Orientation to ATE Survey 2012

What you need to know to get good information into and out of the survey

January 18, 2012

Evaluate
EVALUATION RESOURCE CENTER for advanced technological education

This material is based upon work supported by the National Science Foundation under grant number 0802245. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the presenters and do not necessarily reflect the views of the National Science Foundation.

Introductions

Stephanie

Stephanie
Evergreen

Lori
Wingate

Jason
Burkhardt

David
Campbell

Dan
Hull

Evaluate@ Western Michigan University

NSF

OP-TEC

Lara
Smith

Maricopa Community Colleges

Handout

Stephanie

Available from

www.evalu-ate.org/resources

Keyword search:

orientation

Webinar Handout

Orientation to ATE Survey 2012

What you need to know to get good information into and out of the survey

by Jason Burkhardt, David Campbell, Stephanie Evergreen, Dan Hull, and Lori Wingate

January 18, 2012

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Webinar slides and recording are available at evalu-ate.org/events/ate_survey_orientation_webinar/

ATE Survey Overview

Although the actual survey is conducted online, you may **preview a PDF version** of the survey instrument at evalu-ate.org/annual_survey. **Survey FAQs** are available from here as well. The FAQs cover many of the topics addressed in the webinar, and the survey instruments provides definitions of specific terms.

Changes to the survey for 2012 include a one-third reduction in length, removal of items about workforce needs assessment, use of advisory committees, detailed evaluation practices, and fine-grained student outcomes. The Special Topics section has new questions about grantees' interest in resources for entrepreneurial education, opinions about college advising, tools and strategies for tracking graduates, and efforts to recruit/retain students from underrepresented groups. All new questions in the Special Topics section are answerable based on the PIs experience or opinions.

Questions about the ATE annual survey should be directed to Lori Wingate at lori.wingate@wmich.edu or (269) 387-5922.

Using Project Data for Multiple Purposes

Typically, ATE projects need to collect and report data for the following purposes. There is considerable overlap in the nature of information needed for each purpose, so it is a good idea to streamline data collection such that information is readily accessible when needed.

Reporting Activity	Expected Information
Annual ATE survey	Nature of grant activities; numbers of collaborators, faculty, programs offered with ATE support, students enrolled and their completion rates, and materials developed
Annual report submitted to NSF through FastLane	Participants, collaborators, activities, results, and contributions/impacts. PIs and co-PIs may access the system with their NSF IDs. It's a good idea to review the reporting categories and share information with project evaluators.
Project-level evaluation	Findings on quality and effectiveness of grant-funded work, data related to outcomes and goal achievement
Results from Prior NSF Support sections of new proposals to NSF	Metrics on outcomes and results that demonstrate the impact, quality, and effectiveness of NSF funded projects
ATE Center/Project Impact books and website	Data that demonstrate impact on student success, which preferably can be displayed graphically (see atecenters.org and ateprojectimpact.org)

OP-TEC's Use of Research and Evaluation Data

To learn more about OP-TEC (Dan Hull, PI) and their use of evaluation, see www.op-tec.org. In the Resources section, you will find links to their Industry Needs Assessment survey and findings. In Clearinghouse, you will find reviews of their curriculum materials.

Evaluate

Objectives

Stephanie

By the end of this webinar, you will…

1. Understand how and why the ATE annual survey is conducted
2. Have a clear understanding of the survey questions and how to answer them
3. Know how the data you provide for the survey can be used for other purposes.

Survey Overview

Lori Wingate

What

Lori

- Web-based survey of ATE PIs
- Conducted annually since 2000
- Originally part of ATE program evaluation, now serves a monitoring function

Survey ≠ Evaluation

What

Lori

Raise your hand if you've participated in the ATE annual survey before

What

Lori

1/3 shorter!

7 sections
-
27 pages
-
5,600 words

2011

5 sections
-
16 pages
-
3,700 words

2012

QUESTIONS REMOVED:

- Workforce needs assessment
- Advisory committees
- Detailed evaluation practices
- Detailed student outcomes

What

Lori

1/3 shorter!

7 sections
-
27 pages
-
5,600 words

2011

5 sections
-
16 pages
-
3,700 words

2012

1. Grant Characteristics and Practices
2. Materials Development
3. Professional Development
4. Program Improvement
5. Special Topics

What

Lori

2012 Special Topics questions:

- Interest in resources for entrepreneurial education
- Opinions about college advising
- Tools and strategies for tracking graduates
- Efforts to recruit/retain students from underrepresented groups

When

Lori

Survey launches

Survey closes

Feb 15 | Feb 22 | Feb 29 | Mar 7 | Mar 14

1st and 2nd reminders sent by EvaluATE

3rd reminder sent by NSF

Who

Lori

- Sent to all ATE PIs, except those for planning grants (N=~250)
- PIs may delegate survey to others

Who

Lori

1. Grant Characteristics and Practices
2. Materials Development
3. Professional Development
4. Program Improvement
5. Special Topics

Who

Lori

1. **Grant Characteristics and Practices**
2. Materials Development
3. Professional Development
4. Program Improvement
5. **Special Topics**

➡ **Completed by everyone**

Who

Lori

1. Grant Characteristics and Practices
2. **Materials Development**
3. **Professional Development**
4. **Program Improvement**
5. Special Topics

➡ **Completed by grantees that spent at least 30% or at least $100,000 on these activities**

(New grantees may skip these sections)

How

Lori

Copy-and-paste login information

How

Lori

Start early, save often

Who

Lori

1. Grant Characteristics and Practices
2. Materials Development
3. Professional Development
4. Program Improvement
5. Special Topics

Entire survey or certain sections may be delegated to another for completion

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ATE SURVEY 2011

Welcome, Lori Wingate

We strongly recommend that you read through the survey FAQs before beginning the survey

Survey FAQs

Thank you for signing in to take part in the NSF ATE Survey 2011!

Your PI survey responsibilities include:

- Completing the survey
- Reassigning sections to others to answer, if desired
- Closing the survey

If you choose to delegate your PI survey responsibilities to a diff
assign sections, close the survey, or answer questions (unless t
section back to you).

You will still be able to view survey responses for your grant

Go to Survey Questions

Delegation of PI Survey Responsibilities

Logout

Select to have someone else complete the entire survey

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ATE SURVEY 2011

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assign sections, close the survey, or answer questions (unless the p
section back to you).

You will still be able to view survey responses for your grant.

Go to Survey Questions

Delegation of PI Survey Responsibilities

Logout

Select to view or answer the questions yourself OR to delegate certain sections to someone else.

Who

Lori

Delegation

Section 1: Grantee Characteristics	View	Start	Delegate
Section 2: Materials Development	View	Start	Delegate
Section 3: Professional Development	View	Start	Delegate
Section 4: Program Improvement	View	Start	Delegate
Section 5: Special Topics	View	Start	Delegate

Who

Lori

Delegation

Section 1: Grantee Characteristics	View	Resume	Delegate
Section 2: Materials Development	View	Start	Delegate
Section 3: Professional Development	View	Start	Delegate
Section 4: Program Improvement	View	Start	Delegate
Section 5: Special Topics	View	Start	Delegate

Why

Lori

Intended to provide a high-level view of the program, not capture all the details

Why

Lori

Intended to provide a **high-level view** of the program, not capture all the details

Why

Lori

Intended to provide a high-level view of the program, not capture all the **details**

Why

Lori

Survey ➡

Annual Report and Project Evaluation Reports ➡

FastLane v. Survey

Lori

"Can you just use the information we provided in our annual (FastLane) report?"

FastLane www.fastlane.nsf.gov **Annual Report**

- All NSF grantees
- PDF reports

Evaluate **Annual Survey**

- ATE-specific
- Database of quantitative and qualitative data

Discussion

David Campbell

Definitions

Lori Wingate

Collaboration

Lori

"Collaboration is a relationship with another institution, business, or group that provides money or other support to your project or center. Collaborators are not funded by the grant."

Collaboration

Lori

For each type of collaborating organization listed below, report the number of different organizations you collaborated with in 2011.

