Best Practices in Program Evaluation

Nazanin Mohajeri-Nelson, Ph.D. and Tina Negley, M.A.
Office of Data, Program Evaluation, and Reporting (DPER)

February 4, 2016
Introduction to Program Evaluation
What is Program Evaluation?

- Process to Determine if an intended outcome is reached using empirical methods and evidence.
- Process for judging the worth of some intervention, strategy, or service.
Why evaluate local programs?

- Data limitations at the state level
  - Implementation data ~ currently collect little to no implementation data
  - Outcome data ~ only state assessment
- Design can be based on local activities, data, and meet local needs
  - Identify what is working and what can be improved
  - Beneficial to application for funds
Purpose of Program Evaluation: What Should Be Learned from the Results?

- Evaluation plans and designs should be developed considering factors, such as:
  - ROI expectations
  - Needs of targeted recipients
  - Local needs
  - Stakeholder requests or needs
  - Statutory requirements or guidance
  - Federal, state, or local expectations
  - Program Logic Model
  - Based on the Theory of Action
Regardless of the type of evaluation question, the evaluation must be aligned to the Theory of Action.
Theory of Action

- A statement designed to connect program goals and objectives to the intended outcomes of the program
  - Describes the philosophical relationship between identified needs and desired outcomes
- Often follow the format
  - If we do....
  - Then this will happen...
- Include underlying assumptions about the needs being addressed
- Often are based on prior program evaluation findings or other evidence that something has not worked or is not working well
Begin With the End In Mind to Build a Theory of Action

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Inputs</th>
<th>Outputs</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>What problem is being solved?</td>
<td>What resources are available to help reach those results?</td>
<td>What activities would help us reach those results? And who would need to participate to reach the desired results?</td>
<td>What results do we hope to achieve?</td>
</tr>
<tr>
<td>And do we have the right priorities, situation, and timing to address that problem?</td>
<td>Would these resources be enough to implement with fidelity?</td>
<td>Feasible &amp; Reasonable to expect desired outcomes from these activities?</td>
<td></td>
</tr>
</tbody>
</table>

What activities would help us reach those results? And who would need to participate to reach the desired results? Feasible & Reasonable to expect desired outcomes from these activities?
PE process always starts with the question(s)...

**Purpose**
- Evaluation Question(s)

**Data Identification**
- Identify goals & measurable objectives of project being evaluated
- Determine if currently available data can be used to address evaluation question; If not, create data collection (collect and store data)

**Data Preparation**
- Gather & merge data from various sources
- Clean data

**Data Analysis and Interpretation**

**Reporting**

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Data Collection & Storage
Developing the Right Evaluation Questions

Necessary for Planning the Right Design
Ask the Right Question(s)

- **5 types of Evaluation Questions**
  - *Needs Assessment*: questions about the condition that needs to be resolved or improved or the need for this program
  - *Assessment of Program Theory*: questions about the reasonableness, feasibility, or ethicalness, or appropriateness of the program concept or design
  - *Process Evaluation*: questions about program implementation, operation, or delivery of services (fidelity)
  - *Impact or Outcome Evaluation*: questions about reaching the desired outcomes
  - *Efficiency Assessment*: questions about program costs and/or cost-effectiveness
## Sample Evaluation Questions

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Sample Questions</th>
</tr>
</thead>
</table>
| Needs Assessment                  | • What condition/situation/outcome is in not working? In need of improvement?  
• Why does that condition/situation/outcome exist? What is contributing to it?                                                                 |
| Assessment of Program Theory      | • Is our Theory of Action plausible based on the research literature?  
• Do our stakeholders &/or subject matter experts think it’s reasonable & feasible?                                                           |
| Process Evaluation                | • Is the program reaching the targeted recipients?  
• Is the program being implemented as planned/designed?  
• Are implementation benchmarks being reached?  
• How is the program progressing? Compared to last year? A month ago?  
• What challenges have we faced? What improvements/changes in strategies are needed for us to reach intended outcomes? |
| Impact or Outcome Evaluation      | • What were the intended outcomes of our program? What changes did we hope to achieve? Did we achieve those intended/hoped for outcomes?  
• Did the program yield the same results for all participants? Was the program more effective for some? If so, why?  
• What were (any) unintended outcomes of the program?                                                                 |
| Efficiency Assessment             | • Do the benefits of our program outweigh the costs?  
• Are we getting a return on our investment?                                                                                           |
Why Say It When You Can Display It?

Introduction to Logic Models
**Sections of Logic Models**

Inputs are the resources used by the program.

Examples: program staff, funding, time, external partners, volunteers, materials, equipment, technology

Activities are what the program does with its inputs to fulfill its mission.

Examples: events, informational materials, products, workshops, trainings, conferences, exhibits, curricula

Audience refers to the participants, clients, or customers reached by the program.

Examples: number of people attending an event, workshop, and/or training; type of participants (grade levels, ages, ethnicities, etc. of participants)

Outcomes are the results of your program. They are the changes that take place during or after the program for individuals, groups, communities, or organizations. These changes can take place over the short, intermediate, or long-term. Long-term outcomes are sometimes referred to as Impacts.

