



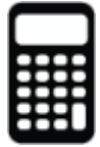
Student Success in Mathematics Partnership:

Logic Model Workshop

October 16, 2017



Welcome

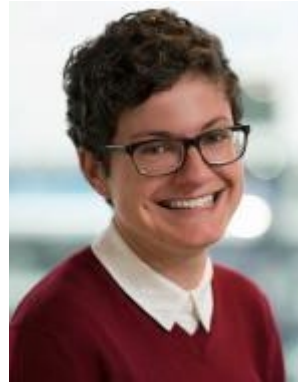


Student Success in Mathematics Partnership

REL-AP Student Success in Mathematics Team



Pam Buffington
Partnership Lead



Veronica Madrigal
Partnership Liaison



Jill DePiper
Partnership Member



Ryoko Yamaguchi
Research Lead



Student Success in Mathematics Partnership

Overall Goal

- To improve mathematics instruction and student academic outcomes by:
 - Ensuring that all students master **algebraic concepts** no later than grade 9
 - Supporting teachers to deliver **effective mathematics instruction**
 - Providing students who struggle in mathematics with **evidence-based interventions and practices**

Morning Agenda

- 9:00 Welcome, Overview of REL Program Goals and Objectives
- 9:30 Review Prework: Building Core Strategies
- 10:15 Review Logic Model as a Strategic Tool and Logic Model Elements
- 10:45 *Break*
- 11:00 Logic Model Problem Statement
- 11:30 Logic Model Outcomes
- 12:00 Logic Model Strategies and Activities
- 12:20 Resources and Assumptions
- 12:50 Wrap-up and Next Steps

Regional Educational Laboratory (REL) Program



- Serve the needs of 10 designated regions helping them improve education through evidence-based practice.
- Administered by the U.S. Department of Education, Institute of Education Sciences (IES).

Key Outcomes for the REL Program

- Sustain **partnerships** that use research to address high- leverage issues.
- Complete coherent and cumulative **research agendas**.
- Use REL Appalachia (REL AP) as **key resource** for credible research and support.
- **Increase capacity** to access, understand, interpret, apply, and conduct research.
- **Increase use** of research findings in education decisionmaking.



Overall Goals for Workshop Series



- Define a common logic model (including short- and long-term outcomes) related to algebra readiness and success.
- Develop a clear, coherent agenda for applied research, technical assistance, and dissemination activities on the basis of the logic model.
- Determine the types of data available to address the questions of interest, as well as any gaps in the data, across the participating divisions.

Logic Model Workshop Objectives

- Review the elements and uses of logic models.
- Build the elements of a shared logic model related to algebra readiness and success.
- Develop concrete next steps for finalizing the shared logic model.
- Preview content of research and training, coaching, and technical support (TCTS) agenda-setting workshop and next steps for the partnership.

Introductions

Please share your:

- Name.
- Affiliation.
- Role.





Reviewing the Prework: Building a Set of Core Strategies

Reviewing the Strategies

Promoting algebra readiness

Standards-aligned curricula with pre-algebra content and practices

Algebra readiness indicators

Providing math professional development

Strategy A

Strategy B

Strategy C

Supporting algebra readiness

Strategy A

Strategy B

Strategy C

DRAFT

Review and Update the Strategies: Your Turn

Promoting algebra readiness

Standards-aligned curricula with pre-algebra content and practices

Algebra readiness indicators

Providing math professional development

Strategy A

Strategy B

Strategy C

Supporting algebra readiness

Strategy A

Strategy B

Strategy C

DRAFT



Review Logic Model as a Strategic Tool

What Is a Logic Model?

- Where are you going?
- How will you get there?
- What will tell you that you have arrived?



A Logic Model ...

- Provides a simplified picture of the relationships between the program inputs and the desired outcomes of the program.
- Is a framework for:
 - Planning.
 - Implementation.
 - Monitoring.
 - Evaluation.
- Builds a foundation for shared goals, strategies, and metrics.



A Logic Model is Not ...

- A strategic plan or a fully developed plan for designing or managing a program or policy.
- An evaluation design or an evaluation method.



Case Example: Early Childhood Workforce Research Alliance

- Members are state-level administrators, public early childhood program directors, and representatives of the local school districts.
- The alliance members are concerned about the quality and constant turnover of early childhood teachers.
- The state has identified kindergarten readiness as an area of concern.

Discuss: What is the problem? What are the members' goals?

