



COLORADO

Department of Education

Best Practices in Program Evaluation

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

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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.



Need for Local Evaluation

- **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



Theory of Action

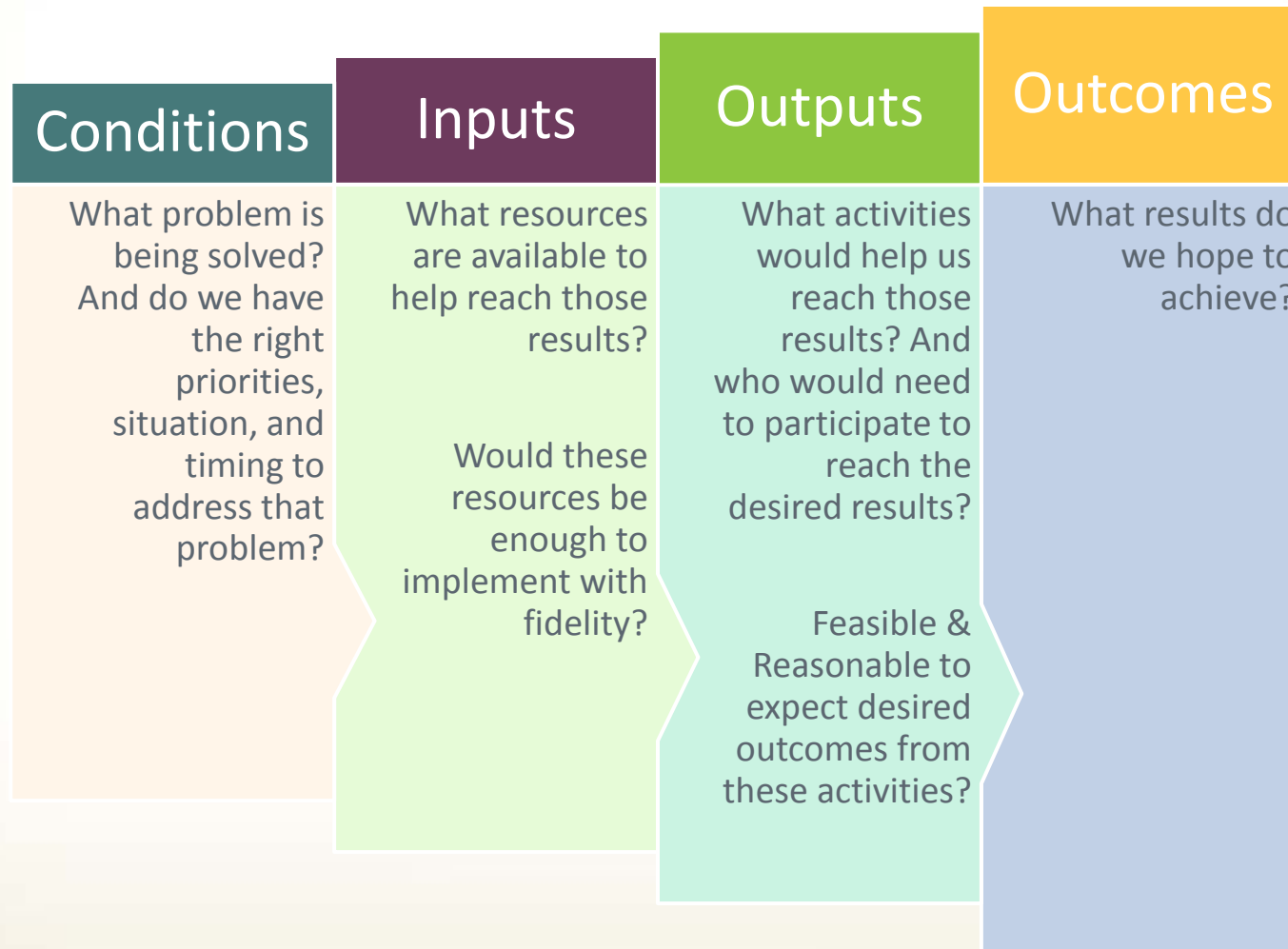
Regardless of the type of evaluation question, the evaluation must be aligned to the Theory of Action



