

# Building Promising Evidence with HEP and CAMP

Department of Education

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*The mission of the Office of Migrant Education is to provide excellent leadership, technical assistance, and financial support to improve the educational opportunities and academic success of migratory children, youth, agricultural workers, fishers, and their families.*

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Office of Migrant Education

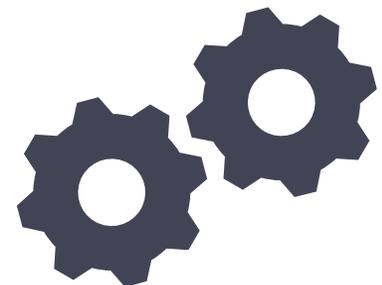
Office of Elementary and Secondary Education

U.S. Department of Education

Washington D.C.

# Webinar Logistics

- Please mute your electronic devices (phone, computer) during this webinar.
- If you are struggling to connect, try dialing in separately using the telephone line.
- Please use the chat box to pose any questions. We will do our best to respond during the question-and-answer portions of the webinar or, if needed, after the webinar.
- Please note that the presentation portions of this webinar will be recorded.
- This webinar will include a breakout session discussion at the end of the presentation. Separate links are provided to join the breakout groups.



# Presentation Objectives

- Discuss the purpose and importance of evaluation in your HEP and CAMP projects
- Review logic models and suggestions on how to use them for evaluation
- Review the Department's evidence categories
- Review details of Promising Evidence
- Discuss how to plan an evaluation as part of demonstrating promising evidence
- Share resources for promising evidence



# Statutory and Regulatory Requirements

- Authorizing Program Statute: Section 418A of the Higher Education Act.
- Program Regulations: 34 C.F.R. 75 and 206
- Non-Regulatory Guidance: Using Evidence to Strengthen Education Investments (September 2016)  
<https://www2.ed.gov/policy/elsec/leg/essa/guidanceuseinvestment.pdf>
- See also Notice Inviting Applications

# Purpose of the Evaluation

HEP and CAMP evaluations are used to help build evidence of the extent to which HEP/CAMP projects impact student performance.

Overall, your program evaluation work informs understanding about:

- GPRA 1, GPRA 2, and efficiency targets
- Strengths and weaknesses in program implementation
- Program effectiveness

# Evaluation Requirements

- From Notice Inviting Applications (NIA):
  - Methods of evaluation are required to be thorough, feasible, and appropriate to the proposed project's goals, objectives, and outcomes.
  - Methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.
  - Methods of evaluation will, if well implemented, produce promising evidence (as defined in 34 CFR 77.1(c)) about the project's effectiveness.

# Evidence Definitions from EDGAR

Requirements	Strong	Moderate	Promising	Demonstrates a Rationale
<b>Study Design</b>	Experimental study (RCT, RDD, Single-Case)	Experimental study or quasi-experimental study	Experimental study, quasi-experimental design study, or correlational study with statistical controls for selection bias	Logic model informed by research or evaluation findings
<b>Outcomes</b>	At least one statistically significant and positive effect on a relevant outcome; no statistically significant and negative effects on a relevant outcome	At least one statistically significant and positive effect on a relevant outcome; no statistically significant and negative effects on a relevant outcome	At least one statistically significant and positive effect on a relevant outcome	Not Applicable
<b>What Works Clearinghouse (WWC) Evidence Rating</b>	Meets WWC without reservations*	Meets WWC with or without reservations*	Not Applicable	Not Applicable
<b>Sample Size</b>	Large sample (n≥350) and multi-site sample	Large sample (n≥350) and multi-site sample	Not Applicable	Not Applicable

# Use of Evidence

## Quality of Project Evaluation:

The extent to which the methods of evaluation will, if well implemented, produce promising evidence (as defined in 34 CFR 77.1(c)) about the project's effectiveness.  
(Up to 5 points)

**Exit Evidence**

# What is a Logic Model?

Logic model (also referred to as a theory of action) means a framework that...

