

CRT 2025
Summer Training
Institute
Session 1

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Session 1

The Big Picture

Program Logic Model

Evaluation Logic

Identify Outcomes

Craft Questions

The Big Picture

- ◇ Problem
- ◇ Intervention
- ◇ Outcomes
- ◇ Evaluation
- ◇ Feedback



The Big Picture

◇ Problem – define it

◇ Intervention

◇ Outcomes

◇ Evaluation

◇ Feedback

Math performance
Achievement gap
School drop-out
School safety



The Big Picture

- ◇ Problem – define it
- ◇ Intervention – design it & implement it
- ◇ Outcomes
- ◇ Evaluation
- ◇ Feedback



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Threats to Internal Validity

History
Maturation
Testing
Instrumentation
Selection (into, out of)

The Big Picture

- ◇ Problem – define it
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Laura's Semantic Issues

- ✗ “gold standard”
- ✗ random assignment design
- ✗ random assignment study
- randomized control/lled trial
- ✓ randomized experiment
- ✓ experimental evaluation
- classically designed evaluation
- classically designed experiment

The Big Picture

- ◇ Problem – define it
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- ◇ Evaluation – design it
- ◇ Feedback – use it to...
...redefine the problem, redefine the solution, etc.



The Big Picture

- ◇ Problem – define it
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- ◇ Feedback – use it to...
...redefine the problem, redefine the solution, etc.

◇ Important Overlay: CRE

Culturally-responsive evaluation principles and practices are not mutually exclusive of using experimental evaluation designs