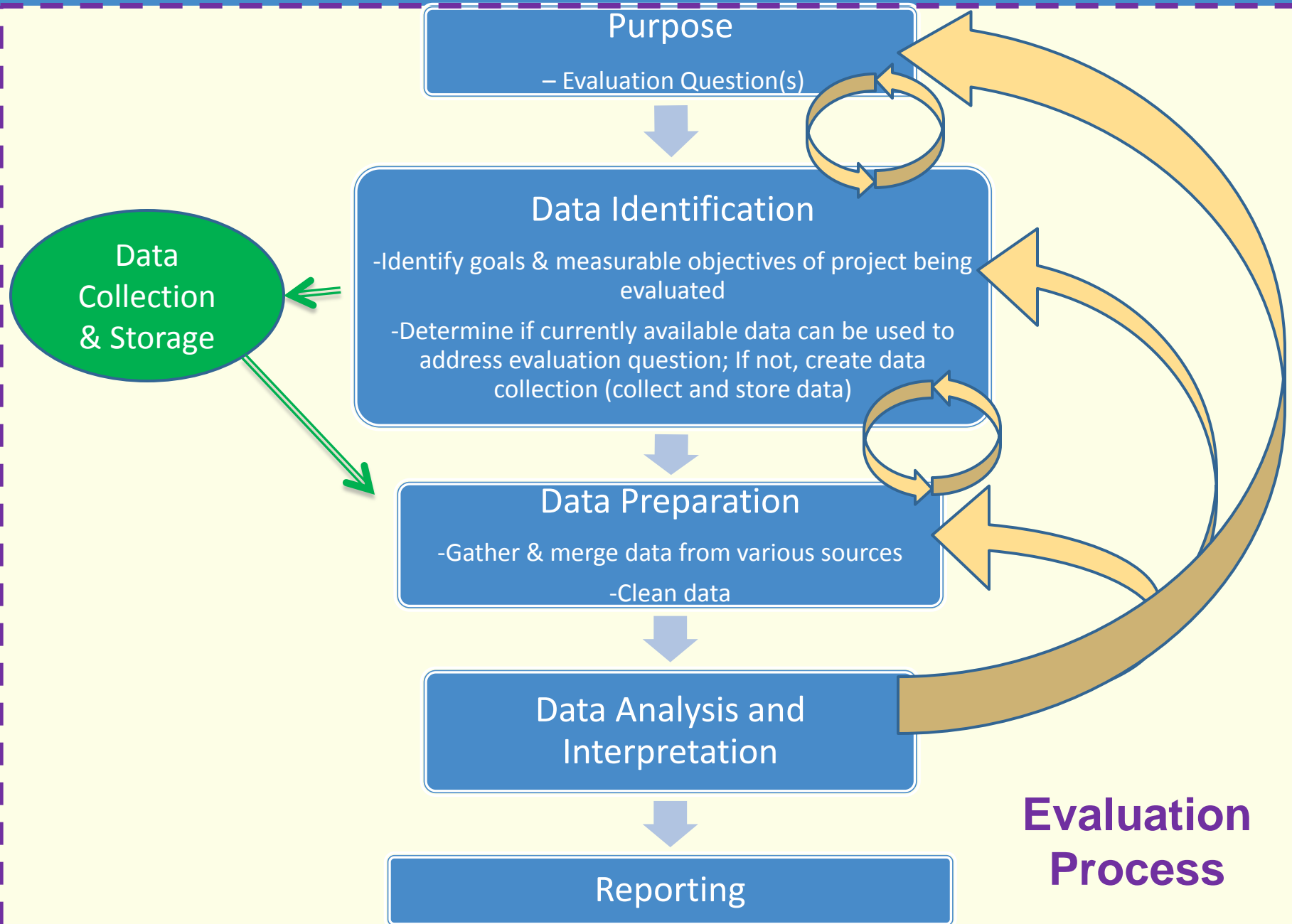
Theory of Action

- **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



PE process always starts with the question(s)...



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

Type of Question	Sample Questions
Needs Assessment	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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?