_____ Business/industry

_____ Within your host institution

_____ Other education institutions

_____ Public agencies

_____ Other ATE projects/centers

_____ Other (specify):

Collaboration

Lori

Examples

- Someone serving on an advisory board whose time is compensated by his/her employer
- Donation of time to give presentation/workshop
- Donation of space or materials
- One-time provision of advice
- Paid consulting services
- Use of space or materials regularly available to grant staff

Calculating value of collaboration

Lori

A person's time:

Estimated daily rate

X Number of days contributed

= Value of collaboration

Calculating value of collaboration

Lori

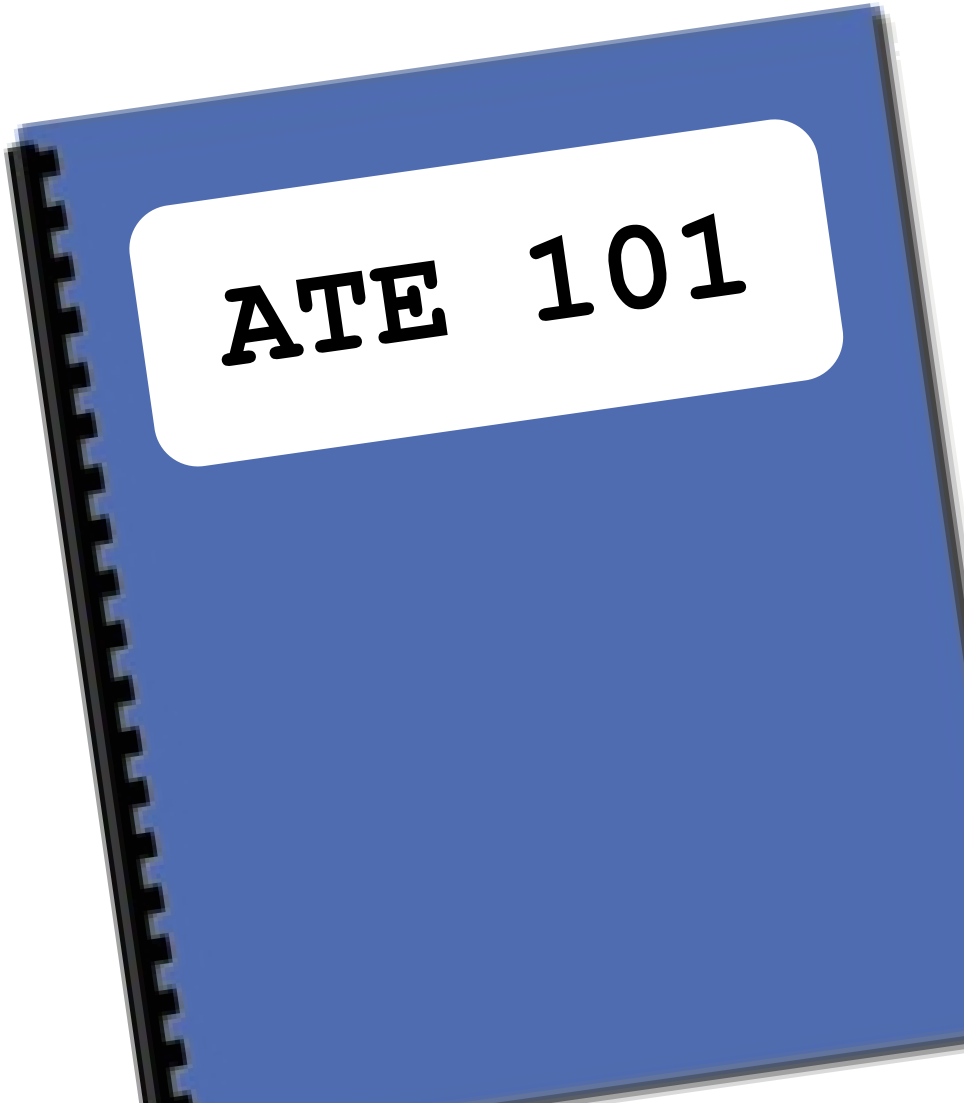
Equipment:

Cost of purchasing
comparable equipment
= Value of collaboration

Materials

Lori

"This section of the survey focuses strictly on materials developed for national dissemination to serve instructional purposes…."



Materials

Lori

For all materials you reported above, indicate the number directed at each type of audience.

Target Audience	Type of Material		
	Course	Module	Activity
Secondary school			
2-year college			
4-year college			
Business/industry training or education program			

Stand-alone collection of instructional content and activities to achieve desired educational outcomes

Materials

Lori

For all materials you reported above, indicate the number directed at each type of audience.

Target Audience	Type of Material		
	Course	Module	Activity
Secondary school			
2-year college			
4-year college			
Business/industry training or education program			

Self-contained collection of content and activities designed to achieve a set of specific objectives

Materials

Lori

For all materials you reported above, indicate the number directed at each type of audience.

Target Audience	Type of Material		
	Course	Module	Activity
Secondary school			
2-year college			
4-year college			
Business/industry training or education program			

An instructional exercise designed to achieve a discrete learning outcome or a test to measure achievement or progress toward that outcome

Materials

Lori

Examples

- ✓ Course curriculum
- ✓ Lab manuals
- ✓ Multimedia resources
- ✓ Problem-based scenarios
- ✓ Simulation applications
- ✗ Newsletters
- ✗ Brochures
- ✗ Advertisements
- ✗ Posters
- ✗ Conference giveaways

Professional Development

Lori

"… professional development provided to secondary school teachers, college faculty, and preservice teachers to enhance their disciplinary capabilities, teaching skills, vitality, and understanding of current technologies and practices in areas that directly impact technician education."

Professional Development

Lori

- professional development for educators to improve their teaching

Professional Development

Lori

Report the number of participants in your 2011 professional development activities that are associated with each education level.				
Professional Development Activity	Total Number of Participants			
	Secondary Level	Associate Level	Baccalaur-eate Level	Other
Short presentations to raise awareness				
Instructional activities of less than a day				
Instructional activities of at least one day but less than one week				
Instructional activities that last from one to several weeks				
A long-term periodic instructional activity				

Professional Development

Lori

Examples

- ✓ Workshops
- ✓ Summer institutes
- ✓ Coaching/mentoring
- ✓ Industry internships
- ✗ Conference booth
- ✗ Materials
- ✗ Hits on a website/views of a video

Students and Programs

Lori

"…development or improvement of technician education programs for secondary students, college students, or persons employed in technician positions in business or industry."

Students and Programs

Lori

"Program: A sequence of classes, laboratories, and/or work-based experiences that lead students to a **degree**, **certification**, or **occupational competency point**."

Students and Programs

Lori

	Education Level of Participating Students				Contract Training
	Secondary	Associate	Bacca-laureate	Post Bacca-laureate	
Total number of locations where the ATE-supported programs were offered					
Total number of individual students who took at least 1 course in 1 of your ATE-supported programs (if a student took more than 1 course, count that person only once)					

Students and Programs

Lori

Students to count:

Anyone who enrolled in a course offered through a program that was the focus of a ATE-funded program improvement effort

How accurate are your student numbers?

Lori

Use the marker tool to show where you are on the continuum

Wild Guess

100% Precise Measurement

Data Accuracy Continuum

Example

Lori

KVCC Wind Energy Technology Certificate

CIS 110	PC Operating Systems
DRFT 105	Blueprint Reading
DRFT 110	Analytical Apps Tech Careers I
DRFT 112	Analytical Apps Tech Career II
ELT 102	Applied Electricity
ELT 120	Electrical Machines
ELT 122	Wind Turbine Ops/Maint/Repair
ELT 126	Power Generation & Dist
ELT 222	Programmable Control
ELT 228	Adv Program Control & Data Acq
HVAC 104	Intro to Renewable Energy
MSM 110	Safety for Alt Energy Tech
MSM 120	Basic Fluid Power
MSM 250	Wind Turbine Mechanical System