Intervention

The Program Logic Model, Theory of Change, & Evaluation Logic

Program Logic Model



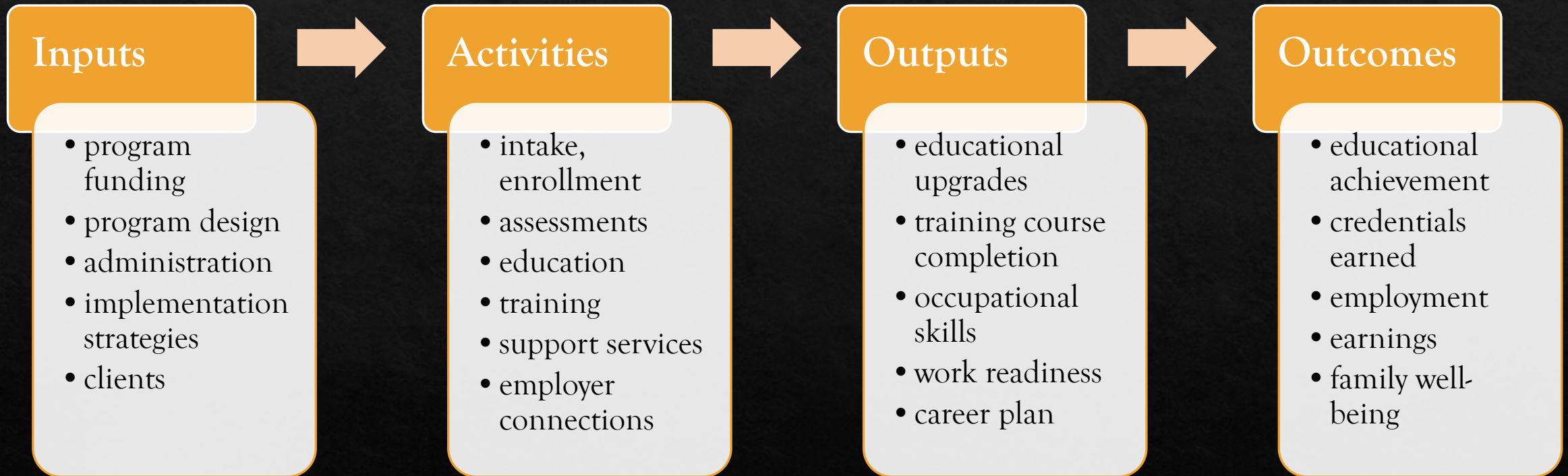
Inputs

Activities

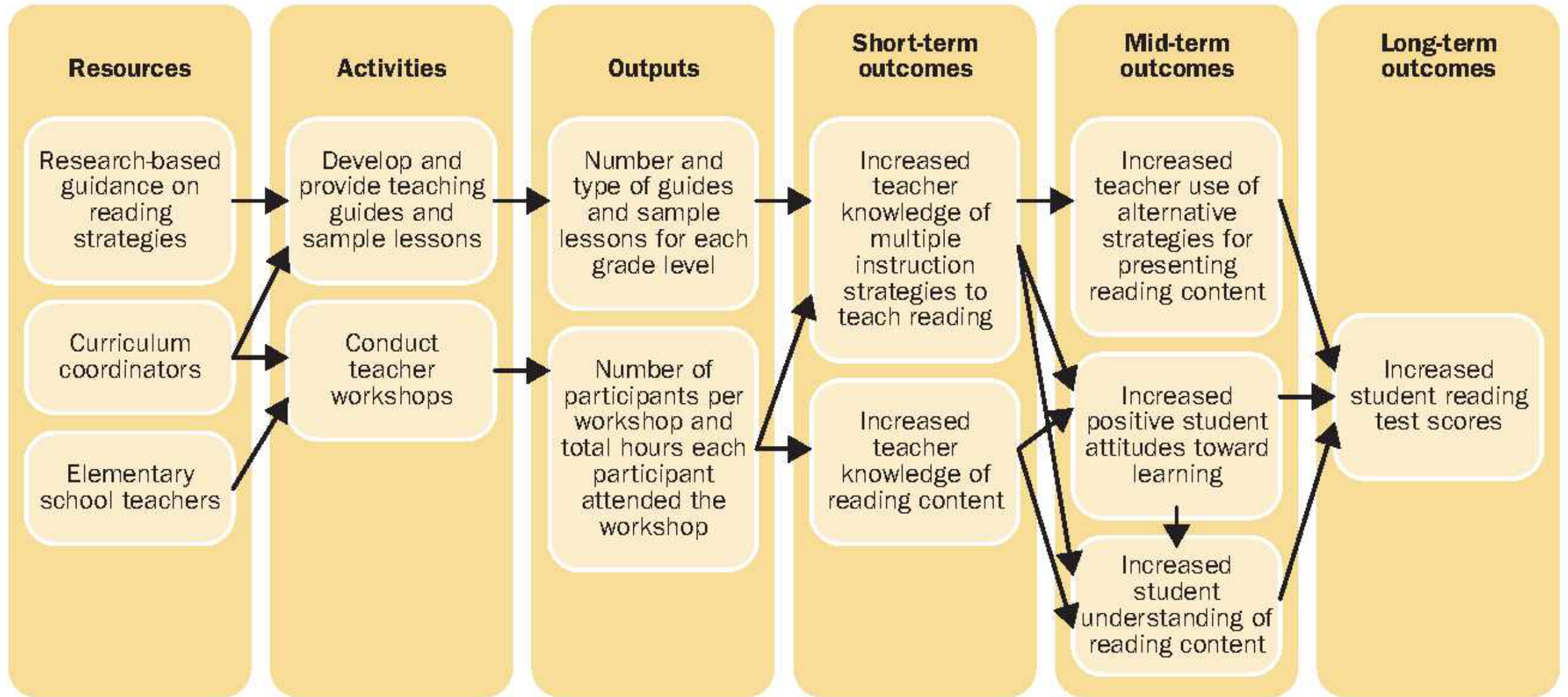
Outputs

Outcomes

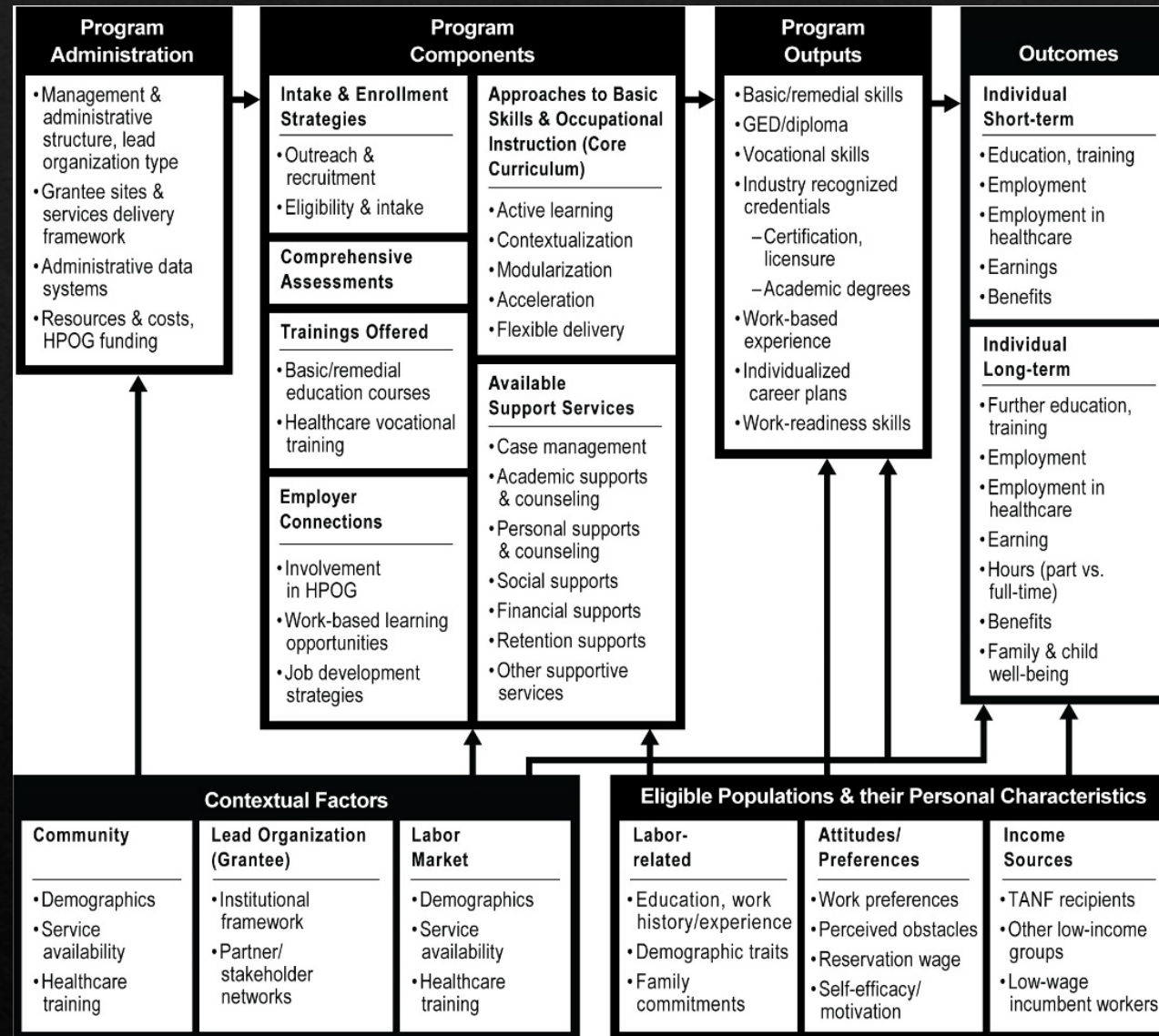
Program Logic Model



Program Logic Model



Program Logic Model → Theory of Change



Considerations when Specifying Your Theory of Change

1. Nature of the need addressed

- ◇ what and for whom (e.g., 2nd grade students who don't read well)
- ◇ why (e.g., poor decoding skills, limited vocabulary, lack of skills/competencies)
- ◇ where the issues addressed fit in the developmental progression (e.g., prerequisites to fluency and comprehension)
- ◇ rationale/evidence supporting these specific intervention targets at this particular time

2. How the intervention addresses the need and why it should work

- ◇ content: what the student should know or be able to do; why this meets the need
- ◇ pedagogy: instructional techniques and methods to be used; why appropriate
- ◇ delivery system: how the intervention will arrange to deliver the instruction
- ◇ What are the key factors or core ingredients most essential and distinctive to the intervention