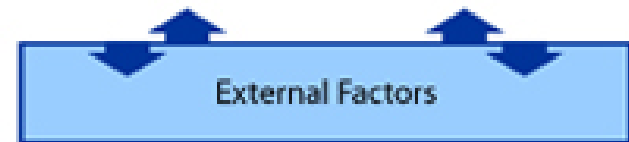
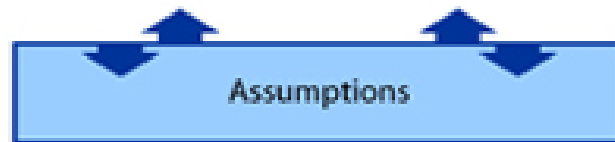
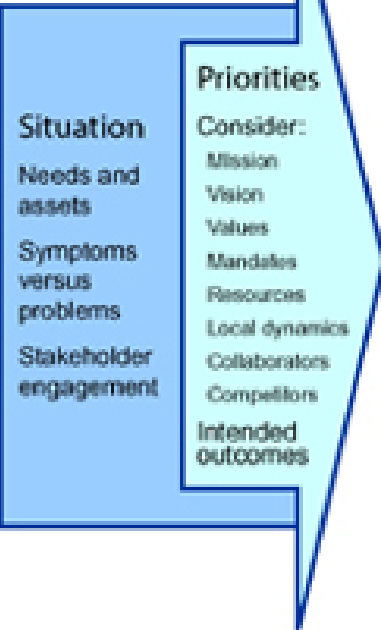
Introduction to Logic Models