The Simplest Logic Model



Inputs: What is invested in the program
(e.g., money, people, time, and space)

Strategies: What is done in the program
(e.g., program strategies and activities)

Outcomes: What results from the program
(i.e., short- and long-term outcomes)

The Simplest Logic Model

INPUTS → STRATEGIES → OUTCOMES



What Is a Logic Model?

Case: Early Childhood Workforce Research Alliance

Inputs	Strategies	Outcomes
Staff Funding Interagency collaboration	Early childhood credentialing Professional development opportunities Rating system for providers	Job satisfaction increases among early childhood providers Retention of early childhood teachers Increased K readiness

What Is a Logic Model? Your Turn

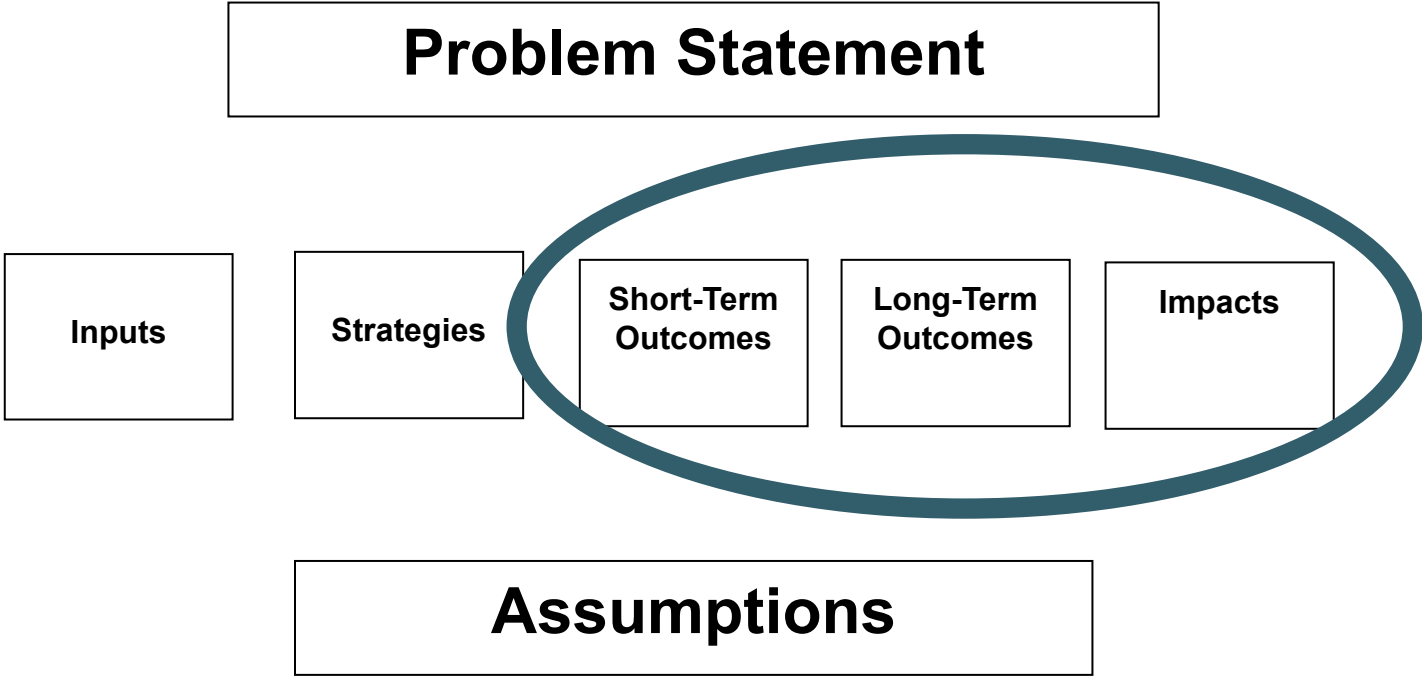
Student Success in Mathematics: Brainstorm on a single input, strategy, and outcome.