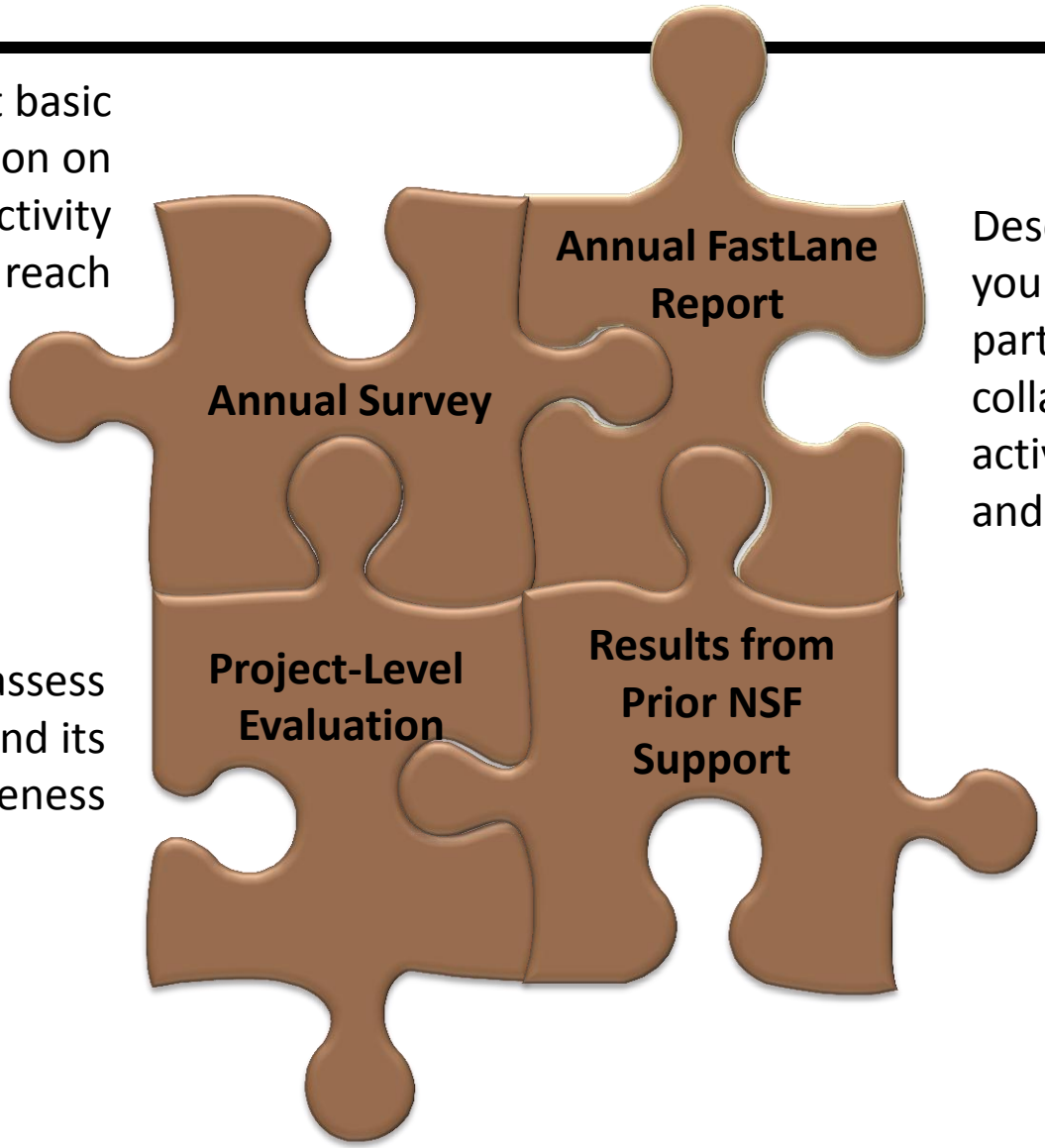
Moving from Data to Information

Jason Burkhardt

ATE Reporting Puzzle

Jason

Report basic information on grant productivity and reach



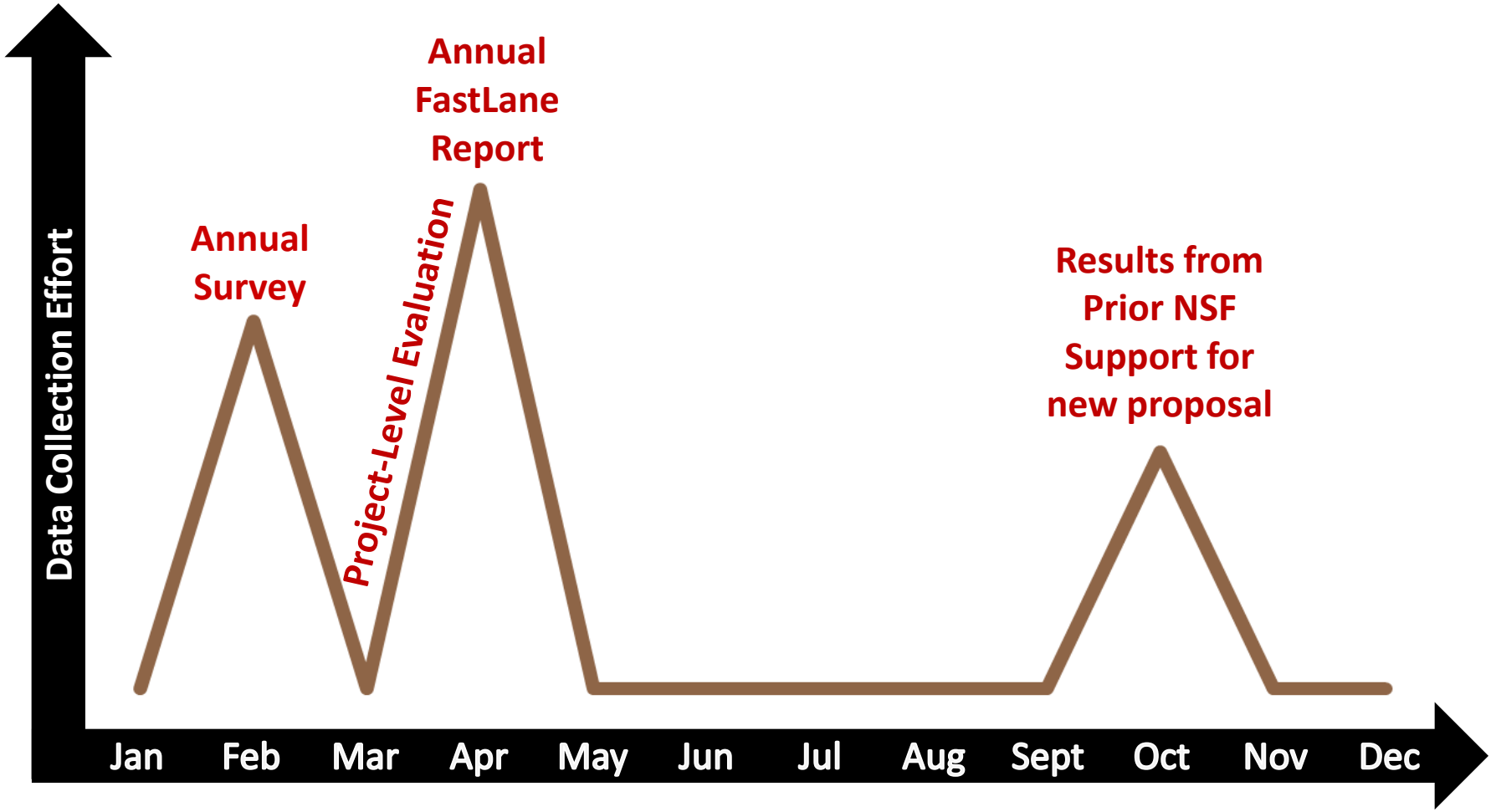
Describe in details your project's participants, collaborators, activities, results, and contributions

Describe and assess your project and its effectiveness

Show what you've accomplished with NSF funding in the past.