Examples of short/intermediate-term Outcomes: knowledge, attitudes, awareness, opinions, skills, behavior

Examples of Impacts: educational, environmental quality, or human health improvements

Satisfaction refers to participants’ satisfaction with their experience in the program and how it was implemented
Narrow the Focus

- **Evaluation Purpose**
  - Why are we evaluating? What do we hope to learn?
  - Do our evaluation questions meet this purpose?

- **Evaluation Needs**
  - What resources (time, capacity) do we have to conduct the evaluation? Is that enough to conduct the type and extent of evaluation we need?
  - Is this something we can do internally or should we contract out?
  - How quickly do we need the results/findings?

- **Evaluation Plans**
The Evaluation Plan
Designing the Plan: Will Depend on Question, Data Available, & Purpose of the Evaluation

**Evaluation Plan**

- Include evaluator as early as possible in the planning process.
- Numerous evaluation methods ~ two commonly used
  - Treatment v. comparison group
  - Pre, mid-, and post-program comparison
- Sample plan

<table>
<thead>
<tr>
<th>Program Goals</th>
<th>Target Outcomes</th>
<th>Steps to Achieve the Outcome</th>
<th>Analysis and Action Plan</th>
<th>Results</th>
<th>Person Responsible</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers who attend math professional development will have higher scores on a math content knowledge assessment</td>
<td>Treatment teachers, on average, will have a 5% higher score than the comparison group</td>
<td>Math PD will be provided as planned in the proposal</td>
<td>Compare the average post-test score of attending teachers to non-attending teachers from same school</td>
<td>Program Coordinator In collaboration with Program Evaluator</td>
<td>Fall the year following the summer professional development</td>
<td></td>
</tr>
</tbody>
</table>
Analyses plans can include various sub-groups and how they performed at each point:

<table>
<thead>
<tr>
<th>Groups of indicators</th>
<th>Subgroups</th>
<th>Pre-program</th>
<th>Mid and/or Post-program</th>
<th>Comparison Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>High attendance</td>
<td>Low attendance</td>
<td>High attendance</td>
</tr>
<tr>
<td>Objective 1</td>
<td>With certain history</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Without certain history</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective 2</td>
<td>High on some aspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium on some aspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low on some aspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective 3</td>
<td>High on some demographic aspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low on some demographic aspect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other evaluation question</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Program Evaluation Goals and Objectives

**Primary Goals and Objectives:**
- Determine the Impact of Summer School Attendance on Student Academic Performance of participating students to comparison students where possible (some schools provided comparisons; while others we will have to create comparisons by looking at the performance of all remaining students with similar demographics in that school)

**Secondary Goals and Objectives:**
- Determine the most effective programs, dosage, intensity, duration
- Determine how the most effective programs spent their funds [look at PPAs for actual expenditures]
- Determine if “School Continuation”, “Mid-Summer”, or “Early School Year Start” programs have the most effect
- Determine if students attending SS at a non-resident school (a school other than where they are enrolled) makes a difference in performance
<table>
<thead>
<tr>
<th>Broad Evaluation Question</th>
<th>Steps and/or more specific questions</th>
<th>Data to be used</th>
<th>Analysis Method</th>
<th>Comments/Notes</th>
</tr>
</thead>
</table>
| What is the overall impact of Summer School participation on Student Academic Performance? | 1. Identify all SS students and their resident schools.  
2. Comparison students:  
a. If the school/district already identified comparison students, then include those in the analyses.  
b. If school/district did not include comparison students, create comparison groups  
   i. take SASIDS of all students in the same grades as those students that participated from each resident school;  
   ii. Remove SS students from list;  
   iii. Select a random sample of students who were eligible for participating in SS but did not with similar demographics to those students that did participate | 1. Reading  
a. CBLA  
   i. 2010-2011  
   ii. 2011-2012  
b. CSAP PL, SGP  
   i. 2010-2011  
   ii. 2011-2012 | 1. Calculate the percentage of students that moved up in PL from 20102011 to 20112012 for SS and comparison students | 2. Calculate the MGP for SS and comparison students |
Find and Use the Right Data

What will it take to answer our evaluation questions?
Purpose
- Evaluation Question(s)

Data Identification
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Data Preparation
- Gather & merge data from various sources
  - Clean data

Data Analysis and Interpretation

Reporting

Evaluation Process

Data Collection & Storage
Example

Source: http://meera.snre.umich.edu/sites/all/images/logic-model-big.png

Key Evaluation Questions

- Were the inputs sufficient, timely?
- Was curriculum developed? Were all 6 sessions delivered?
- Did all parents attend that we intended? Who did/ did not attend? Did they attend all 6 sessions? Why/ why not?
- To what extent did knowledge increase? Did they learn new approaches? What happened?
- Are parents actually using improved skills? What difference do these skills make?
- Has there been a decrease in rates among participants? Were goals met?