Inputs	Strategies	Outcomes

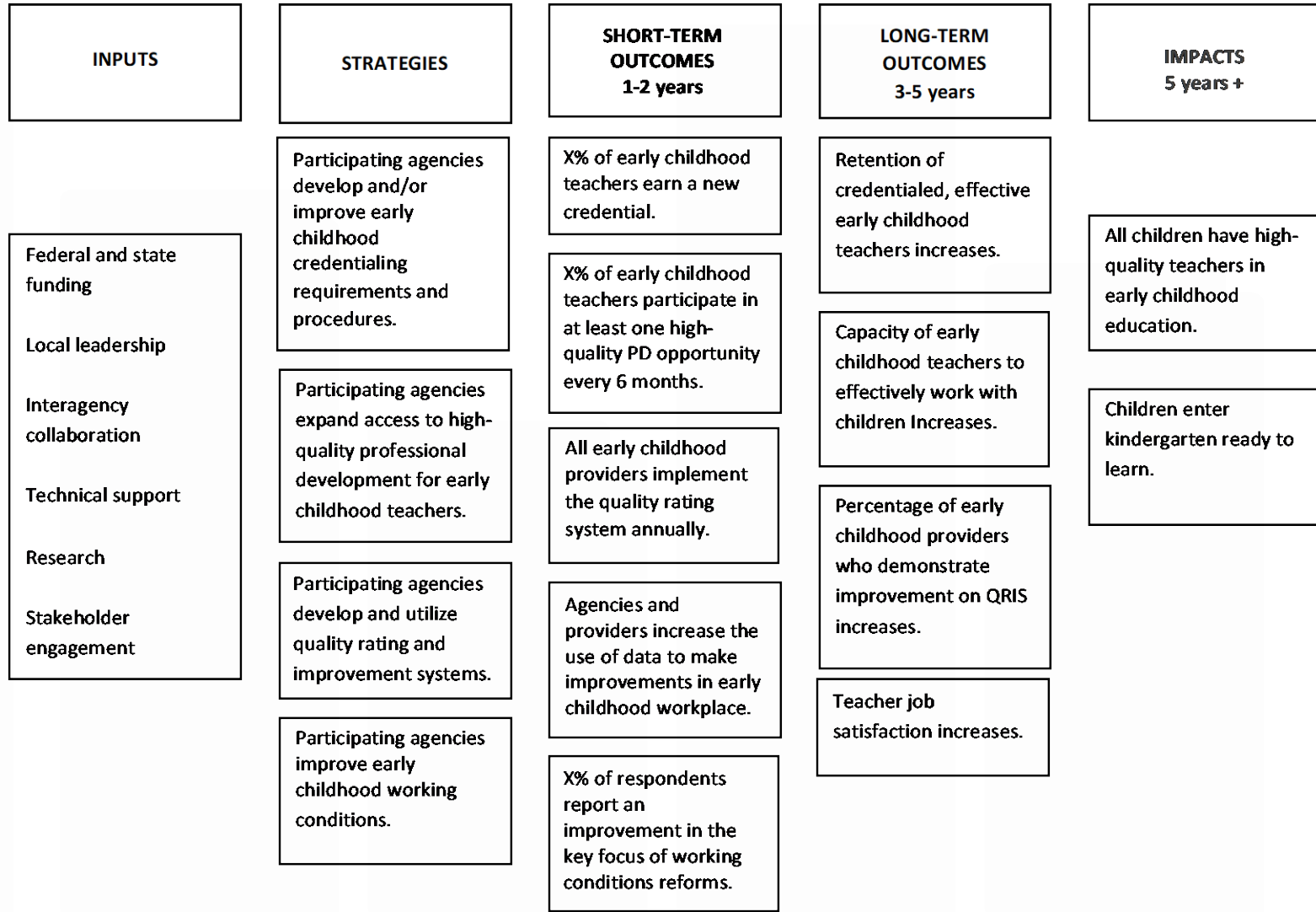


Review the Logic Model Elements

Elements of a Logic Model



Early Childhood Workforce Research Alliance Logic Model - Sample



Assumptions: *Interagency collaboration will be possible because leadership will support efforts to collaborate; *A well-prepared workforce will improve student readiness for kindergarten; *An increase in the quality and support for early childhood teachers will increase retention.

Logic Model Case Example: Brief Discussion

- What do you notice/what observations do you have about the model?
- What questions does the model raise for you?
- What do you want to know more about?

Theory of Action - Early Childhood Workforce Research Alliance Case Example

Theory of Action

If participating agencies create and disseminate effective credentialing procedures, professional development, and quality rating and improvement systems for the early childhood workforce and workplace, then early childhood teacher effectiveness and retention will increase and children who participate in these programs will enter kindergarten ready to learn.

Break





Logic Model Problem Statement

Problem Statement

Problem statement: The problem or challenge that the program or policy is designed to address.

Questions to ask in defining the problem:

- What is the problem or issue?
- Why is this a problem?
- For whom does this problem exist?
- Who has a stake in the problem?
- What is known about the problem (through previous work, research, etc.)?

Problem Statement

The problem or challenge that the program or policy is designed to address.

Case: Early Childhood Workforce Research Alliance

- Early childhood educators lack skills and knowledge to prepare children for kindergarten.
- Turnover among early childhood educators is a barrier to building productive relationships among staff and with children.
- The quality of early childhood programs varies considerably, but little is understood about the features of high-quality programs in our state.

