment with national standards

Evaluation of products

Impact on industry/employers

Impact on host institutions

Claims & evidence re: impact on discipline

All centers

Evaluation of materials/services; impact on student learning, employers, host institutions; longitudinal studies of students' performance in the workplace, employers' satisfaction with graduates



ATE Proposal Review Criteria



Since 2005:

- Is the evaluation plan clearly tied to the project outcomes?
- Is the evaluation likely to provide useful information to the project and others?
- Does the project provide for effective assessment of student learning?
- Will the project evaluation inform others through the communication of results?

Budgetary Requirements

New in 2010

“ All projects and centers carry out evaluative activities. The funds to support an evaluator independent of the project or center must be requested. Generally, project PIs budget ~10% of the proposed budget in support of evaluation. ”



Budgetary Requirements

Modified in 2011

“ All projects and centers carry out evaluative activities. The funds to support an evaluator independent of the project or center must be requested. ~~Generally, project PIs budget ~10% of the proposed budget in support of evaluation.~~ and the requested funds must match the scope of the proposed evaluative activities. ”



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PROJECTS

Curriculum Materials Development

Measures of increased student learning
 Input from industry
 Impact on faculty
 Evaluation activities are "deep and broad"

Program
 evaluation

Evaluation
 resource
 center

Professional Development

Demonstrate changes in teaching practice
 Demonstrate use in classrooms
 Perceptions of technical careers

Program Improvement & Development

Claims & evidence
 Goal achievement

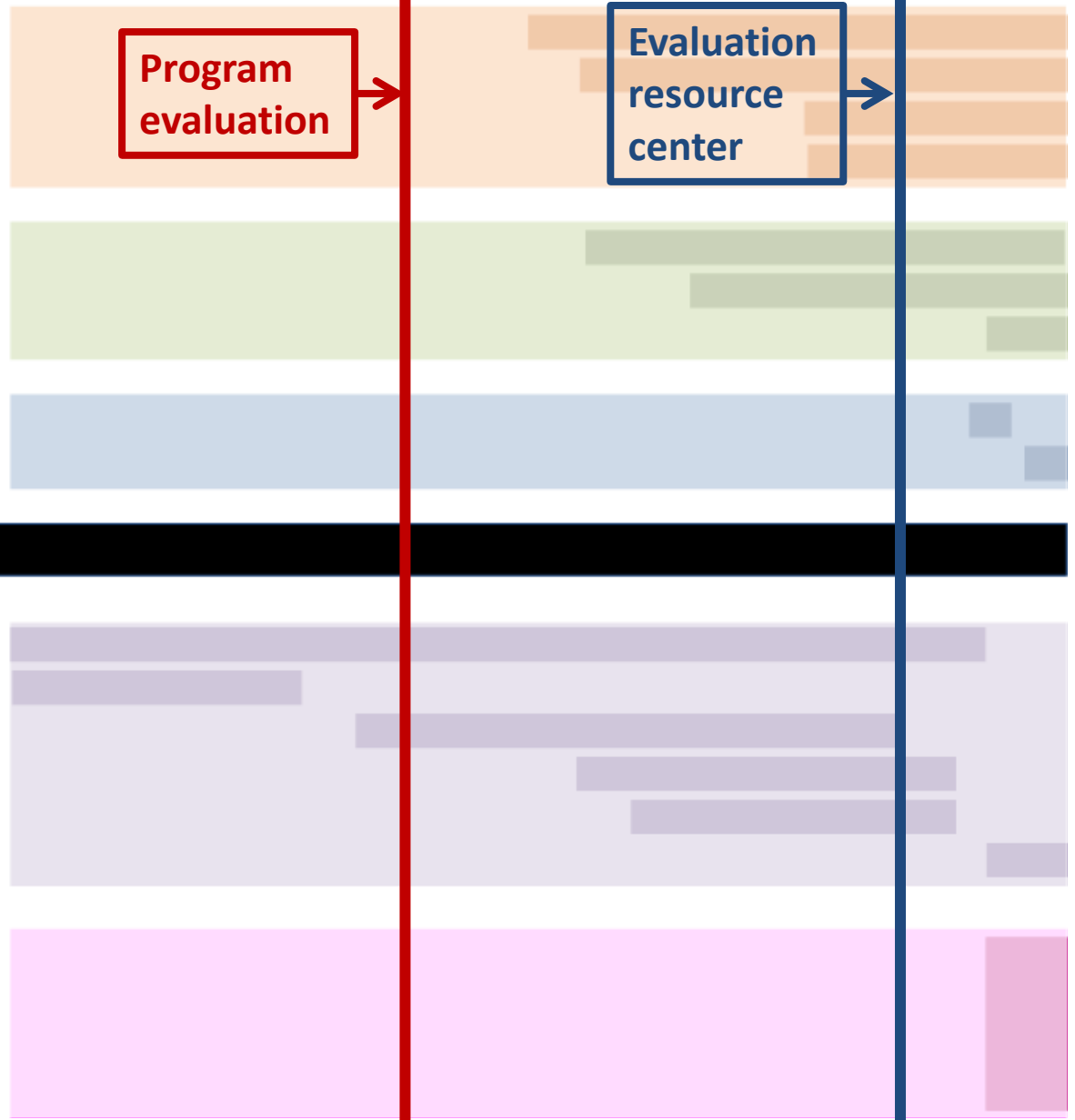
CENTERS

National Centers

Assessment of student learning
 Alignment with national standards
 Evaluation of products
 Impact on industry/employers
 Impact on host institutions
 Claims & evidence re: impact on discipline

All centers

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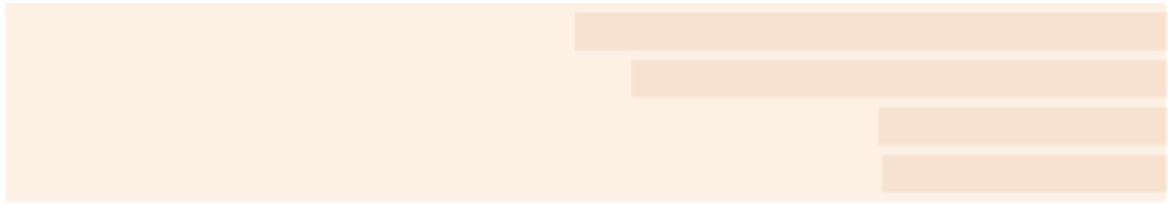
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Perceptions of technical careers

Program Improvement & Development

Claims & evidence

Goal achievement



46%

of grants

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National Centers

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Program Improvement Evaluation

2010

“ The PI should establish claims as to the project's effectiveness, and the evaluative activities should provide evidence on the extent to which the claims are realized. ”

Program Improvement Evaluation

Modified in 2011

“ *articulate clear project goals and objectives* The PI should ~~establish claims as to the project's effectiveness,~~ and the evaluative activities should provide evidence on the extent to which the ~~claims~~ are realized. ”

goals and objectives

Claims & Evidence

Patton

“ The most powerful, useful, and credible claims are those that ... are of **major importance** and have **strong empirical support**. ”

- makes a difference
- deals with an important problem
- affects a large number of people
- sustainable
- new/innovative
- saves money/time

- longitudinal results
- documentation
- comparisons
- replications
- multiple sources/types of data
- independent
- systematic

For more information...

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www.evaluate.org



www.nsf.gov/ate

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