- identifies key project components of the proposed project (i.e., the active “ingredients” that are hypothesized to be critical to achieving the relevant outcomes) and...
- describes the theoretical and operational relationships among the key project components and relevant outcomes.

# Components of a Program Logic Model

1. Inputs / Resources: materials to implement the program
2. Activities: steps for program implementation
3. Outputs: products of the program
4. Impacts on Outcomes: changes in program participants' knowledge, beliefs, or behavior
5. Assumptions: facts or special circumstances in your community, region, and/or field
6. External factors: factors over which you have little or no control may affect your program's outcomes (political, economic, social/cultural influences, geographic, etc.)



# Kavita Mittapalli, Ph.D.

MN Associates, Inc.

# Presentation Topics

- Introduction to the task of producing *new* promising evidence.
  - What is *promising evidence*, and where does it come from?
- Critical questions that drive *new* evidence production.
- Appropriate *quasi-experimental designs* for producing new promising evidence.
- *Sampling, reliability*, and *validity* of your study; and
- Review your own projects.



# Building New Promising Evidence

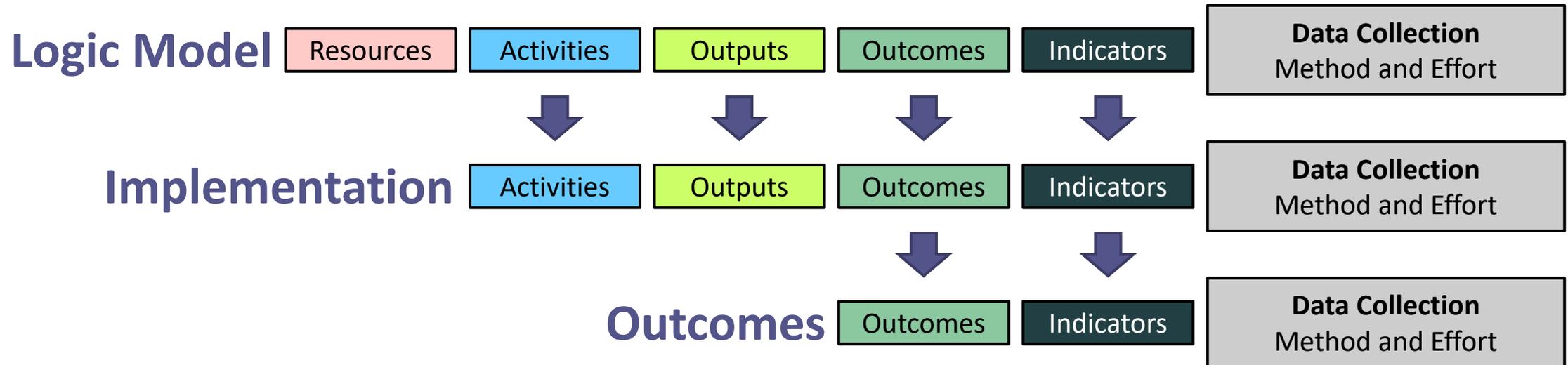
## What is evidence?

For our purposes, we need to understand that evidence...

- is a particular form of information;
- is information for the purpose of affirming or disconfirming a claim; and
- has qualities of validity and reliability.

# Unpacking "promising evidence"

# Logic Model's Role in Evaluation



Using an appropriate experimental design, projects are expected to produce evidence bearing on the theoretical linkage between at least one critical component of the project and at least one relevant outcome.

*The component and the outcome need to be evident in the logic model along with how the two are linked.*

# Four Critical Questions

- Which key component (activity, intervention, and/or treatment) of your project will be the **intervention** for an effectiveness study?
- What is the **outcome** intended by this component intervention?
- How is this **outcome** to be measured?
- What **level of outcome** do I expect to achieve with this component intervention?

## Example of a “Claim”

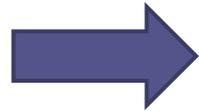
HEP/CAMP students who participate in grant-supported academic tutoring will:

- improve their scores on HSE practice tests (HEP) or
- successfully complete all first semester courses (CAMP).