Logic Model – Sample Structure

Source: <http://www.uwex.edu/ces/pdande/images/logicmodel.jpg>

Program Action - Logic Model

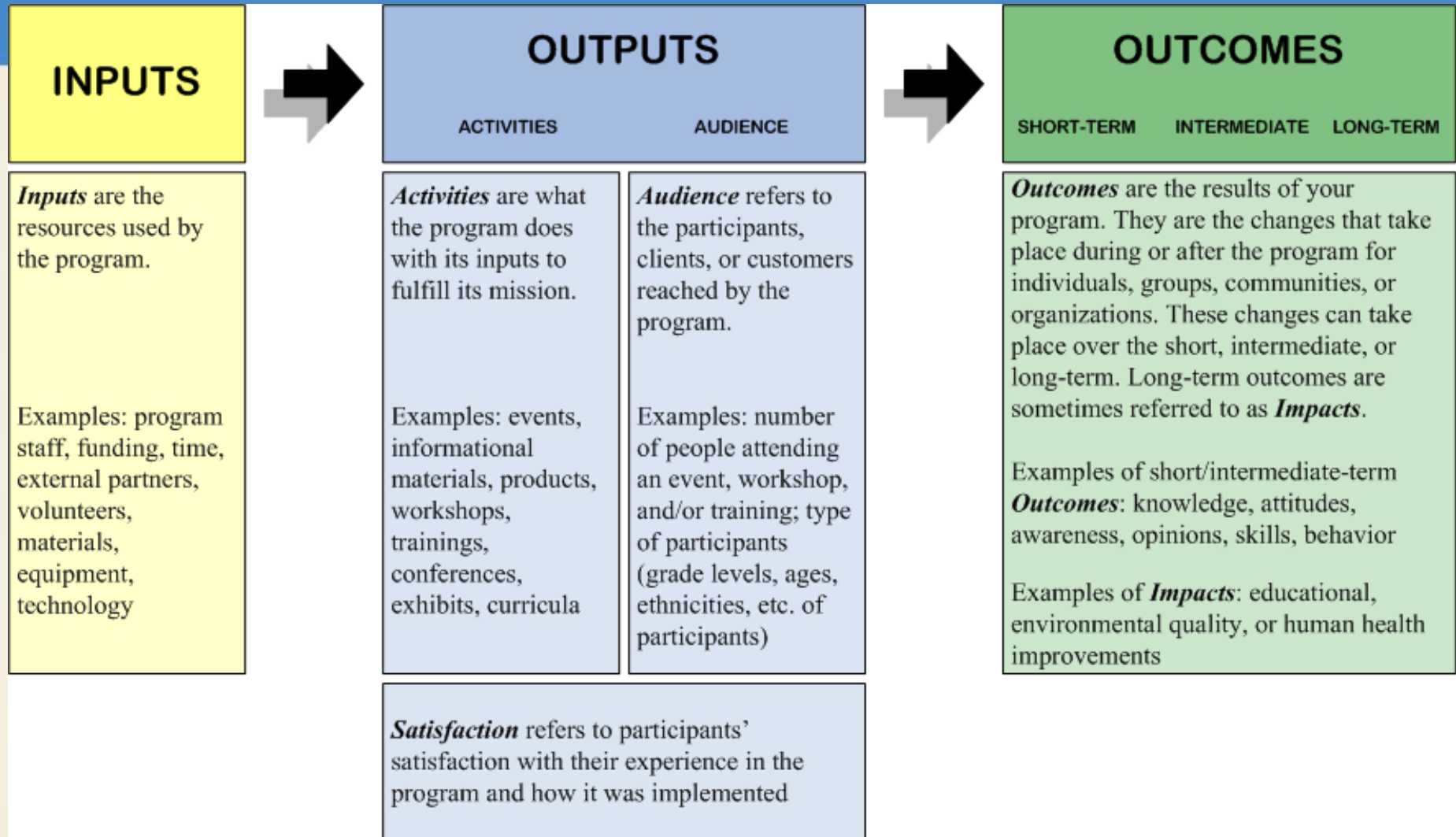


Evaluation

Focus - Collect Data - Analyze and Interpret - Report

Sections of Logic Models

Source: <http://meera.snre.umich.edu/sites/all/images/step-2-logic-model-big.png>



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

Program Goals	Target Outcomes	Steps to Achieve the Outcome	Analysis and Action Plan	Results	Person Responsible	Time Frame
Teachers who attend math professional development will have higher scores on a math content knowledge assessment	Treatment teachers, on average, will have a 5% higher score than the comparison group Treatment teachers will increase CK by 10 points on pre- to post-assessment	Math PD will be provided as planned in the proposal	Compare the average post-test score of attending teachers to non-attending teachers from same school Compare pre-test score of attending teachers to their post-test scores		Program Coordinator In collaboration with Program Evaluator	Fall the year following the summer professional development



Sample Template

Source:

http://www.stepstoolkit.org/index.php?option=com_courses&task=ShowModule&Module=8&type=T&CatId=54&Itemid=142&lang=en

- Analyses plans can include various sub-groups and how they performed at each point:

Groups of indicators	subgroups	Pre-program		Mid and/or Post-program		Comparison Group
		High attendance	Low attendance	High attendance	Low attendance	
Objective 1	With certain history					
	Without certain history					
Objective 2	High on some aspect					
	Medium on some aspect					
	Low on some aspect					
Objective 3	High on some demographic aspect					
	Low on some demographic aspect					
Other evaluation question						

CDE Evaluation Plan Template

Program:		Evaluation Period:	20122013 - 20132014	Team FTE devoted to this program evaluation:	NMN		Report Projected Timeline	Preliminary Analyses	September 15, 2014
Coordinator:		Segments:			EY/T N			Final Analyses and Report	December 31, 2014

Program Evaluation Goals and Objectives
<p><u>Primary Goals and Objectives:</u></p> <ul style="list-style-type: none"> 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) <p><u>Secondary Goals and Objectives:</u></p> <ul style="list-style-type: none"> 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



