

How to Develop Strong Programming Using Outcomes-Based Evaluation Tools

October 17, 2008
ASTC Annual Conference
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Innovations in Science Learning

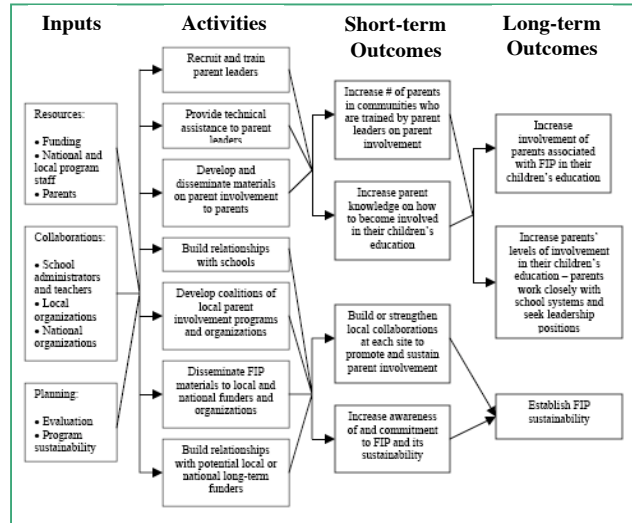
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Example Logic Model 1: United Way Training

Helping Kids After School Program <i>(for middle school age children)</i>					
Inputs	Activities	Outputs	Outcomes		
			Initial	Intermediate	Long Term
Licensed Case workers \$50,000 from county \$5,000 from UWMA Partnership with 3 local principals Free space in East town middle school	Daily homework assistance Nationally proven reading activities weekly	Avg. daily attendance – 45 3000 hours of homework time each quarter	Students enjoy learning	Improved school attendance	
	Organized recreational activities Cultural/arts activities weekly	25 hours of music class each quarter 35% of students below poverty		Improved relationships with peers and adults	
			Students complete homework each week	Improved grades in core subjects	Maintain B average in core subjects

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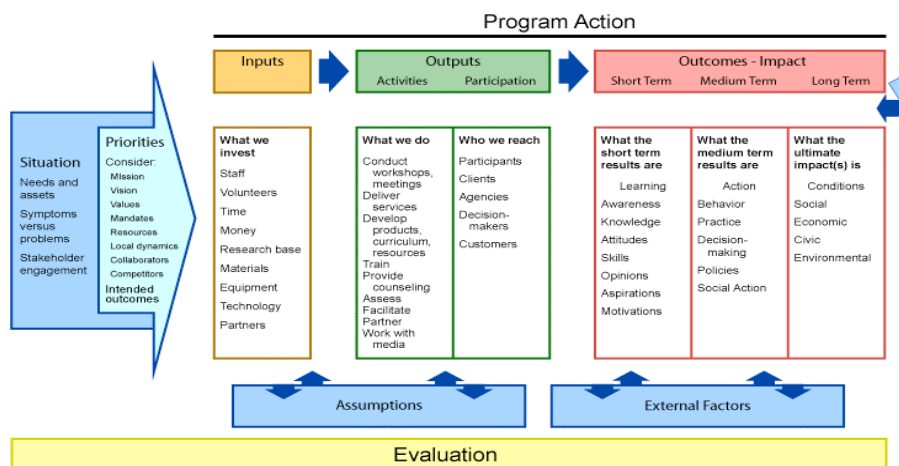
Example Logic Model 2: Family Involvement Project



From: Learning from Logic Models, Harvard Family Research Project

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Example Logic Model 3: UW Extension



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Developing a Logic Model: Steps

1. Think about what you know and what you want to communicate.
2. Identify a format for your logic model.
3. Start with what's easiest...
 - Identify important (long-term) outcomes. *What are the BIG outcomes that we hope to achieve?*
 - Identify activities or outputs. *What activities or outputs have we already decided to deliver?*
4. Develop a logical path between the activities or outputs and the long-term outcomes.
What must happen between our activities/outputs for us to achieve our long-term outcomes?
5. Reflect and revise.
What else do we need to know? Does our logic hold?
What have we left out?

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Developing a Logic Model: An Example for Discussion

Program Scenario Handout: Teacher Retention and Renewal through Bioregional Outdoor Education
Four Corners School of Outdoor Education
NSF -- ESI-0243523



Please take a moment to review the Program Scenario Handout.

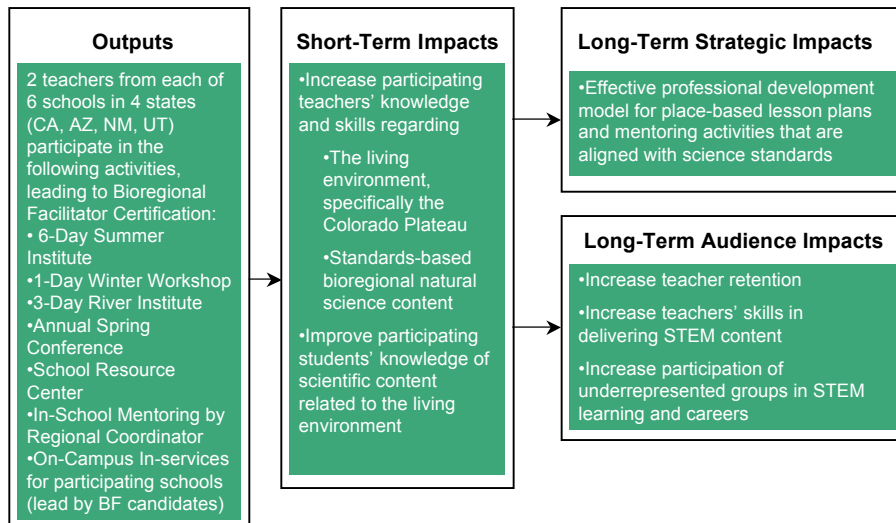
Assuming we are developing a logic model for a funder...