Expected target: **95%**

## Example Claim

Participating in grant-supported academic tutoring will enable HEP/CAMP students to improve their scores on HSE practice tests (HEP) or successfully complete all first semester courses (CAMP).



Expected target: **95%**

**Which key component of our project will be the intervention for an effectiveness study?**

- *participating in at least 10 hours of grant-supported academic tutoring*

**What is the outcome intended by this component intervention?**

- *improve scores on HSE practice tests (HEP)*
- *successfully complete all first semester courses (CAMP)*

**How is this outcome to be measured?**

- *percent of students improving their scores on HSE practice tests (HEP)*
- *percent of students successfully completing all first semester courses (CAMP)*

**What is my accomplishment target having implemented this component?**

- *expected target: 95%*

## Example of a “Claim,” Revised:

**95%** of HEP/CAMP students who participate in at least **10 hours** of grant-supported academic tutoring will:

- Show improvement on HSE practice test (HEP), or
- Complete all first semester courses (CAMP) with a C grade or better.

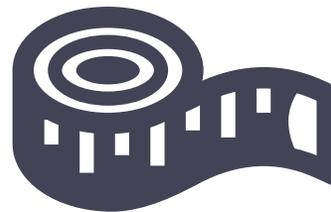
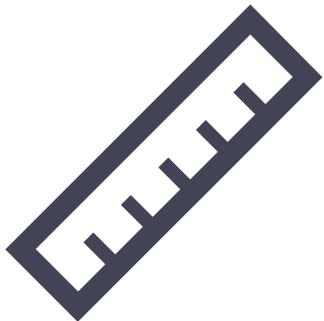
## Measurement devices need to have demonstrated validity and reliability.

- **Validity:** a device measures what is intended to be measured.
- **Reliability:** a device yields stable responses. For example, if data is collected one day from a person, a week later (assuming nothing happened during the week), that person will respond the same way on the same device.

# Baseline Data

Every project should be paired to collect **baseline data**.

**Baseline data** are the data about your participants at the start of your project.



# Fidelity of Implementation

## Looking again at our example, something still seems to be missing...

**95%** of HEP/CAMP students who participate in at least **10 hours** of grant-supported academic tutoring will:

- Show improvement HSE practice test (HEP), or
- Complete all first semester courses (CAMP) with a C grade or better.

# Quasi-Experimental Designs (QED)

- Quasi-experimental designs attempt to approximate an experimental study by identifying a comparison group that is *like* the treatment group in important respects.
- To create *similar* groups, one often “matches” participants on relevant characteristics so that the participants in both the control and treatment conditions have similar characteristics. The better the matching, the better the design.

# Quasi-Experimental Designs (QED): Research Design

- **Research Question:** Is there a statistically significant difference in student retention (based on GPRA 1 metric) for CAMP students who participated in the CAMP AAA 101 course compared to mainstream Aims AAA 101 students?
- **Data Collection:** GPRA data (IR); rosters of CAMP and non-CAMP students
- **Statistic:**
  - Independent t-test – *determines the significance of the effect of two groups' means*
  - Effect Size – *determines the magnitude of the effect*

# Quasi-Experimental Study: Control Group – Setting Selection Criteria (Data from the IR)

All students are:

1. enrolled in developmental courses
2. first-generation, college students
3. first-year students
4. commuter students
5. Pell grant-eligible
6. full-time students

## Limitations

- Not all MSFW students (Migrant Seasonal or Farm Worker)
- May or may not receive additional services