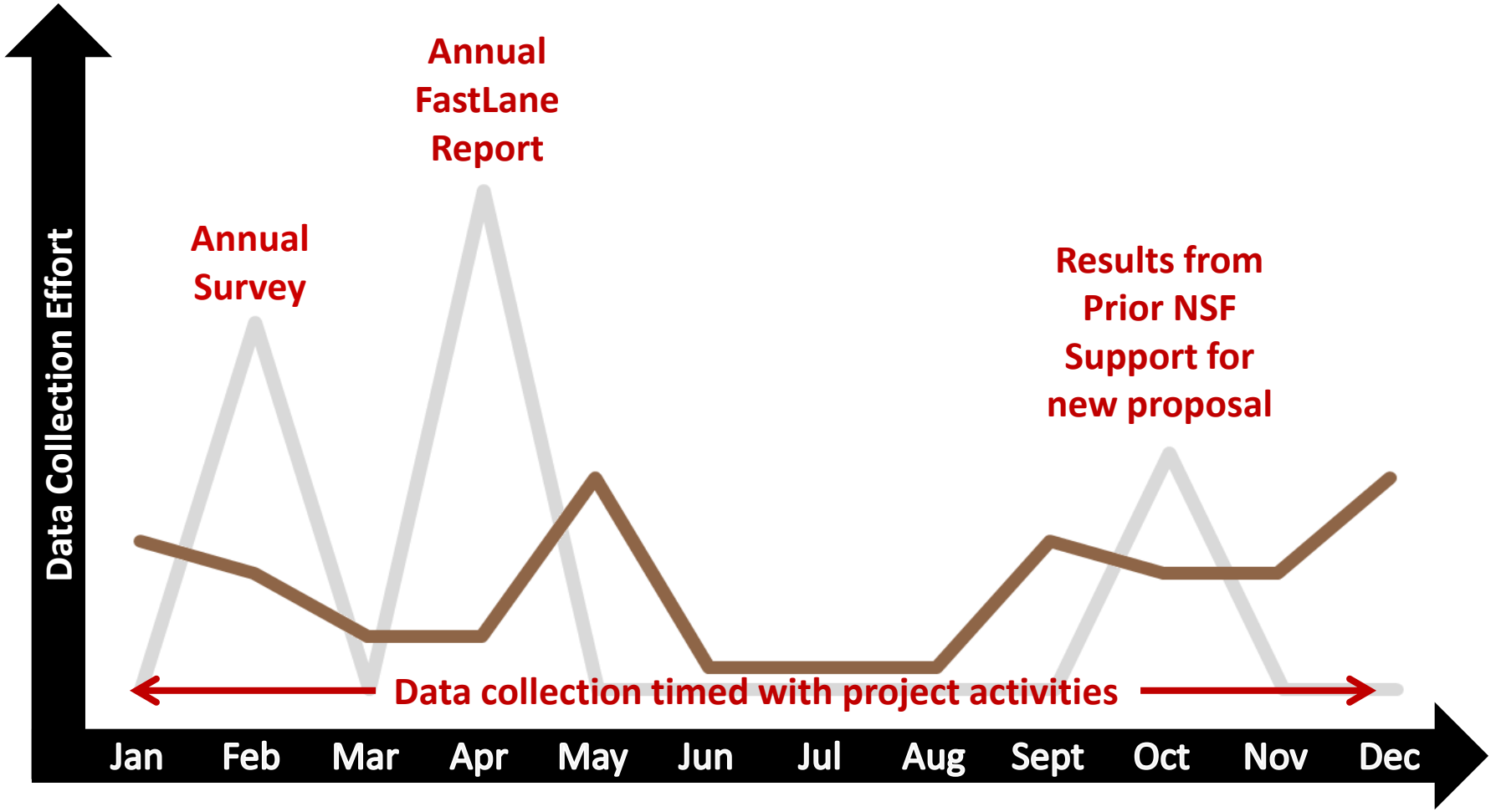
Data collection timelines

Jason



Data collection timelines

Jason



Managing your Data

Jason

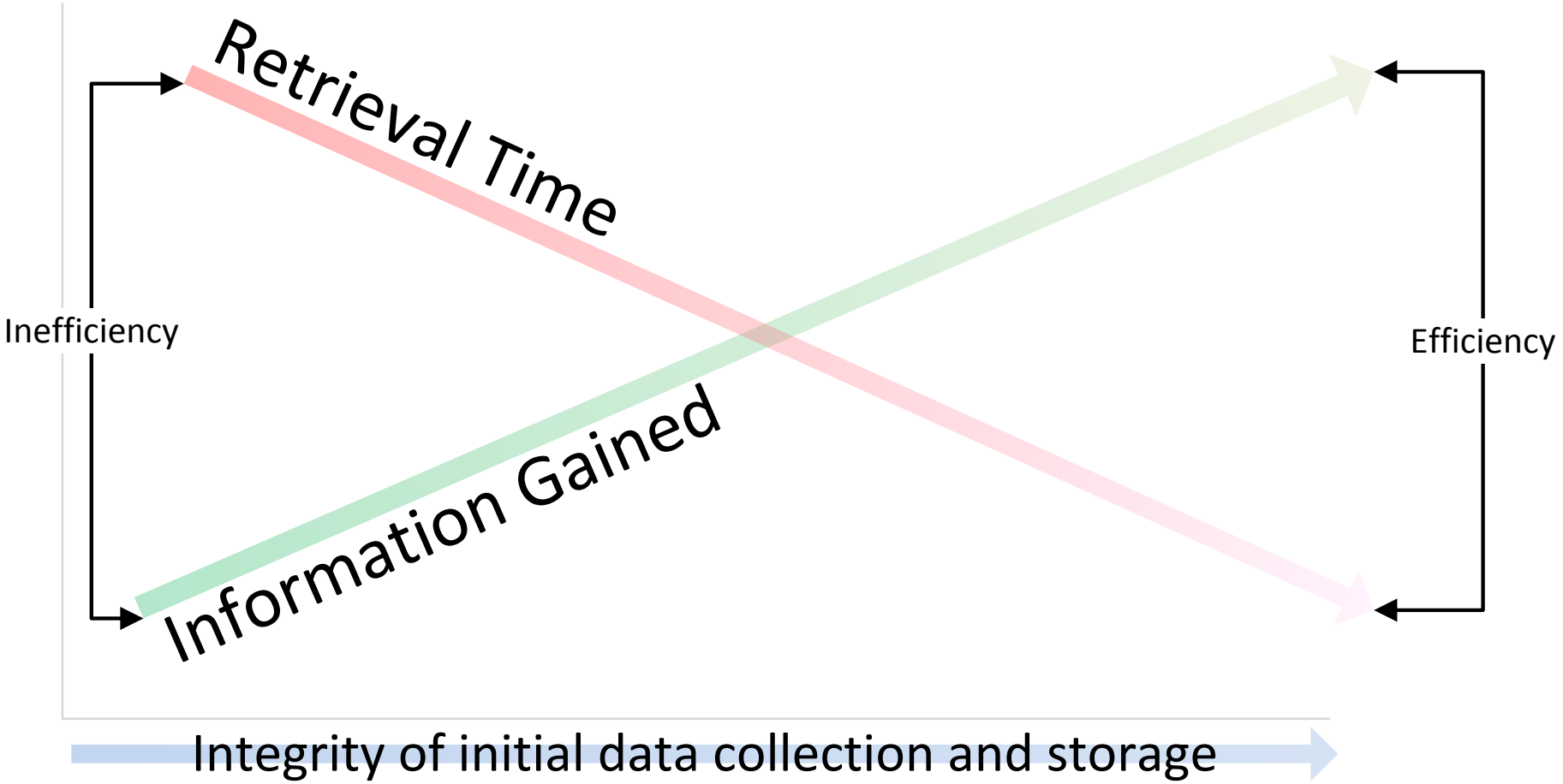
Large, multisite programs create issues for data managers, since the site personnel are often responsible for data collection

Coordination of data collection efforts is crucial to good data management

Collecting data at the point of service is a great strategy

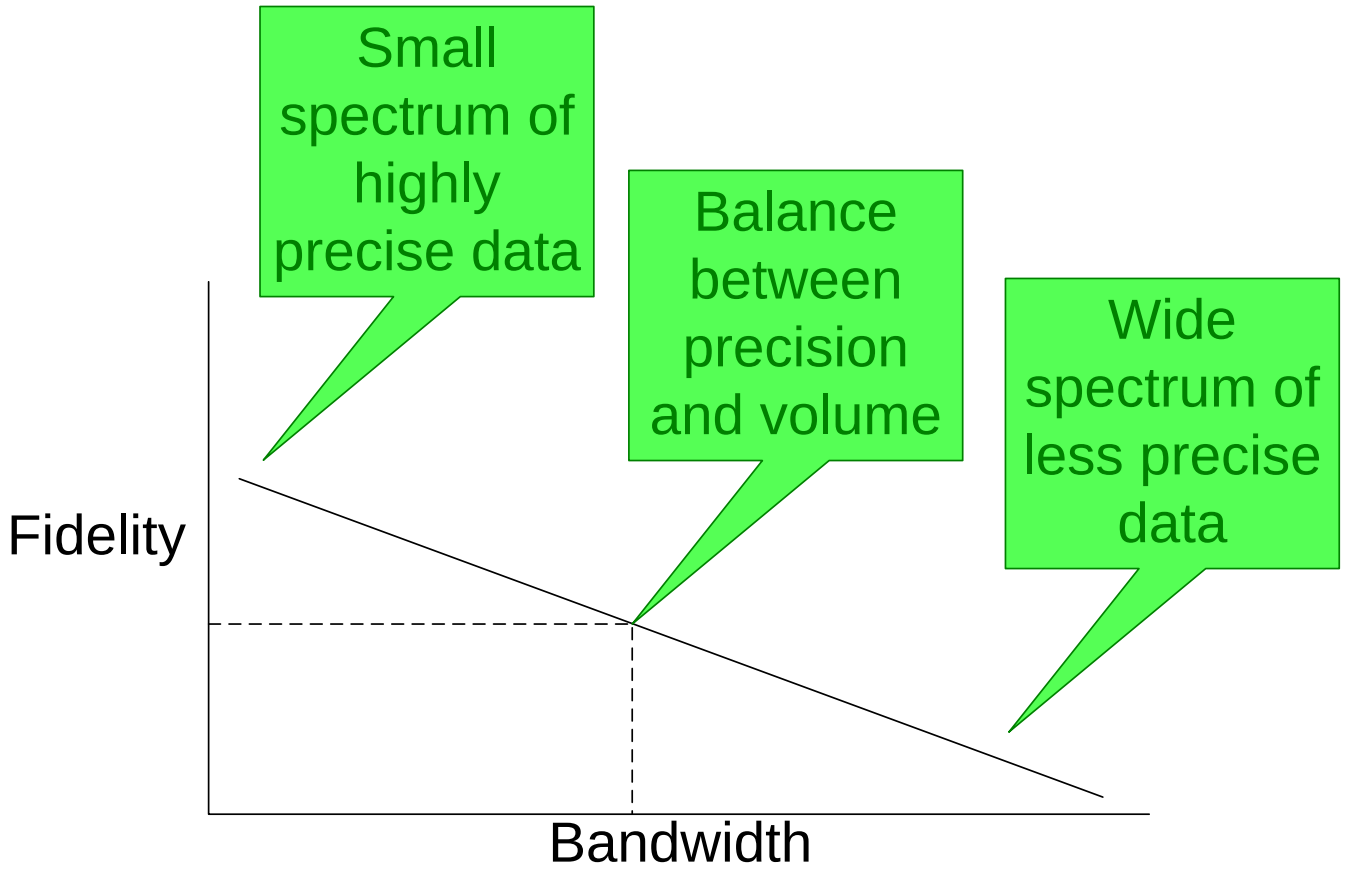
Retrieval

Jason



Data collection and analysis

Jason



Assumes an equal amount of time spent collecting and managing the data

Turning raw data into information

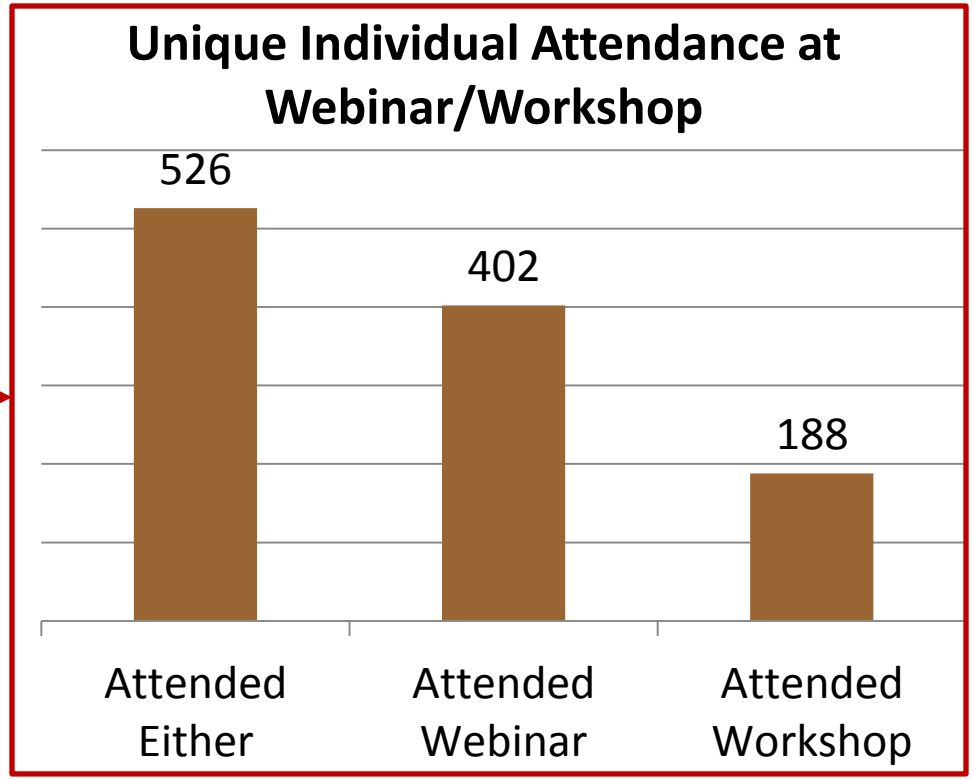
Jason

First Name	Last Name	ATE Role	Grant 1	Grant 2	Webinars		Workshop
					Jan 10	Mar 11	A
John Q	Public	PI	0812345	0911132	x		
Jim	Atepi	Evaluator	1078655	0711234		x	x
Martha	Participant	PI	1009919	0230686			