...What do we know?

...What things will be important to communicate?

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Developing a Logic Model: The TRRBOE Example



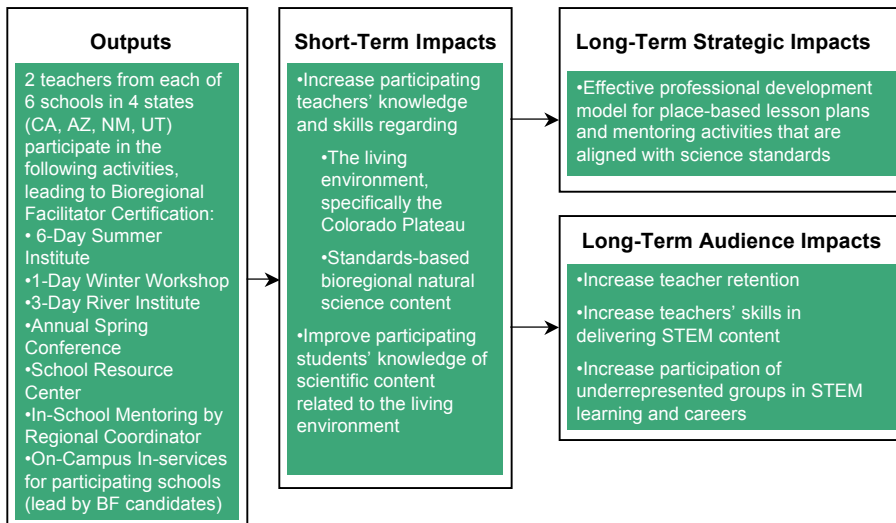
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Developing a Logic Model: Some Tips

- **Focus on clearly communicating your program model.** Don't get bogged-down in terminology.
- **Pay attention to what your funder wants.** e.g. NSF "Strategic Impacts"
- **Be clear on outputs vs. outcomes/impacts.**
- **Highlight what's important.** It may not be necessary to include all elements of the logic model (activities & outputs).
- **Work backwards.** For long-term outcomes, ask yourself... Why did I want to do this project in the first place?

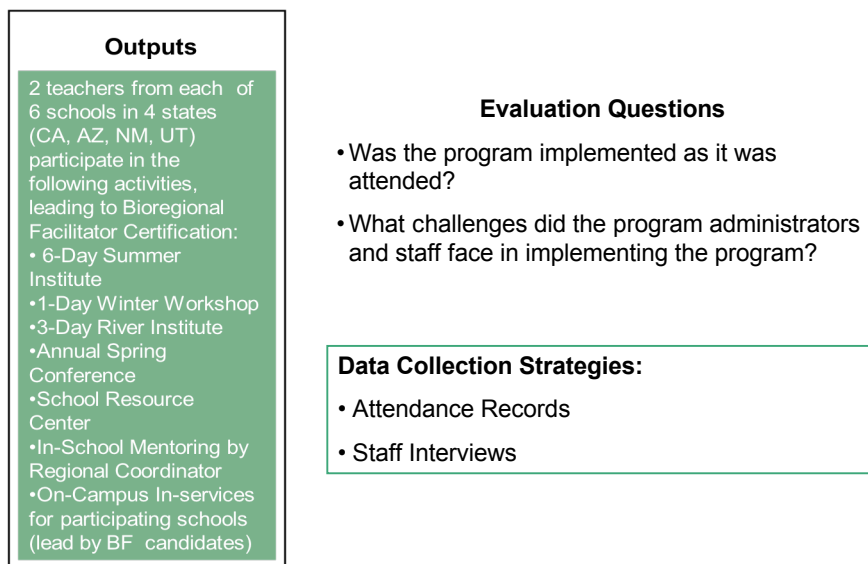
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Using your Logic Model to Develop an Evaluation Plan



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Using your Logic Model to Develop an Evaluation Plan

Short-Term Impacts

- Increase participating teachers' knowledge and skills regarding
 - The living environment, specifically the Colorado Plateau
 - Standards-based bioregional natural science content
- Improve participating students' knowledge of scientific content related to the living environment

Evaluation Questions

- Do participating teachers report an increase in their knowledge and skills regarding the living environment of the Colorado Plateau?
- Do participating teachers report a better understanding of standards-based bioregional science content?
- Do participating students show an increase in their knowledge of the scientific content related to the living environment?

Data Collection Strategies:

- Pre- and Post-Program Teacher Surveys
- Pre- and Post-Program Student Surveys

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Using your Logic Model to Develop an Evaluation Plan

Long-Term Strategic Impacts

- Effective professional development model for place-based lesson plans and mentoring activities that are aligned with science standards

Long-Term Audience Impacts

- Increase teacher retention
- Increase teachers' skills in delivering STEM content
- Increase participation of underrepresented groups in STEM learning and careers

Evaluation Questions

- Does the TRRBOE program result in improvements in teacher retention in participating schools?
- Do teachers in participating schools show improved skill in delivering STEM content?
- Do students in participating schools express increased interest in STEM learning and careers?

Data Collection Strategies:

- Annual teacher retention rates by school
- Teacher observations
- Student interviews/surveys

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