



Evaluating Your STEM Program

Carrie Liston
Karen Peterson

Presentation Outline

- Overview of evaluation
- Importance of evaluation of STEM programs
- Three phases of evaluation
- Thinking about your evaluation needs
 - *Data collection instruments*
 - *Logic models*
- Resources and Wrap-up



Evaluation

Program evaluation is about carefully collecting information about a program or some aspect of a program in order to make necessary decisions about the program.

Written by [Carter McNamara, MBA, PhD, Authenticity Consulting, LLC](#). Copyright 1997-2006



Reasons for Evaluation

- Performance improvement
- Outcome assessment
- Program justification
- Accountability
- Program clarification
- Cost-effectiveness



Types of Evaluation

- Formative: *Done early to decide delivery, or form program will take*
- Process-based: *How delivered, as intended?*
- Outcomes-based: *Summative*



Phase One:

Preplanning and background information

- Program description, objectives
- Program theory
- Logic model
- Stakeholders
- Purpose and scope of evaluation
- Evaluation goals and questions



Program Objectives

A simple acronym used to set objectives is SMART:

- **Specific** – Objectives should specify what they want to achieve
- **Measurable** – You should be able to measure whether you are meeting the objectives or not
- **Achievable** - Are the objectives you set achievable and attainable?
- **Realistic** – Can you realistically achieve the objectives with the resources you have?
- **Time** – When do you want to achieve the set objectives?



Logic Model

- Resources (Inputs)
- Activities (Interventions)
- Outcomes (Short and Long term)
- Impact



Logic Model Sample

Inputs	Activities	Outcomes	Impact
Participants Computers	Game programming sessions	Participants' increased confidence in technology	Gender equity in IT



Logic Model Sample

Inputs	Activities	Outcomes	Impact



Evaluation Purpose

- Does the program work?
- Does it do what intended to do?
- Are there unintended consequences or outcomes?
- What is happening? How is the program being implemented?
- Guide decision-making
- Report to funders



Creating an Evaluation Plan

- What is the purpose of the evaluation?
- Who is the audience for evaluation results: funders, program directors, participants...?
- What are measurable indicators or outcomes?
- What type of information do you need?
- From what sources should the information be collected?
- What resources are available to collect the information?
- What are the limitations—funding, time, lack of access to data, expertise, etc.



Phase Two

Evaluation design and framework

- Design timeline and framework
- Identify metrics to be collected
- Identify and create measures
- Determine sampling and data collection
- Communicate with stakeholders
- Design data analysis



Evaluation Methods

Quantitative

- Surveys/Questionnaires
- Document Review

Qualitative

- Interviews
- Focus Groups
- Observations

Mixed Methods

Benefits

Depth and breadth
Triangulate results
Clarify findings

Drawbacks

Cost
Effort
Expertise



Phase Three

Evaluation implementation and results

- Conduct the evaluation
- Communication
- Reporting (formative)
- Make adjustments
- Continue data collection
- Data analysis
- Final report



Analyzing and Using Data

To improve/inform program elements

- Successes and challenges
- Steps for program improvement
- Participant and partner input and investment

Reporting results

- Audience (parents, funders, community members, school administrators, partners)
- Purpose (celebrate, show progress, solicit funding, accountability)



Successful Evaluation

- Systematic process
- Produces valid results
- Requires careful planning and follow-through
- Looks at what DOES happen in the real world



Your Program, Your Needs

- Use the "*Program Evaluation Reflection Tool*" to think about evaluation for your program.
- Work in small groups to discuss



Small Groups

1. How do you evaluate your programs?
2. What tools have been most useful?
3. What are some challenges of evaluating your program?
4. How do you use your evaluation results?
5. How could you make your evaluation more useful?



Questions?

Carrie Liston

cliston@psctlt.org

Karen Peterson

kpeterson@psctlt.org

Presentation posted at:

<http://www.psctlt.org/era>