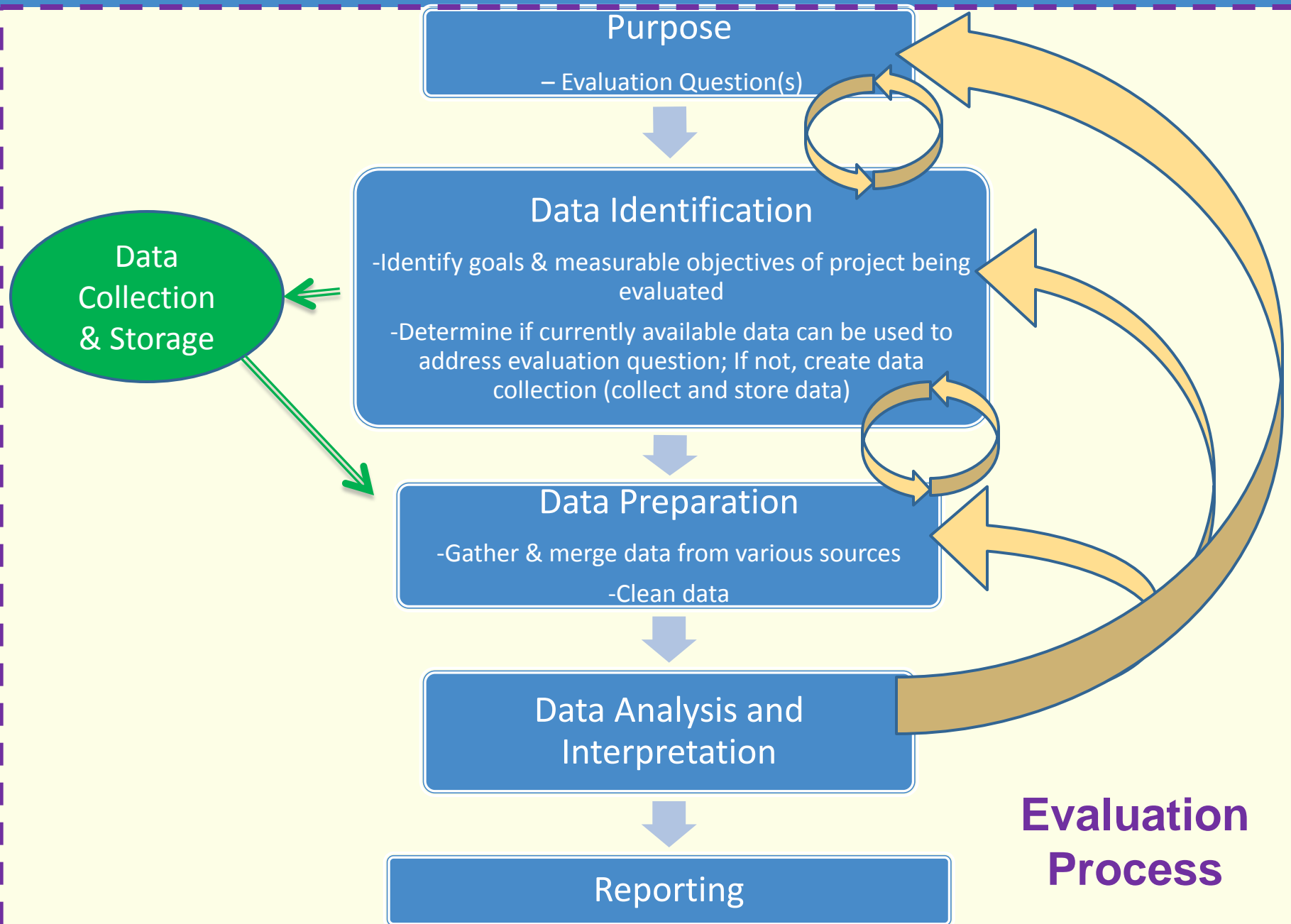
Broad Evaluation Question	Steps and/or more specific questions	Data to be used	Analysis Method	Comments/Notes
<p>What is the overall impact of Summer School participation on Student Academic Performance?</p>	<ol style="list-style-type: none"> 1. Identify all SS students and their resident schools. 2. Comparison students: <ol style="list-style-type: none"> 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 <ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. Reading <ol style="list-style-type: none"> a. CBLA <ol style="list-style-type: none"> i. 2010-2011 ii. 2011-2012 b. CSAP PL, SGP <ol style="list-style-type: none"> i. 2010-2011 ii. 2011-2012 2. Math <ol style="list-style-type: none"> a. CSAP PL, SGP <ol style="list-style-type: none"> i. 2010-2011 ii. 2011-2012 	<ol style="list-style-type: none"> 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?



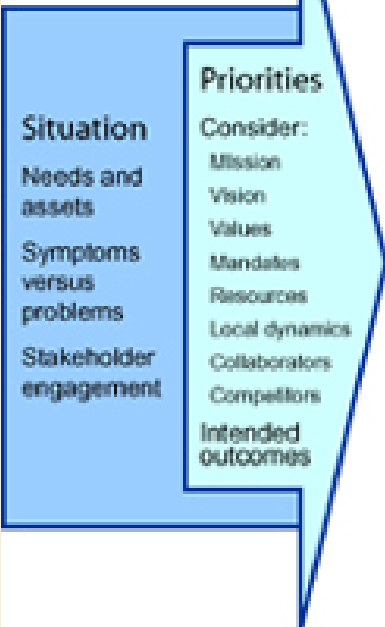
Moving on to Find the Right Data...