# Quasi-Experimental Study: Year 1 (2017-18)

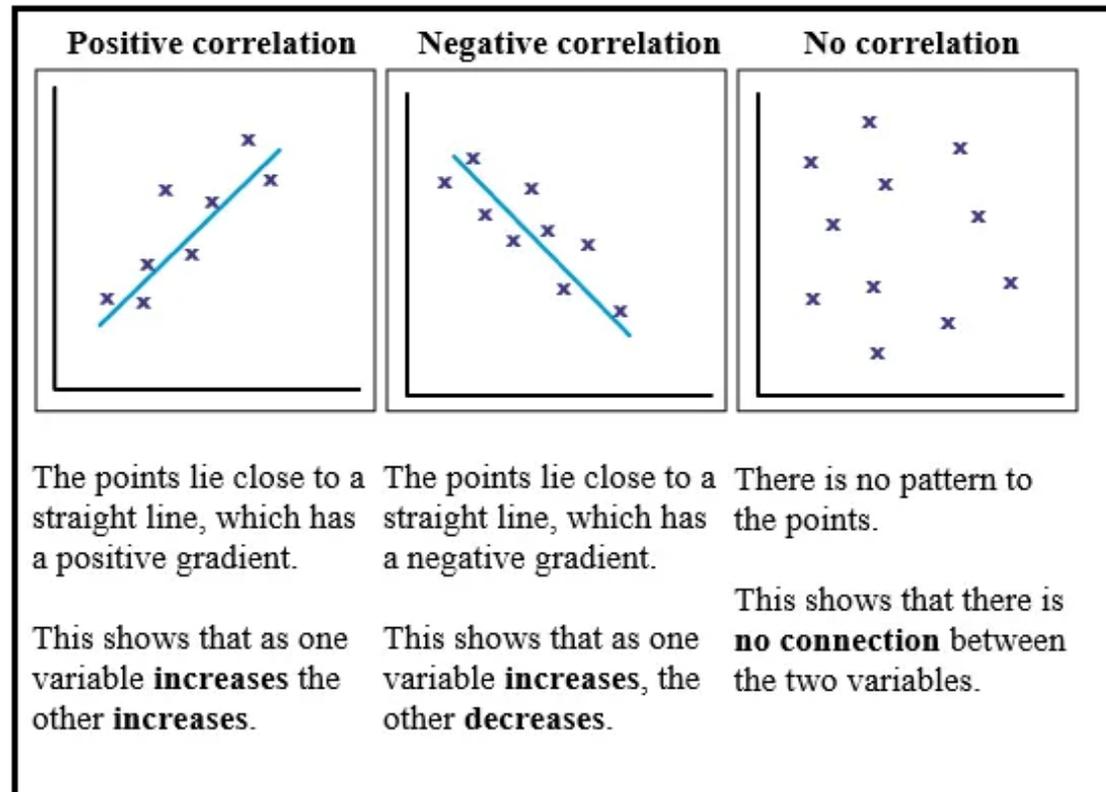
- N = 112 (31 CAMP student & 81 control)
- CAMP completers = 87.1% & Control completers = 57%
- Level of Significance,  $p < .001$
- Effect Size, 0.70 (medium effect size)

## Quasi-Experimental Study: Year 3 Totals (Adding Years 1-2-3 for a larger N)

- N = 333 (97 CAMP student & 236 control)
- Independent t-test
- CAMP completers M = 88.1% & Control completers M = 51.3%
- Level of Significance,  $p < .001$
- Effect Size, **0.81** (large effect size)

# Correlational Study

A correlational study investigates the *relationships* (not causal) between variables.



## Using a Correlation Design with our Claim

**95%** of HEP/CAMP students who participate in at least **10 hours** of grant-supported academic tutoring ***will show improvement*** on HSE practice tests (HEP) or obtain a grade of C or better in all first semester courses (CAMP).

*To test this claim, we would need to rewrite the claim:*

As HEP/CAMP students participate in more hours of grant-supported academic tutoring, the ***more likely they will be to improve*** their scores on HSE practice tests (HEP) or obtain a grade of C or better in all first semester courses (CAMP).

## **Complication: statistical controls for selection bias on the intervention...**

The potential for selection bias is ever-present.

An appropriate design controls for selection bias.

## Conclusions: Plan Ahead!

- Use your project's *logic model* to identify the
  1. **intervention** to evaluate and
  2. **relevant outcome(s)** expected to be affected by the intervention.
- Decide how to form a **comparison group** to contrast with students receiving the intervention.
- Make sure you have the **permission** and **resources** in place to collect **baseline, implementation, and outcomes data** for your evaluation.