Grant #	# Attended Webinar
0812345	1
0911132	2
1191782	1
1078655	1
0711234	0
1009919	0
0230686	0

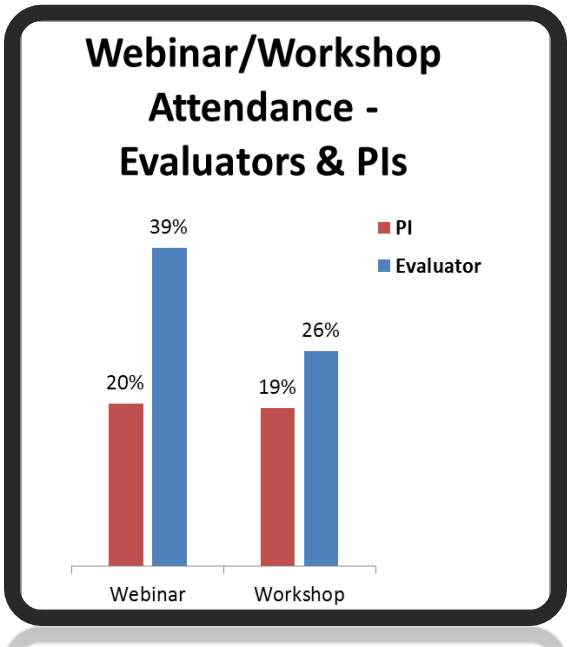
Role	% of total
Evaluator	33%
PI	67%

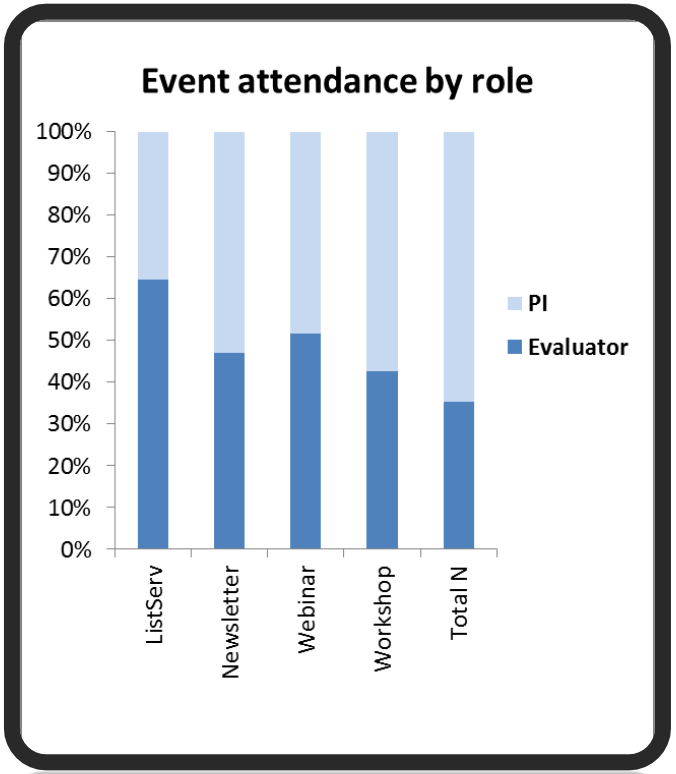
Grant #	PI	Co-PI	Evaluator
0812345	Public, John Q		
0911132	Public, John Q		Atepi, Jim
1191782	Public, John Q	Participant, Martha	
1078655			Atepi, Jim
0711234			Atepi, Jim
1009919	Participant, Martha		
0230686	Participant, Martha		

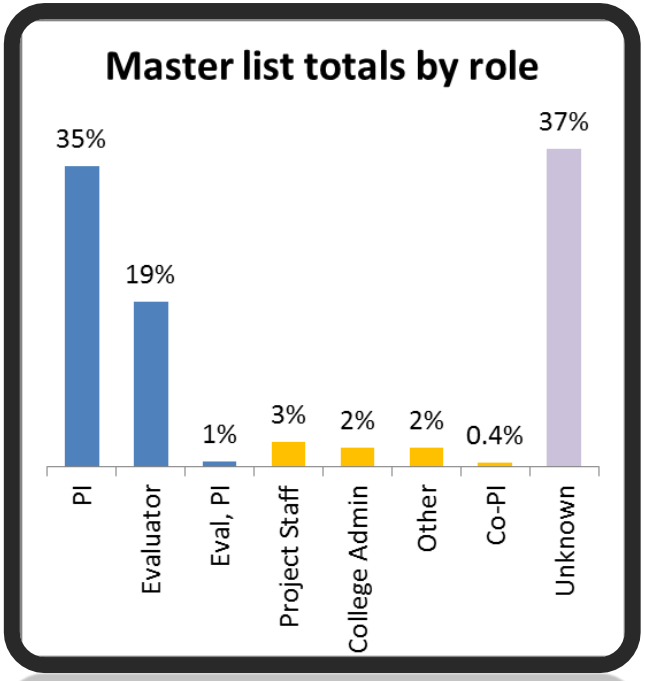


Analyze and Synthesize!

