

Tools and Methods

Evaluation tools produce indicators. Analysis and reporting enables projects to track progress, demonstrate results, and take corrective action to improve...

NSF Guide to Program Evaluation

Guidelines

1. Determine methods to track products or services (Outputs)
2. Choose indicators aligned to the goals of the project (Outcomes)
3. Select metrics to capture long term results of the project (Impacts)

Evaluation methods use instruments to collect indicators and measures.

Methods

There are a number of ways to evaluate your project.

Common evaluation techniques:

- Counts of products and participants
- Tests for learning knowledge or skills
- Interviews and surveys of participants
- Collecting portfolios of participants' work
- Observations of behavior

Indicators: Standard Metrics (Common Metrics across the BIN)

This section provides examples of tangible metrics that project teams can use for both planning and evaluation.

Outputs

Often Descriptive - Numbers, time, amount, area, and value

Number of participants

Number of workshops offered

Increase in numbers served

Decrease in time to learn new material

Increase in geographic area served

Equipment acquired

Number citations, downloads, web hits, social media spread

Outcomes

Often Normative - Compares change

Learning Outcomes:

Increase in awareness, understanding, knowledge, or skill

Affective Outcomes:

Changes in:

Evaluation Tool Kit

Attitude or behavior
Interest or engagement
Motivation or satisfaction
Confidence or self-efficacy

Promised to Produced

What (processes, products, services) were planned and what were actually put in place?

Impact

Often Causal - Measure benefit and change

Indicators and measures

Reduction in...
Retention of...
Improvement of...
Sustained participation in...
Community engagement
Program spread
Legislation enacted
Greater participation in...
New programs established
Change in budget allocated to...
Access to information

Good Project Evaluation Practices

- Make evaluation an integral part of project planning.
- Use established, attainable evaluation methods.
- Plan multiple types of data and anticipate threats to validity.
- Perform evaluation throughout the life of the project.
- Ask different questions at different points in time.
- Consult with or retain external evaluators.
- Identify recommendations for project improvement.

Outcome	Instruments or Indicators
Integrating Research and Education	<p>CURE III (Administered by Grinnell College)</p> <p>SURE III (Administered by Grinnell College)</p> <p>Grinnell Research Follow-up Survey</p> <p>More Surveys to assess Research and Education</p> <p>Student Assessment of Learning Outcomes</p>
Under-represented Groups	<p>James Irvine Campus Diversity Framework</p> <p>Document: Recruiting and Resources</p> <p>Partnerships with Minority Serving Institutions</p> <p>Partnerships with Community Colleges</p> <p>Programs for Women and Girls</p> <p>Number and Traits of Students Served</p>
Enhancing Infrastructure	<p>Document: Equipment and Use</p> <p>Number and Type of Users</p> <p>Trainings</p> <p>Use by REUs and Internships</p>
Outreach Activities	<p>Document: Partnerships and Products</p> <p>K-12</p> <p>Informal Science Education</p> <p>Public Understanding of Research</p> <p>Dissemination, Publications, Presentations</p> <p>Number and Traits of Audiences Served</p>

Instruments and indicators to document and evaluate broader impacts.