## Resources & Links

- [EDGAR Definitions](#)
- [Non-Regulatory Guidance: Using Evidence to Strengthen Education Investments](#)
- [EDGAR and Evidence](#)
- [Understanding ED Evidence Definitions](#)

# Additional Resources

- What Works Clearinghouse *Handbooks*

<http://ies.ed.gov/ncee/wwc/DocumentSum.aspx?sid=19>

- Webinars on Designing Strong Studies and QEDs

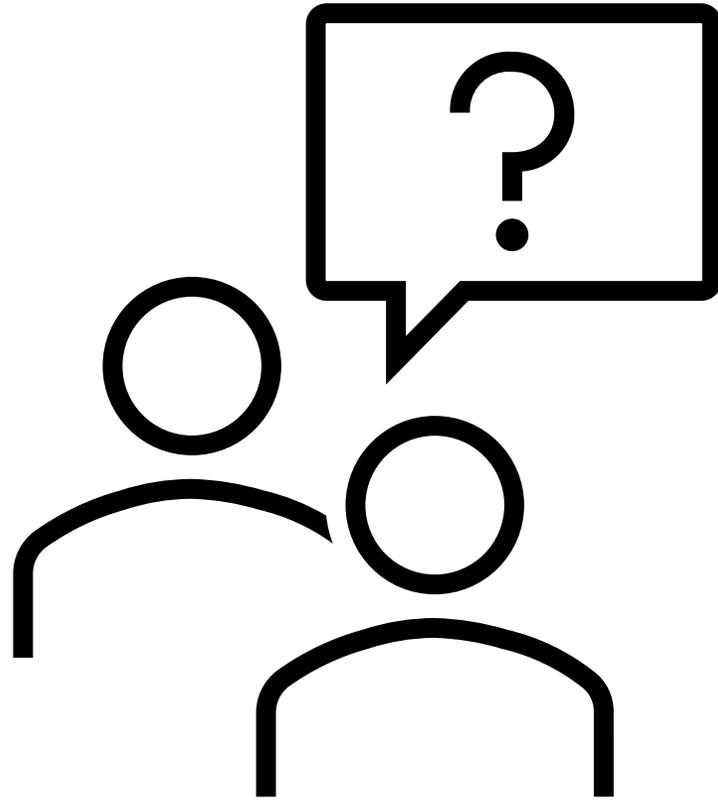
<http://ies.ed.gov/ncee/wwc/Multimedia.aspx?sid=18>

<http://ies.ed.gov/ncee/wwc/Multimedia.aspx?sid=23>

- Additional Resources on the Design of QEDs

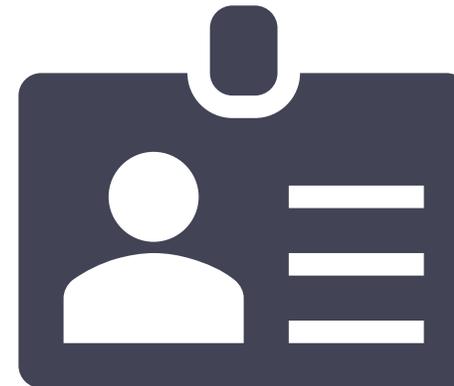
<http://www.dir-online.com/wp-content/uploads/2015/11/Designing-and-Conducting-Strong-Quasi-Experiments-in-Education-Version-2.pdf>

# Questions



# Contacts

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# **Thank you!**

**Transition to breakout rooms for further discussion.**

**Evaluation questions will be shared via the chatbox in the breakout rooms.**

# Peer to Peer Discussions in Breakout Rooms

HEP Facilitator      Kavita Mittapalli, Ph.D.

CAMP Facilitator    Sandra Toro, Ph.D.

- Which components of developing an evaluation and building promising evidence have been most challenging for you?
  - If you addressed the challenge(s), what solution(s) did you use?

Or

- If not addressed, how can your peers help you with identifying a solution?