Problem Statement: Your Turn

Problem statement: The problem or challenge that the program or policy is designed to address.

Student Success in Mathematics Partnership:
Brainstorm on problem statement ideas that reflect shared concerns.

Problem Statement

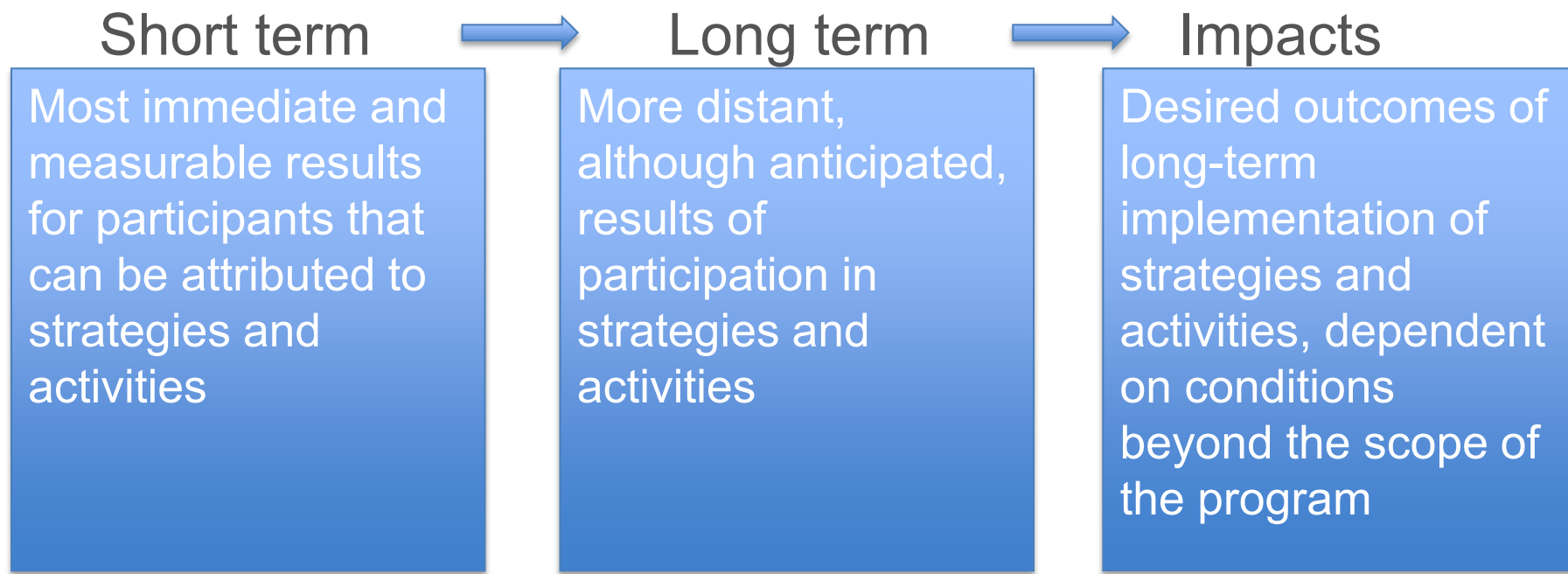
- Articulate a targeted and specific problem.
- Avoid a problem statement that restates the program as a need.



Logic Model Outcomes

Outcomes

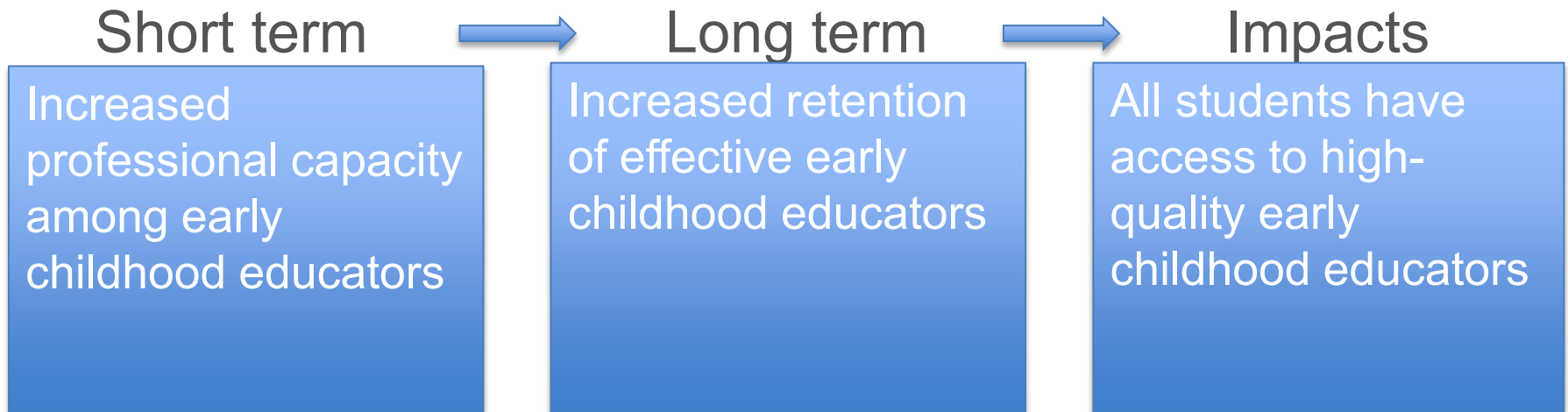
Outcomes: What difference does it make?