Logic Model – Sample Structure

Source: <http://www.uwex.edu/ces/pdande/images/logicmodel.jpg>

Program Action - Logic Model



What we invest

- Staff
- Volunteers
- Time
- Money
- Research base
- Materials
- Equipment
- Technology
- Partners

<p>What we do</p> <ul style="list-style-type: none"> Conduct workshops, meetings Deliver services Develop products, curriculum, resources Train Provide counseling Assess Facilitate Partner Work with media 	<p>Who we reach</p> <ul style="list-style-type: none"> Participants Clients Agencies Decision-makers Customers Satisfaction
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What the short term results are

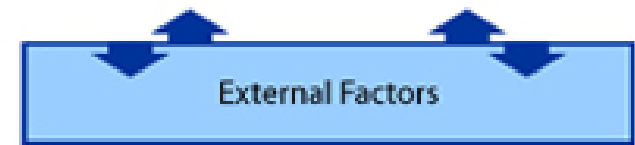
- Learning
- Awareness
- Knowledge
- Attitudes
- Skills
- Opinions
- Aspirations
- Motivations

What the medium term results are

- Action
- Behavior
- Practice
- Decision-making
- Policies
- Social Action

What the ultimate impact(s) is

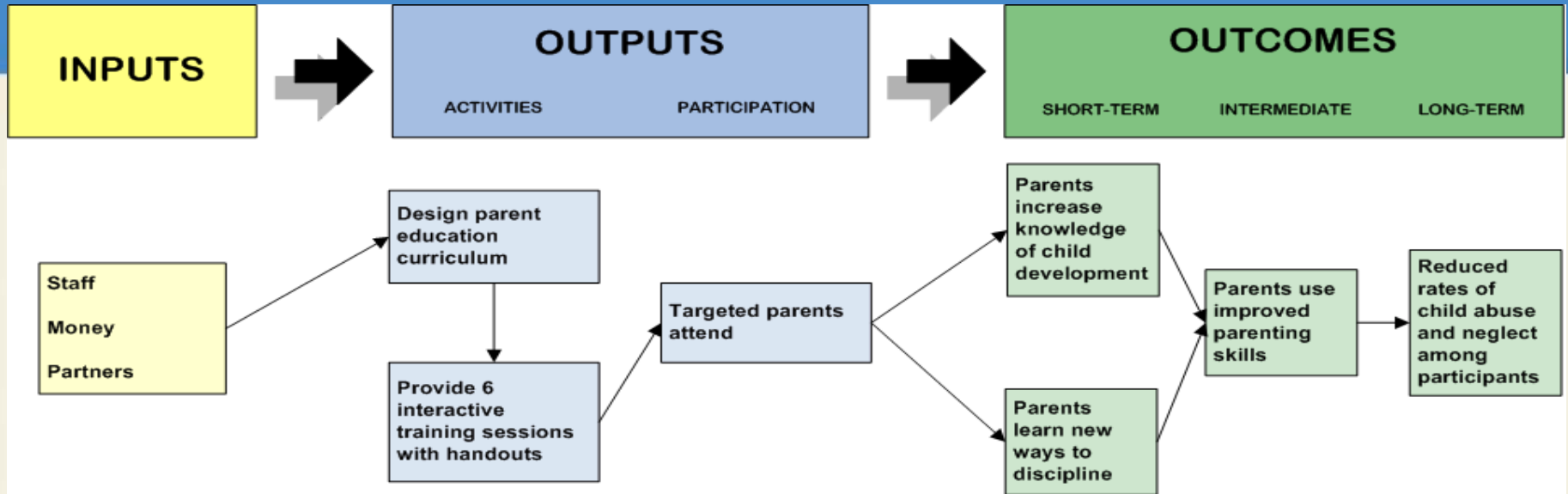
- Conditions
- Social
- Economic
- Civic
- Environmental



Evaluation
Focus - Collect Data - Analyze and Interpret - Report

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 else 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