# Peer to Peer Discussions – Breakout Room Links

## ***HEP Breakout link:***

Microsoft Teams meeting

Join on your computer or mobile app

[Click here to join the meeting](#)

**Or call in (audio only)**

[+1 202-991-0393,,206034684#](#)

Phone Conference ID: 206 034 684#

## ***CAMP Breakout link:***

Microsoft Teams meeting

Join on your computer or mobile app

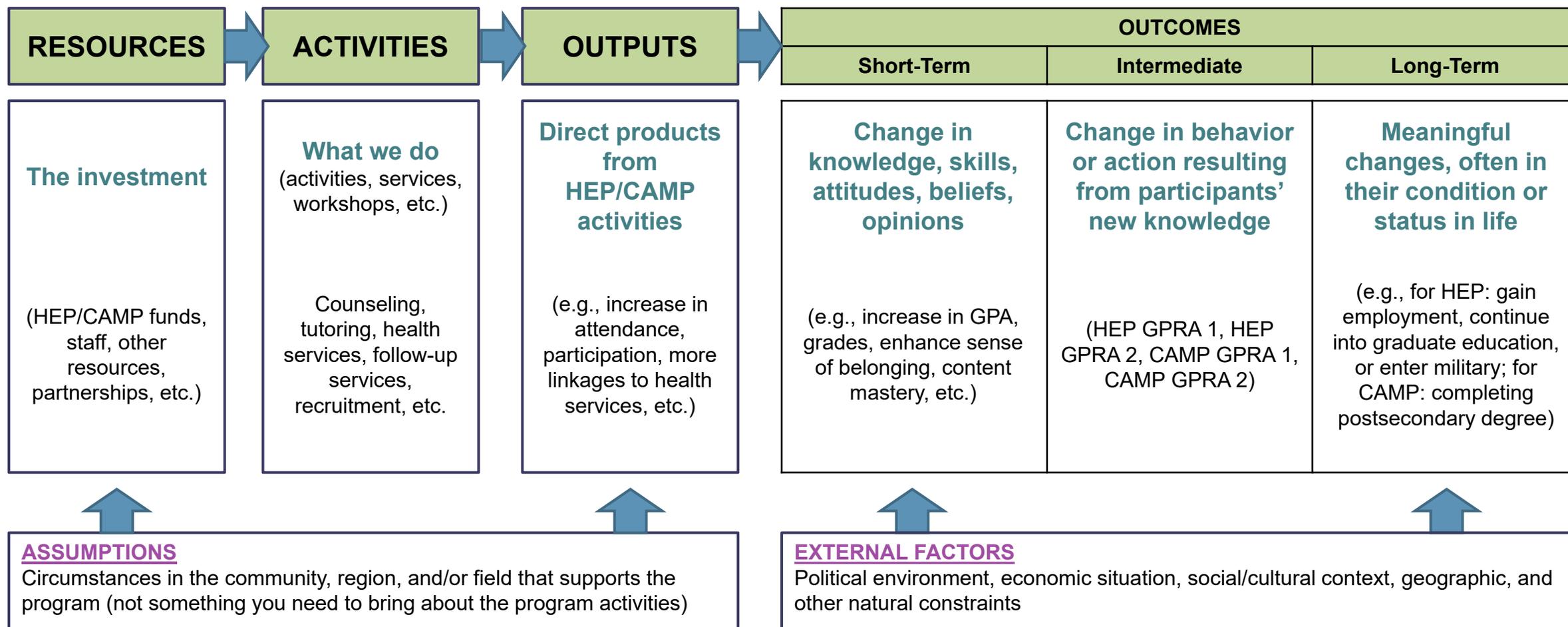
[Click here to join the meeting](#)