Outcomes

Outcomes: What difference does it make?

Case: Early Childhood Workforce Research Alliance



Outcomes: Your Turn

Student Success in Mathematics Partnership: Generate outcomes for college readiness in your districts.

Who is the target?	What is the desired change? (action verb)	In what? (results)	By when?
Example: Highly qualified early childhood teachers	increase	retention	By September 2019

Outcomes

Outcomes checklist

- Important
- Reasonable
- Realistic



Outcomes

Outcomes checklist

- Important?
- Reasonable?
- Realistic?





Logic Model Strategies and Activities

Strategies and Activities

Strategies and activities: What you propose to do to address the problem.

Activities, services, events, and products ...

- Are designed to address the problem.
- Are, together, intended to lead to certain outcomes.

Strategies and Activities: Your Turn

Discuss:

- Do the strategies you identified address the problem?
- Are they likely to result in the outcomes you generated?
- What, if any, changes to the strategies are recommended?

Promoting algebra readiness

Standards-aligned curricula with pre-algebra content and practices

Algebra readiness indicators

Providing math professional development

Strategy A

Strategy B

Strategy C

Supporting algebra readiness

Strategy A

Strategy B

Strategy C



Resources and Assumptions

Resources

Resources (inputs): The material and intangible contributions that are or could reasonably be expected to be available to address the problem.

Examples:

- Money, materials, and equipment (material/tangible).
- People, time, and partnerships (intangible).

Resources

Resources (inputs): The material and intangible contributions that are or could reasonably be expected to be available to address the problem.

Case: Early Childhood Workforce Research Alliance

- Technical support from REL AP staff
- Funding
- Interagency collaboration

Resources: Your Turn

Resources (inputs): The material and intangible contributions that are or could reasonably be expected to be available to address the problem.

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- Technical support from REL AP staff
- ??
- ??

Assumptions

Assumptions: Beliefs about participants, staff, the program, and how change or improvement may be realized.

Make explicit all implicit assumptions:

- Assumptions can be internal and external.
- Ask: What is known, and what is being assumed?

Assumptions

Assumptions: Beliefs about participants, staff, the program, and how change or improvement may be realized.

Case: Early Childhood Workforce Research Alliance

Internal assumptions	External assumptions
<ul style="list-style-type: none">The participating agency leadership will support the collaboration across agencies.	<ul style="list-style-type: none">A well-prepared early childhood workforce will improve student readiness for kindergarten.

Assumptions: Your Turn

Assumptions: Beliefs about participants, staff, the program, and how change or improvement may be realized.

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Internal assumptions	External assumptions



Wrap-up and Next Steps

To Be Shared With You Within 2 Weeks

- Draft logic model
- Meeting notes

You will be asked to send feedback and suggested revisions.

How Did We Do?

- What have you learned? What will you do next?
- Did we answer all your questions?
- Do you have other burning questions or concerns?

Upcoming Events

- **Meeting 2 (January 2018)**
 - Develop a research, technical assistance, and dissemination agenda driven by the logic model.
- **Meeting 3 (January 2018)**
 - Identify the data needed to answer the research questions articulated in the research agenda.
- **Meeting 4 (November 2017-March 2018)**
 - Build a catalog to document the data available (and the new data collection required) to answer key research questions across partnership districts.



**Thank you for
your participation!**

Pam Buffington
Partnership Lead
pbuffington@edc.org

Ryoko Yamaguchi
Research Lead
ryamaguchi@plusalpharesearch.com

Veronica Madrigal
Partnership Liaison
veronica.madrigal@sri.com