Indicators

- # Staff
- $ used
- # partners
- When delivered
- Curriculum
- # sessions held
- #, % attended per session
- Certificate of completion
- #, % with increased knowledge of...
- Additional outcomes
- #, % using skills
- Types of differences reported
- #, % abusing/ neglecting children before - after
Data Identification

- What data would indicate if the objective was met?
  - Indicators must make sense given the design, goals, and measurable objectives of the program being evaluated

- Data available or need to be collected?
  - If not available, need to incorporate data collection into the evaluation plan
  - **Note**: it is important to know the analyses plan before collecting data to ensure that the data to be collected is appropriate for the analyses. Must also have tested any new collections for reliability and validity of the instrument
Data Preparation and Analysis
**Purpose**
- Evaluation Question(s)

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**Evaluation Process**
Do’s

- Identify indicators based on LM
- Identify data points to measure each indicator
- Use multiple sources of data to corroborate findings
  - Perception data ~ assessment data
  - Satisfaction data ~ frequency of use data/attendance
- Clean and prep data as early as possible (soon after collection)
- Use only valid analysis methodology for the type of data being used
- Reflect on what you have learned and determine if results address all of your evaluation questions
- Use caution when interpreting results - don’t read more into it than what the data actually says
More Do’s

- Use unique IDs to track subjects (students, teachers, participants) across data sources
- Keep all original data
- Double check all data entries
- Double check all data analyses (actually run analyses twice to validate findings!)
- Eliminate non-sense (e.g., out of range for data point) or missing data
- **Services received**
  - Program type
  - Format and location
  - Contracted hours completed
  - NEP or LEP (WIDA ACCESS)

- **Assessment data**
  - TCAP proficiency
  - TCAP growth (MGP)
  - DRA-2
  - ACCESS proficiency
  - ACCESS growth (MGP)
Example

SES Evaluation

Components

- **Treatment v. Comparison Group approach**
  - **Treatment group (received SES)**
    - Participated in SES, enrolled in eligible school
    - Two years of assessment data available
    - Completed all tutoring or at least 20 hours
  - **Comparison group**
    - Randomized sample of students who did not participate, same schools
    - Proportional distribution based on grade and proficiency
  - Compare the percent of students receiving SES that increased at least one proficiency level to the performance of the comparison students
  - Compare the MGP of students receiving SES to the MGP of comparison students
Disseminate the Findings
Purpose
- Evaluation Question(s)

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Evaluation Process

Data Collection & Storage
Sharing Results ➔ Using Results

- **Purpose of Dissemination**
  - Accountability?
  - Justification?
  - Program Improvement?

- **Targeted Audience**

- **Disseminating findings**
  - Theory of Action
  - Logic Model
  - Methods
  - Results

- **Conclusions and Recommendations (based on purpose)**
Create Your Report
For the Intended Users

- **Methodology ~ Can It Be Replicated?**
  - Describe each data point used
  - The collection method and process
  - Describe the possible ranges and results
    - How many responded to survey?
    - What were the response options?
    - What was the distribution of responses?
  - Time frame covered by evaluation
  - Analysis plan and techniques to be used

- **Program Reach**
  - Describe the targeted recipients versus the actual participants
  - Describe the frequency, intensity, duration of program
Create Your Report
For the Intended Users

Results ~ What Did the Data Show?

- Describe the analyses conducted
- Describe or even better show the descriptive data
  - Tables, graphs, charts
  - Data ranges, averages, medians
- Describe or even better show the results
  - Changes in scores
  - Differences between groups
  - Variance
  - Rankings
- Noteworthy trends
- Quotes that exemplify the results
Create Your Report
For the Intended Users

- Conclusions ~ Would Another Evaluator Reach the Same?
  - Findings ~ describe what was learned
    - Include what was expected and what was unexpected / were any of the findings surprising?
  - Describe limitations in data, methods, or design
  - Conclusions drawn based on findings
    - Did the program have the impact that had been hoped for? In what way?
  - Lessons learned from the evaluation
  - Next steps and further investigations
CDE’s Evaluations

- Federal reporting requirements
- Dissemination
  - Internal
    - To inform program planning and quality
      - Identifying best practices
      - Identifying effective programs/providers
    - To inform funding decisions
  - External
    - To inform program planning and quality (identifying best practices)
SES – how we share results

- **Internal**
  - Overall program effectiveness
  - Academic and linguistic performance of treatment groups compared to comparison groups
  - Best practices
  - Location of services
  - Format (group vs. individual; online)
  - Hours of services completed
  - Effective providers/programs

- **External**
  - Effective providers/programs
  - Best practices
Questions?
Contact

- Nazanin Mohajeri-Nelson, Ph.D.
  - Mohajeri-nelson_n@cde.state.co.us
- Tina Negley
  - Negley_t@cde.state.co.us

Our evaluation reports can be found on:
- http://www.cde.state.co.us/fedprograms/dper/evalrpts.asp

THANK YOU for your time!
Good luck with your plans!
Call us with questions or to get technical support!
We would appreciate your honest feedback

Please respond to four questions on the following link to provide us with feedback on this training so that we can continue to improve!

https://docs.google.com/forms/d/1sMhYz61gXdEnSwWR3DD0Ddv1ArRSqm12bRPJBqioBOg/viewform?c=0&w=1

THANK YOU!