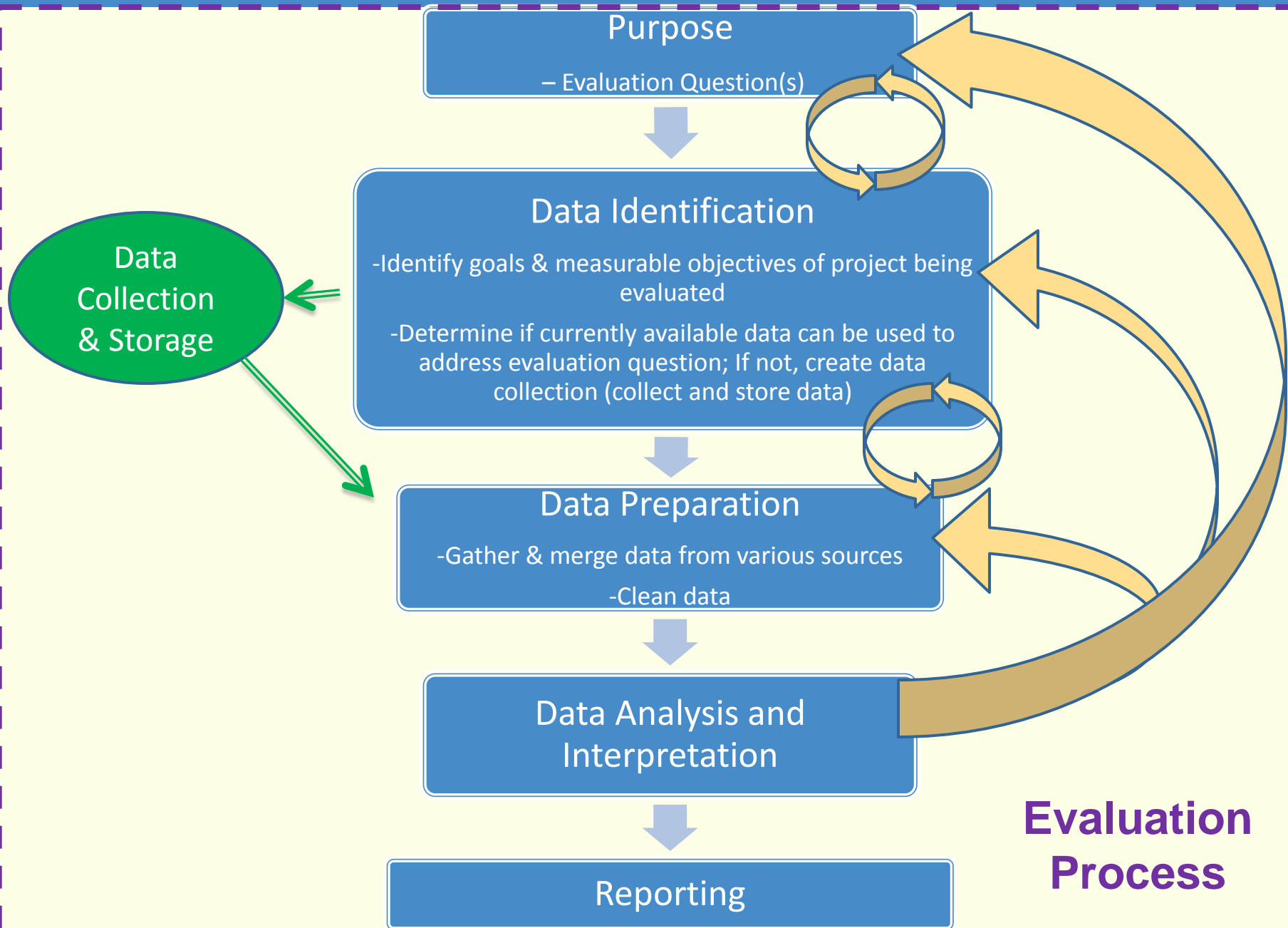
#, % abusing/neglecting children before - after

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





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

Example

SES Data Used

- **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)