Activity: Your Program Logic Model or Theory of Change



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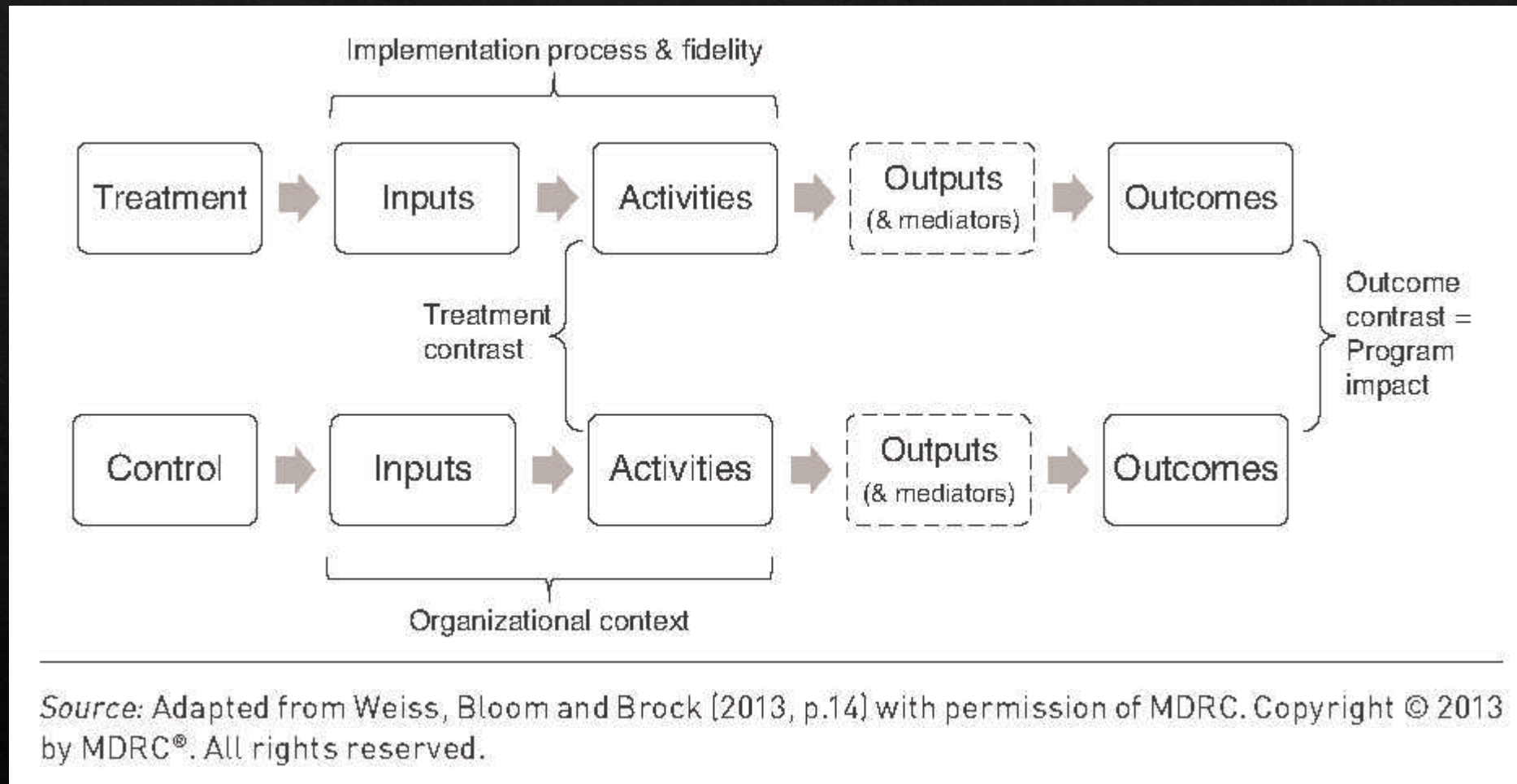
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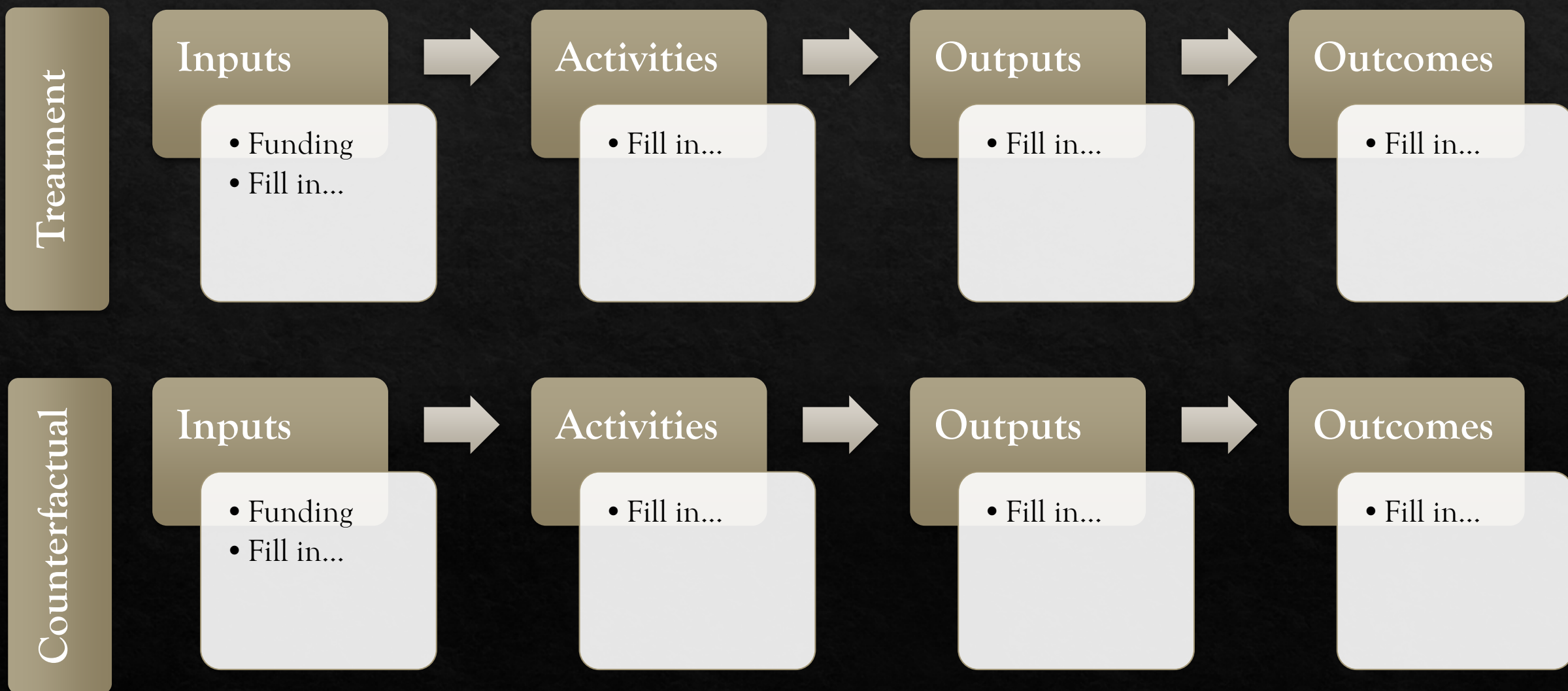
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- ◇ **Important: articulating the counterfactual condition's logic/theory**