**Or call in (audio only)**

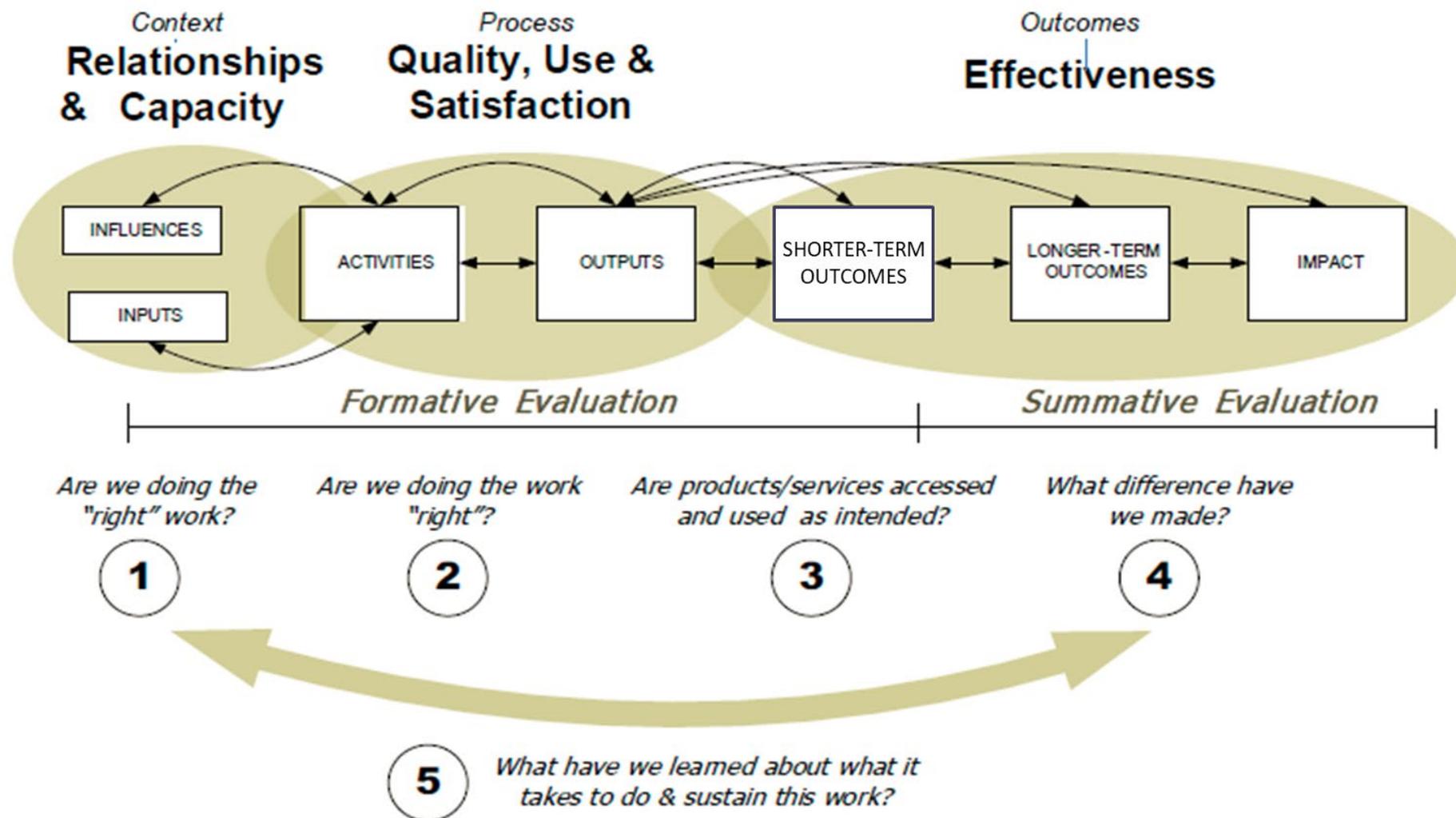
[+1 202-991-0393,,109410168#](#)

Phone Conference ID: 109 410 168#

# Resource: HEP CAMP Logic Model (Example)



# Resource: Models for Evaluation Planning



## Resource: Thinking About Your Logic Model



Take a few minutes to look at your Logic Model.

- Do you see your *claim* (component/outcome) in your logic model?
- Do you see the context in which this component is to be implemented?
- Do you see aspects of this context that will possibly influence the implementation of this component or its effectiveness?