Jason



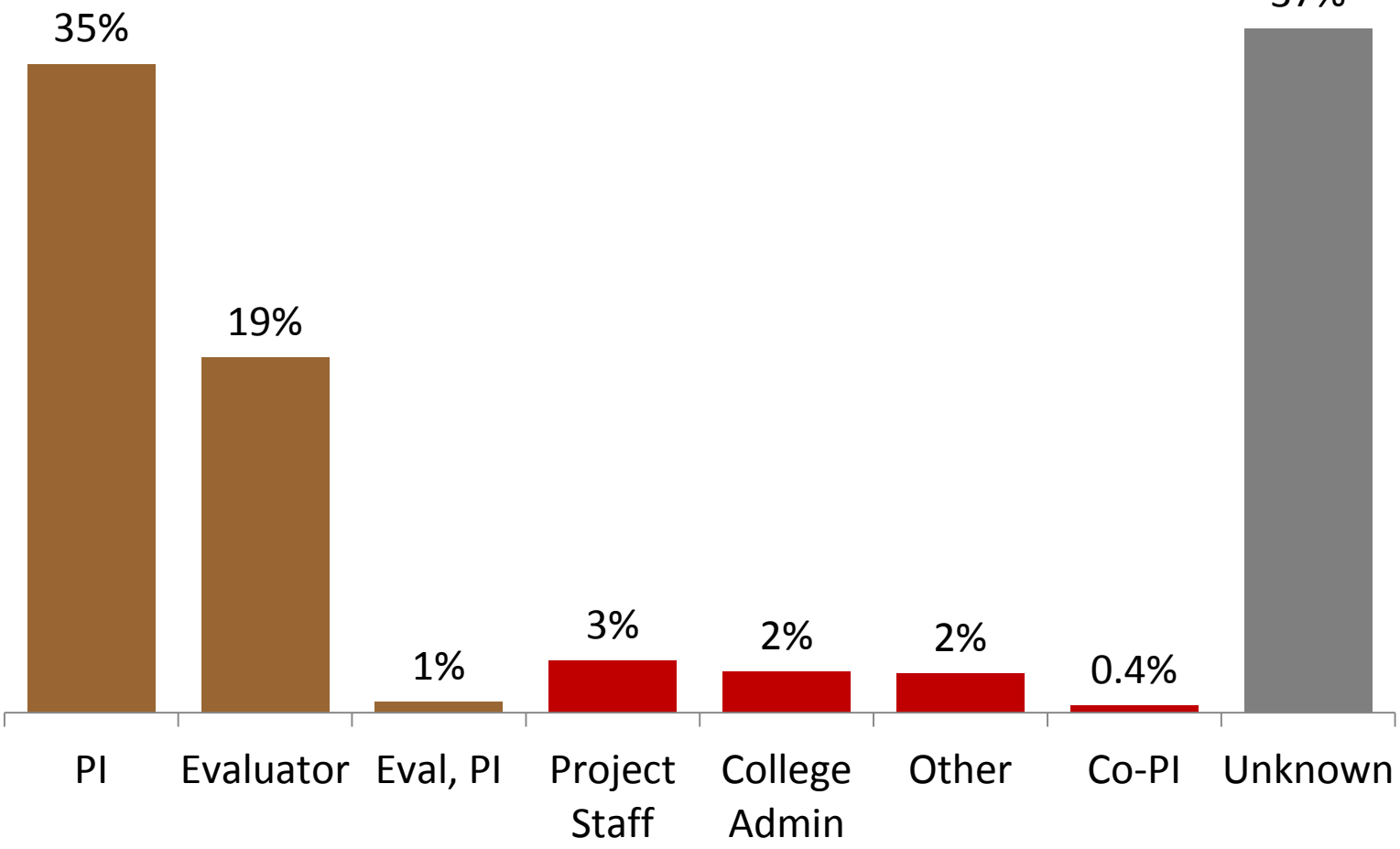


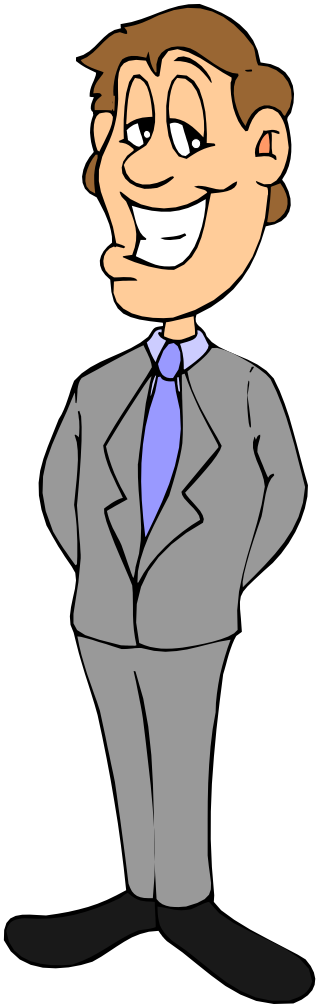


What have we learned?

Jason

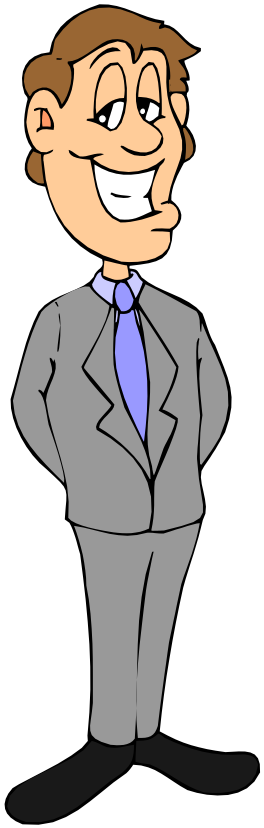
Master list totals by role

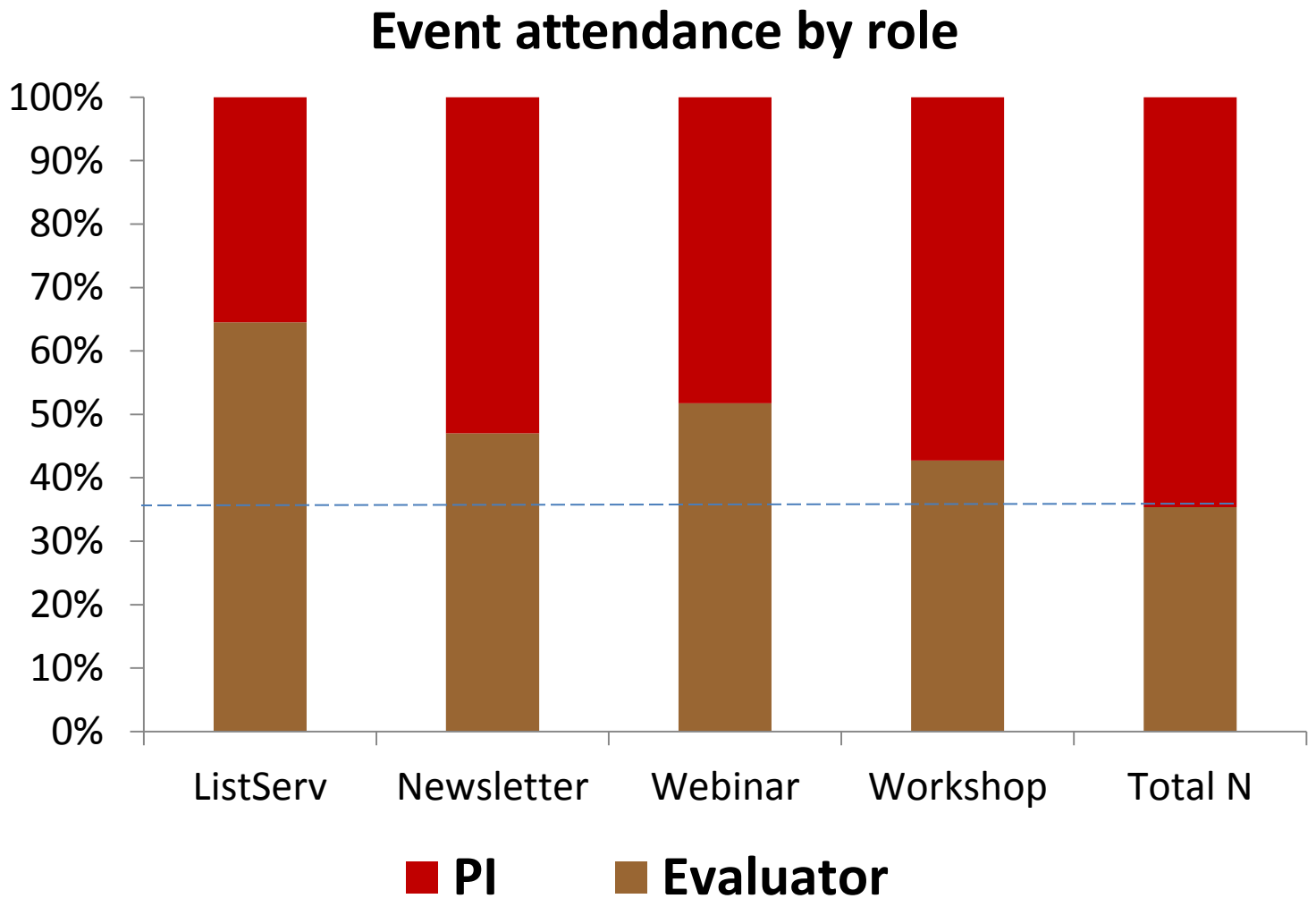




What have we learned?