Evaluation Logic Model

- ◆ Counterfactual logic matters too: identifies contrast and therefore impacts



Activity: Your Program Logic Model or Theory of Change



Crafting Research Questions

- ◇ Relationships of interest
- ◇ Posing questions
- ◇ Registering evaluations

Formative

- **Participation/take-up:** who, how much, when, paths
- **Implementation:** completeness, quality, fidelity relative to logic/theory, explanatory

Summative

- **Causal relationship** between intervention and outcomes (tested as T-C differences)
- **Moderator relationships:** ATIs (aptitude-T interactions): differential T effects for baseline-defined subgroups (tested as T x M interactions or T-C differences within and between subgroups)
- **Mediator relationships:** relationship between a DV and T on outcome (tested via ASPES, IV/principal stratification, SEM techniques)
 - **Dosage** (duration, intensity post-intervention)

Crafting Research Questions

◇ “Good” research question are represented by FINERMAPS

DO	DON'T
• suggest you will “test” a hypothesis • Use wording that leads to magnitude (and not just directionality) • reference the population/context • use	• suggest you will “prove” anything • pose “yes” or “no” questions • suggest directionality • use double barreled language • list all of your outcomes • be wordy

FINERMAPS

- Feasible
- Interesting
- Novel
- Ethical
- Relevant
- Manageable
- Appropriate
- Potential value
- Systematic

◇ Did it work? v. To what extent did it work? v. To what extent did it work for second graders? v. To what extent did it work for second graders in Topeka?

Posing Research Questions

- ◇ DON'T: Does FAN-C teacher professional development improve teachers' self efficacy and children's knowledge of fans, flooring, and kitchen sinks, according to the 6-month survey>
- ◇ DO
 - ◇ What are the impacts of FANC-PD?
 - ◇ To what extent does FANC-PD influence teachers' self-efficacy change?
 - ◇ To what extent does FANC-PD influence children's outcomes?
 - ◇ What factors mediate the impacts of FANC-PD?
 - ◇ How do the impacts of FANC-PD vary by school characteristics?

CHALLENGE: Group randomized designs assign treatment at the group level but we want to learn what happens to the individuals within those groups...

Impact Evaluation Questions

- ◆ What is the effect of the Program relative to...
 - ◆ nothing? (no services control group)
 - ◆ the existing service environment? (status quo or “business as usual” control group)
- ◆ To what extent does Program Model A work better than Program Model B?
- ◆ What is the effect of a Scaled-up of Scaled-back version of the Program relative to the Standard Program?

Summer Electronic Benefits for Children Demonstration:

To what extent does \$60 per month change food insecurity versus \$0

To what extent does \$30 per month change food insecurity versus \$60

Activity: Write, Pair, Share

- ◇ Write a research question
- ◇ Pair with your neighbor and explain...
 - ◇ ...what makes it a well-stated research question
 - ◇ ...what evaluation design lends itself to answering the question
- ◇ Share your insights with the larger group