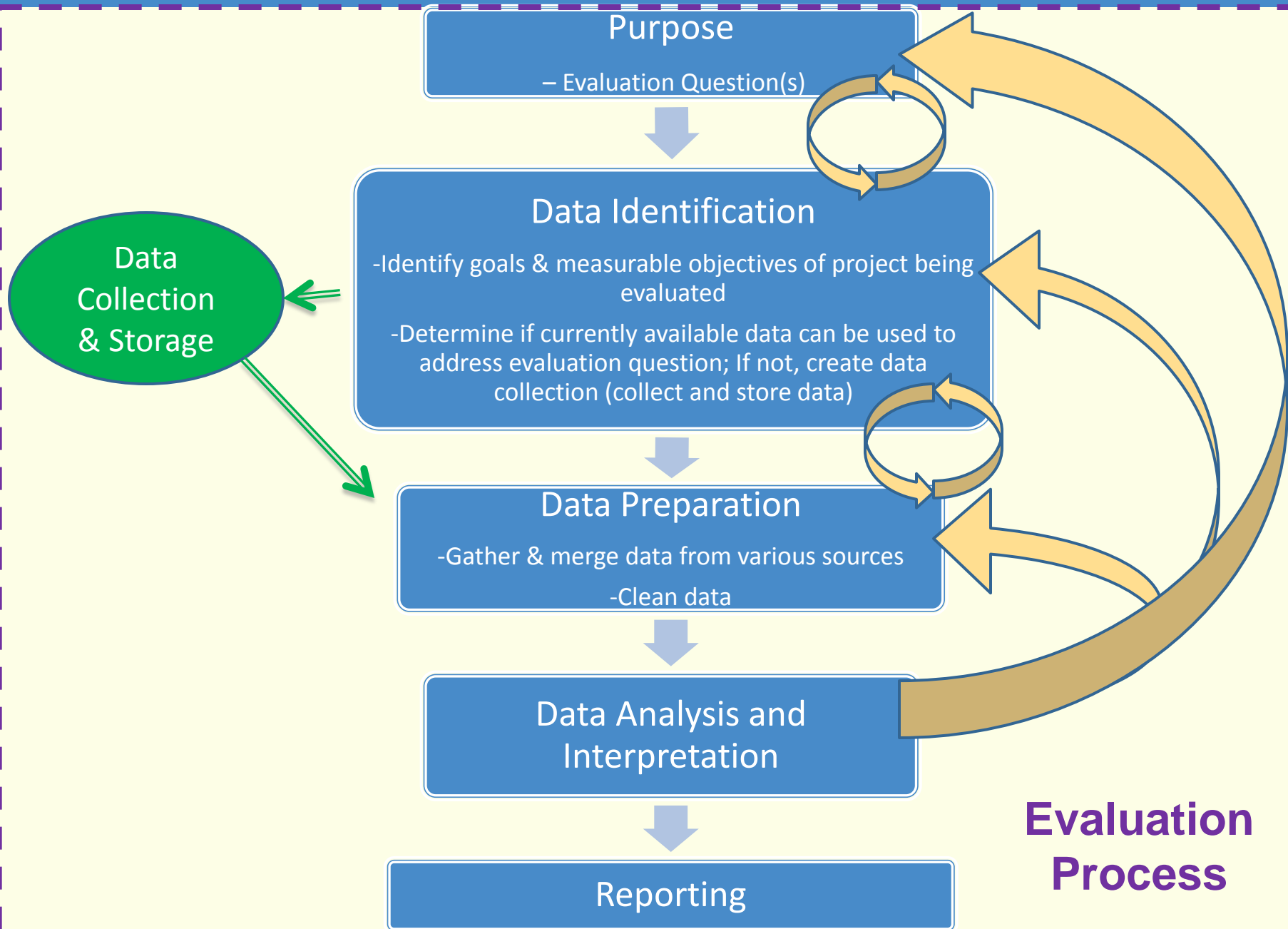
Example

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





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

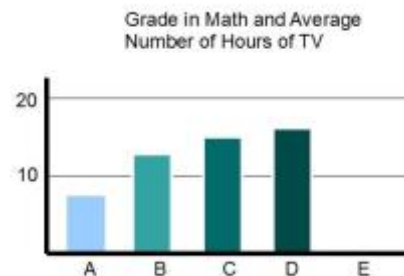
- Describe the targeted recipients versus the actual participants
- Describe the frequency, intensity, duration of program

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

ership	Frequency	Relat
	85	
	60	
	355	
	500	



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)



- **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!

Evaluate Us!

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!