Jason

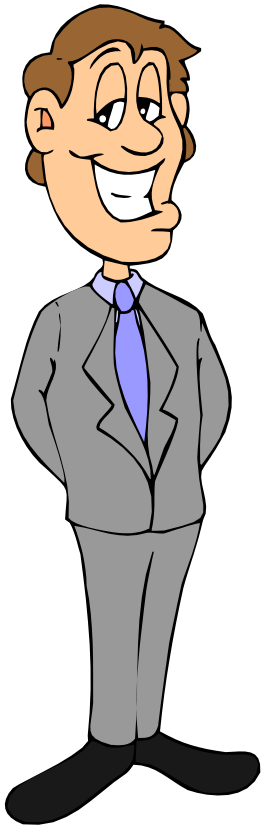


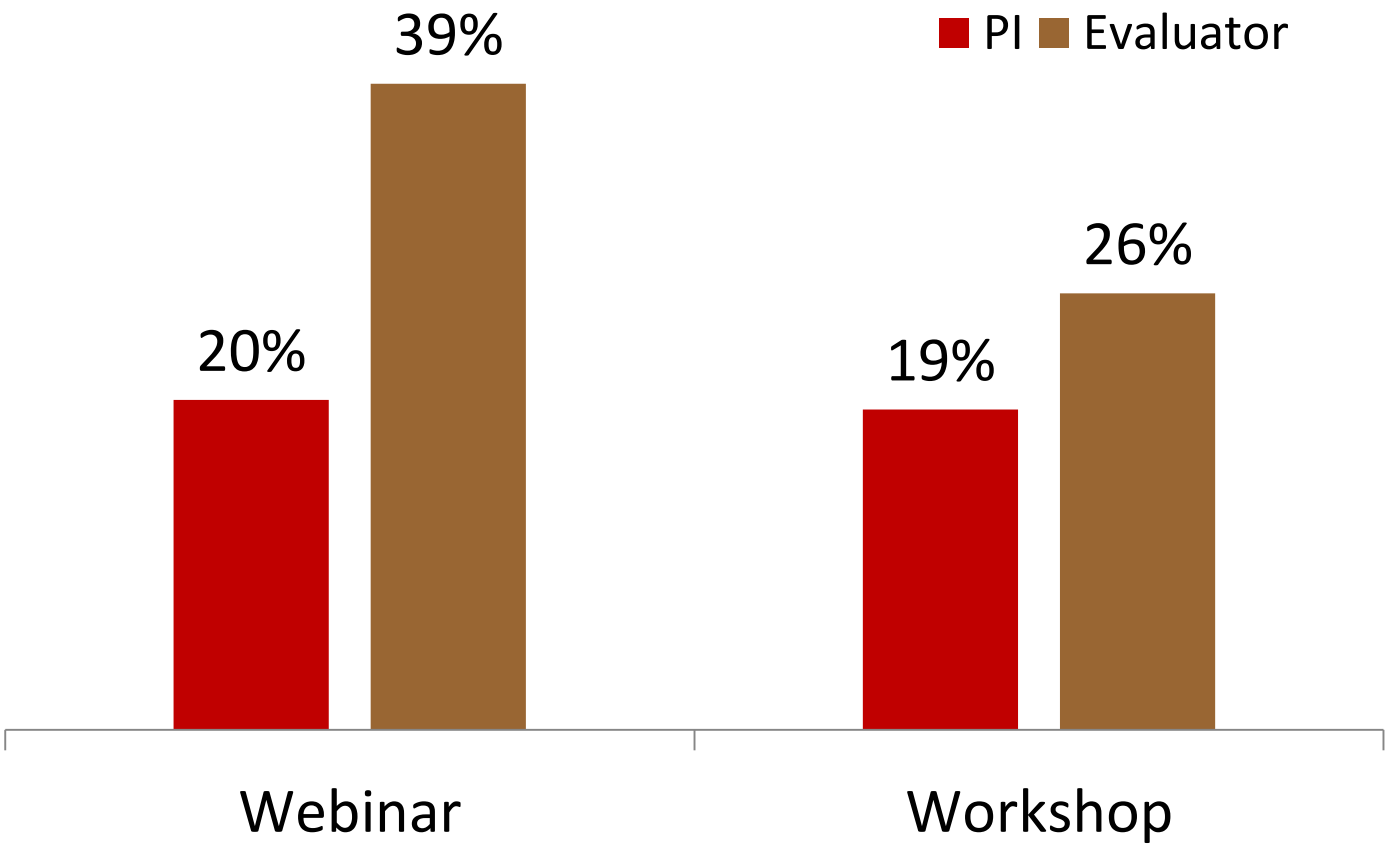


What have we learned?

Jason

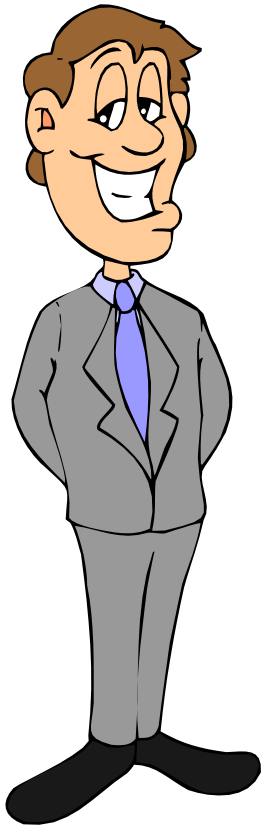
Webinar/Workshop Attendance

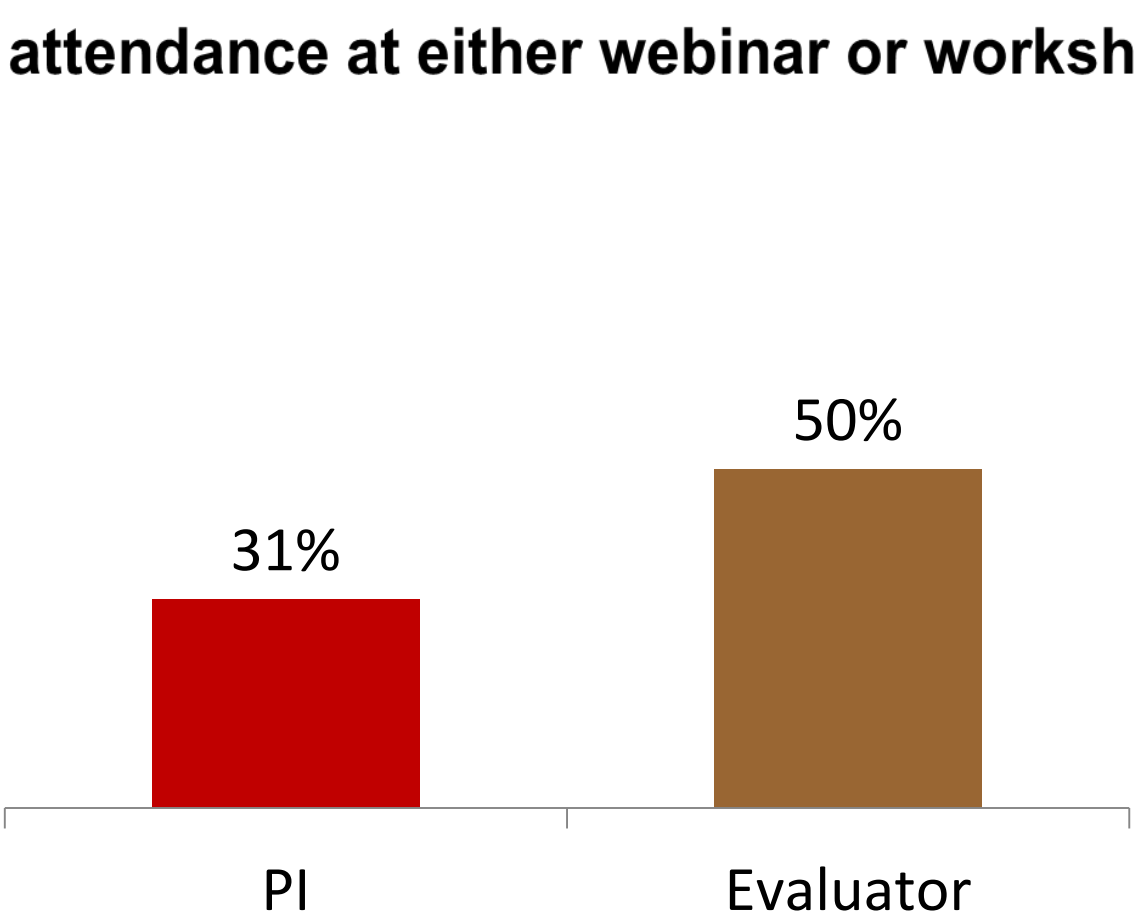




What have we learned?

Jason





Benchmarking

Jason

People of Color[a] in ATE

Evaluate

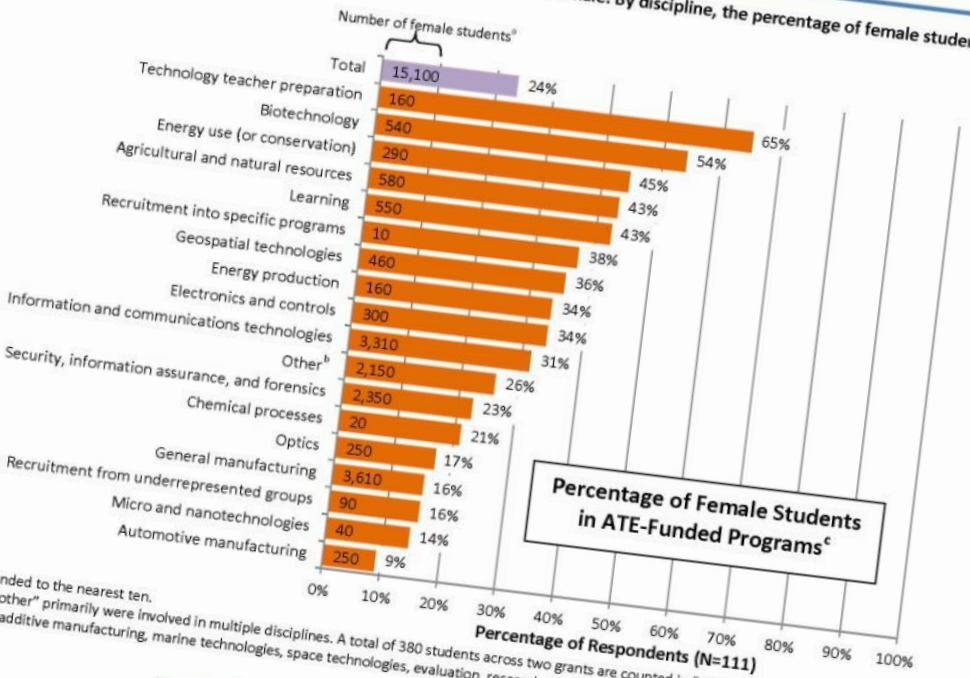
Evaluation Resource Center for advanced technological education

This material is based upon work supported by the National Science Foundation under Grant No. 0802245. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Women in ATE

2011 Survey Findings

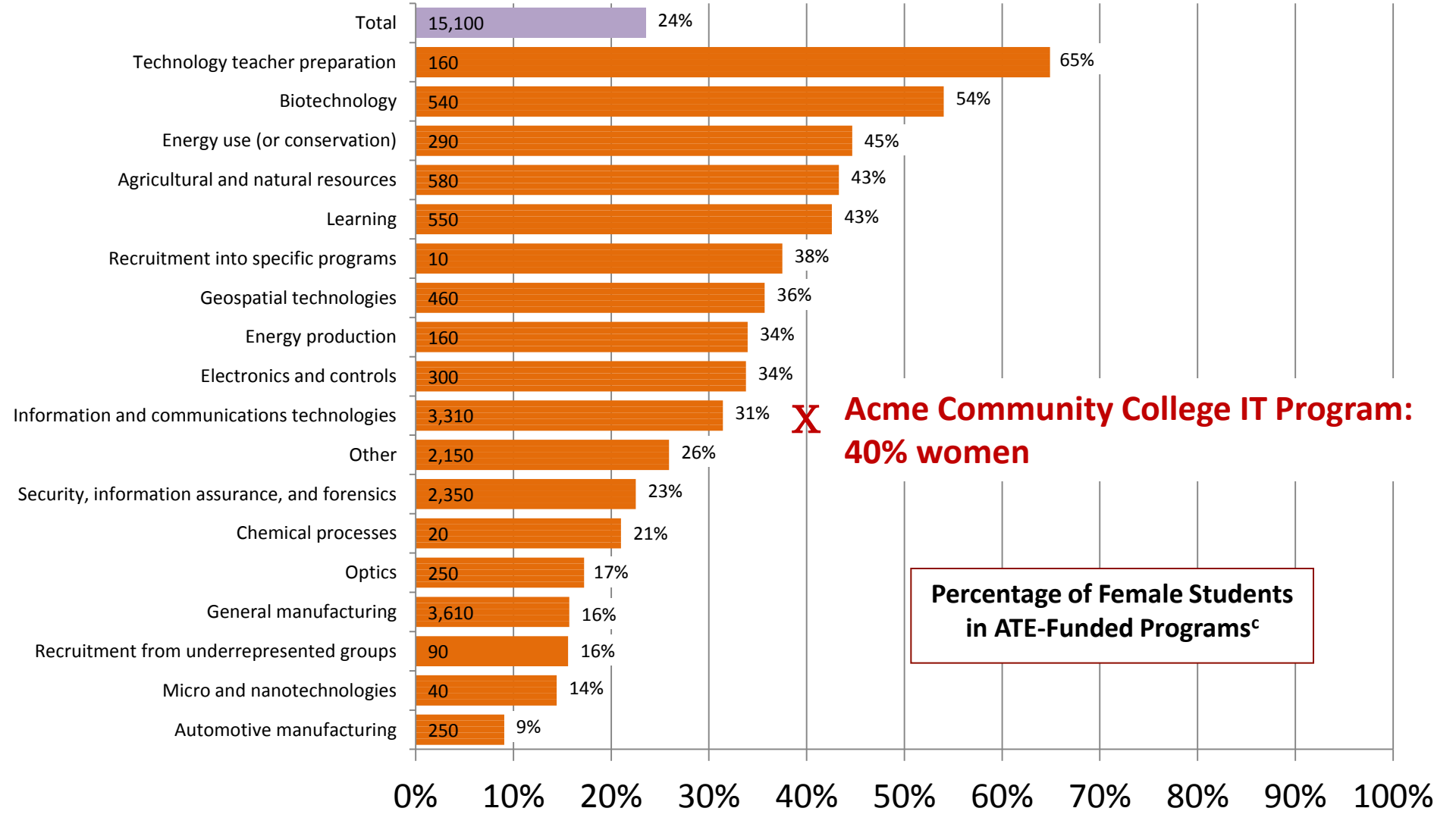
A little less than one-quarter of all students in ATE-supported programs are female. By discipline, the percentage of female students ranges from 9 to 65 percent.



[a] Numbers are rounded to the nearest ten.
[b] Respondents in "other" primarily were involved in multiple disciplines. A total of 380 students across two grants are counted in "other" because no discipline was provided.
[c] Some disciplines (additive manufacturing, marine technologies, space technologies, evaluation, research, and core courses) did not have any student numbers reported and are off the chart.

Benchmarking

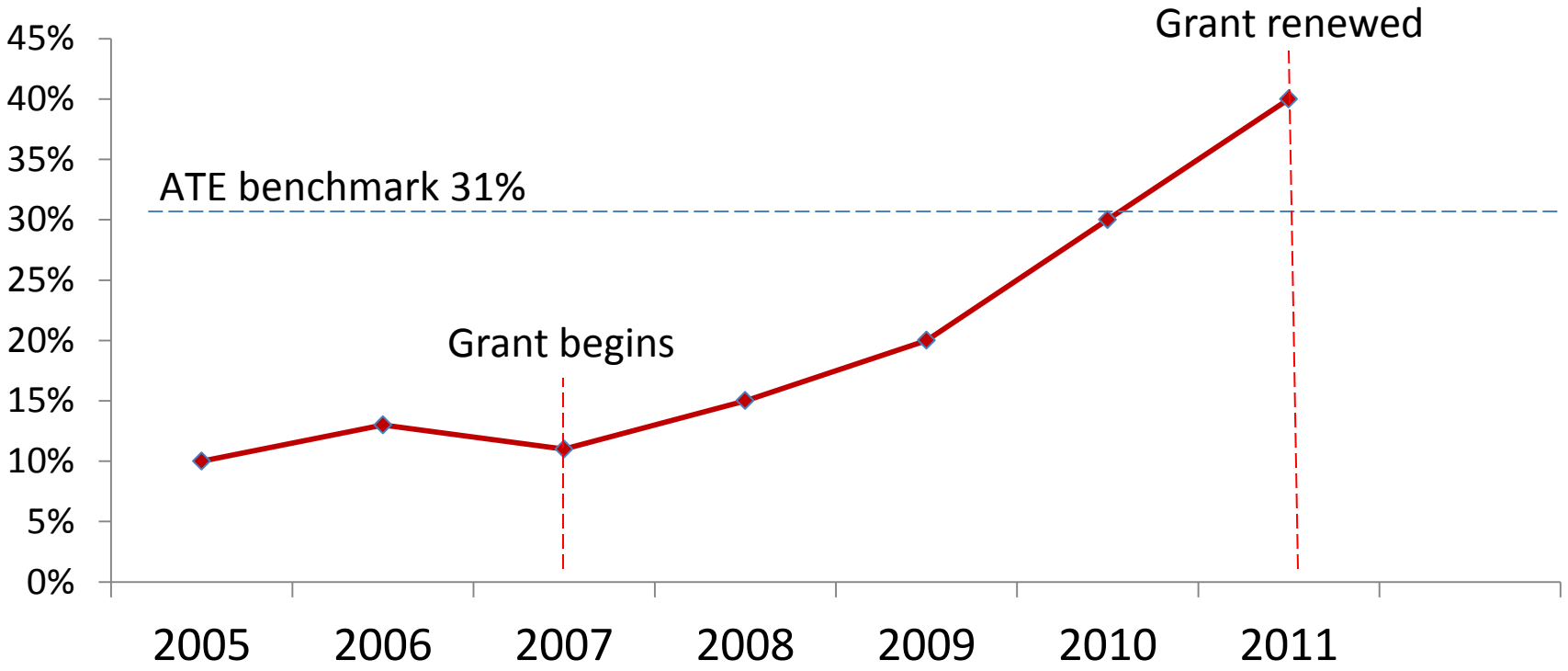
Jason



Benchmarking

Jason

Acme Community College IT Program: 40% women



Summary

Jason

The data you collect can be used at the project/center level, as well as at the overall ATE program level. It can inform your evaluations and planning for future grants.

Regular data collection activities prevent overload at key points throughout the project year, and managing your data can maximize its relevance and accuracy.

Comparing your project to the overall ATE averages can also help future planning.

- Your results can only be as good as the data you collect.

Discussion:

Using Research to Guide OP-TEC's Plan of Work

Dan Hull

OP-TEC

The National Center for Optics and Photonics Education

Dan

- Based at UCF; working with seven partner colleges in FL, NC, SC, NJ, PA, IA & CA
- Sixth year of operation; began in 2006
- Photonics (lasers & optics) is an enabling technology for many fields
- Goal: Provide an adequate supply of well-educated technicians for R&D, service and applications in enabled fields (mfg., medical, defense, communications, energy, etc.)
- Encourage/assist in starting new AAS photonics programs
- Support the growth and improvement of programs in 31 colleges
- Program evaluation is key to the focus and efficient accomplishment of our goals

OP-TEC's Evaluation Team

Dan

External Evaluator: Designs OP-TEC's annual evaluation plan

Internal Evaluator: Conducts studies to quantify need/capacity and to assess center progress

NVC: Reviews evaluations with PIs and staff

PI: Formulates goals and strategies for the next year

Evaluators: Determine metrics to assess next year's progress

Example 1:
Adequate Capacity?

Dan

Employer Needs Study: Determines projected annual needs for new technicians. 1,200/year

Capacity Study: Projects enrollment and completers of 31 photonics colleges. 270/year

Gap: 1,200 needed vs. 270 provided

Goal: Increase number of photonics programs, average enrollment and retention

Strategies: (1) Faculty training and new program planning; (2) More robust “high school pipelines”; (3) “Just-in-time” video math tutorials

Example 2:
Program Improvement

Dan

Examine **emerging technologies** in applications of photonics: e.g., fiber lasers

Examine effective strategies to **improve teaching/learning**: e.g., e-books with enhancements

Develop **curriculum materials and enhancements**

Evaluate products:

- Employer review of materials
- Pilot test new materials/products in classes

Revise materials/products

Benefits to OP-TEC of EvaluATE Survey & Data

Dan

- More difficult to provide some of the data because it has to be retrieved from the colleges that we support
- We now have coordinators that we support at each college, who collect this data for us
- The data from these colleges tells us their strengths and needs; we use this to plan appropriate assistance for the next year
- We can compare our progress in certain areas to the norms in the survey data

EvaluATE Webinars

Stephanie

March 21

Reducing the Outcomes Angst:
A Step-by-Step Approach to
Identify What to Measure

featuring ATE evaluator Lana Rucks

Register at

www.evalu-ate.org/events

AEA

Stephanie

AMERICAN EVALUATION ASSOCIATION

Coffee Break Webinar Series

January 19
Information Visualization
Throughout the Evaluation Lifecycle

January 26
Changing the Evaluation Plan
When Stuff Hits the Fan

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Stephanie

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