

# ESSA tiers of evidence webinar series

## Session 3: A deep dive into ESSA tiers 3 and 4

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# Objectives for today's webinar

1. Review prior sessions and address any unanswered questions
2. A deep dive into ESSA evidence tier 3
3. A deep dive into ESSA evidence tier 4
4. Practice applying knowledge through knowledge checks and activities

# Today's facilitators



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# Agenda

- Review prior sessions
- Tier 3 overview
  - What is tier 3?
  - Defining *statistical controls*
  - Phrases to look for
- Tier 4 overview
  - What is tier 4?
  - Tier 4 requirements
  - Logic models
- Knowledge check activity

Where have we been?



# Session 1 review

- Importance of evidence
- ESSA tiers of evidence overview
  - Tier 1
  - Tier 2
  - Tier 3
  - Tier 4

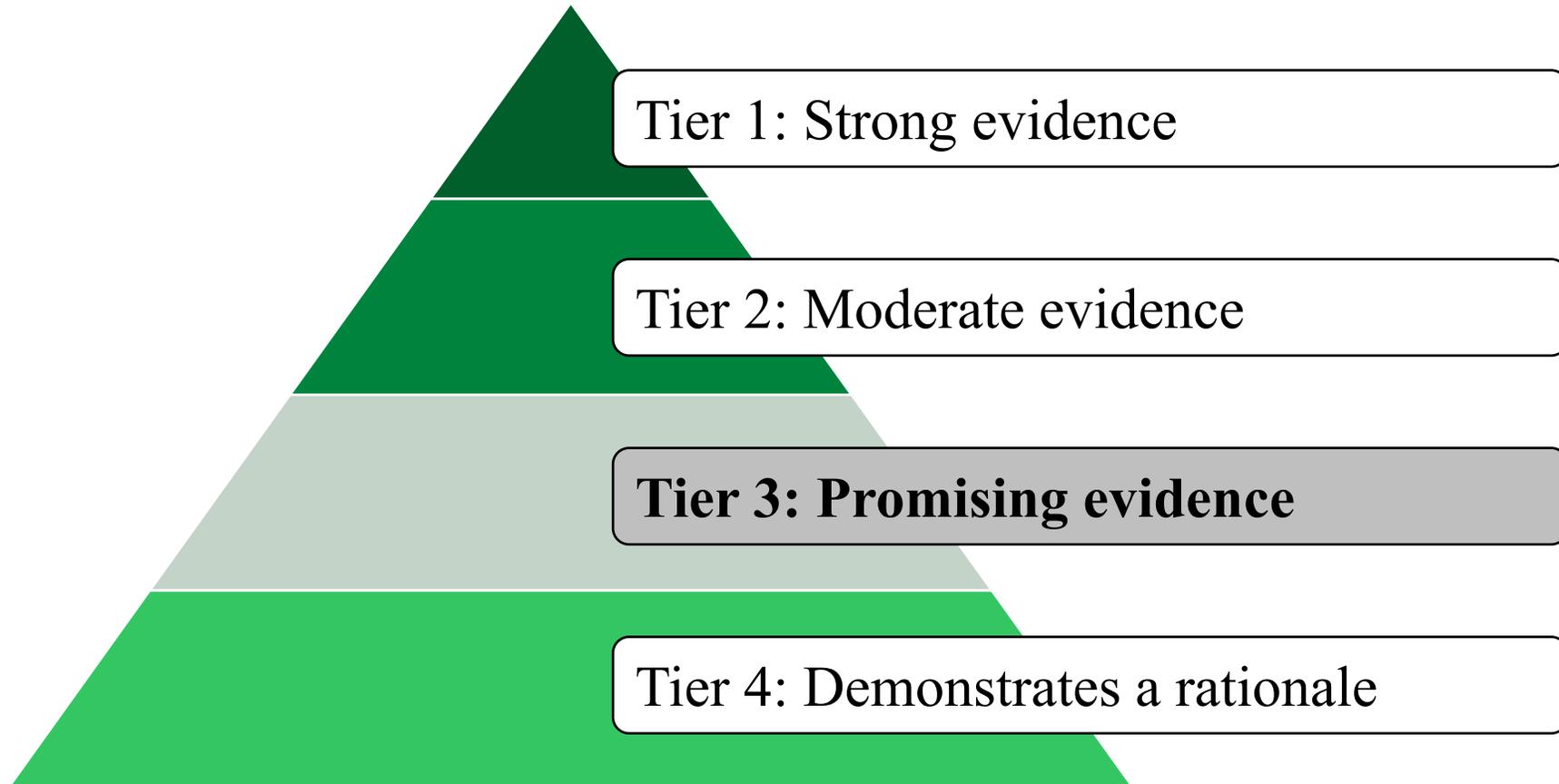
# Session 2 review

- Resources available at the What Works Clearinghouse (WWC)
- Aligning the WWC and ESSA tiers of evidence

# ESSA tier 3: Promising evidence



# Four tiers of evidence under ESSA



# Knowledge check review 1

(1 point) What is one possible reason a finding from an evaluation would not qualify for tier 3 status?

- A. The finding is from a study that does not meet WWC standards.
- B. The sample size for the finding was  $n = 200$ .
- C. A different study of the strategy that meets WWC standards found a significant negative effect for the same finding.

Put your answer in the chat box. The person with the most points will win a special prize at the end of the session.

## Tier 3: Promising evidence

Well-designed, well-implemented correlational study that uses statistical controls to account for differences between treatment and control groups

**OR**

A study that otherwise would meet tier 1 or tier 2 but does not meet the large/multisite sample requirement or the population/setting overlap requirement

**AND**

Statistically significant favorable effect on a relevant outcome

No overriding negative effects from experimental or quasi-experimental studies

# Key terms

## **Selection bias**

When people self-select into an intervention, they may have systematically different characteristics than people who don't self-select.

## **Statistical controls**

Accounting for factors that could influence the outcome other than the intervention.

# Selection bias

- Tiers 1 and 2 evidence establishes baseline equivalence between treatment and comparison groups; tier 3 evidence may not.

Group discussion:

- What are some examples of selection bias?
- What is an example of when something may be selection bias for one outcome but not another outcome?
- Why is selection bias a problem for evidence?

# Statistical controls

- Statistical controls help researchers understand the relationship between a treatment and an outcome while accounting for other factors that may influence the outcome of interest.

Group discussion:

- What are some examples of statistical controls?
- What is an example of why statistical controls are important to include in analyses without baseline equivalence?

# Statistical controls: What to look for

Analyses with statistical controls will have more than two variables (treatment and outcome). Look for these key terms:

- Multivariate, covariates
- ANCOVA/MANCOVA
- Multilevel, nested
- Hierarchical linear model (HLM)
- Quasi-experimental
- Matched comparison

Analyses without statistical controls may only include treatment and outcome variables. Look for these key terms:

- Simple correlation
- Two-way correlation
- *t*-test
- ANOVA

Note: Just because a study includes statistical controls does not mean that the statistical controls included are appropriate. For example, if there is a baseline difference between the treatment and comparison group on the pre-test measure but that measure is not included in the analysis as a statistical control, it is unlikely that the study qualifies for tier 3 status.

# Scavenger hunt!

First, go to <https://ies.ed.gov/ncee/wwc/FWW> and find a study that meets WWC Group Design Standards but would be considered tier 3. Post the link in the chat box (2 points).

Next, go to and <https://ies.ed.gov/ncee/wwc/FWW> and find a study that does *not* meet WWC Group Design Standards but would still be considered tier 3. Post the link in the chat box (2 points).

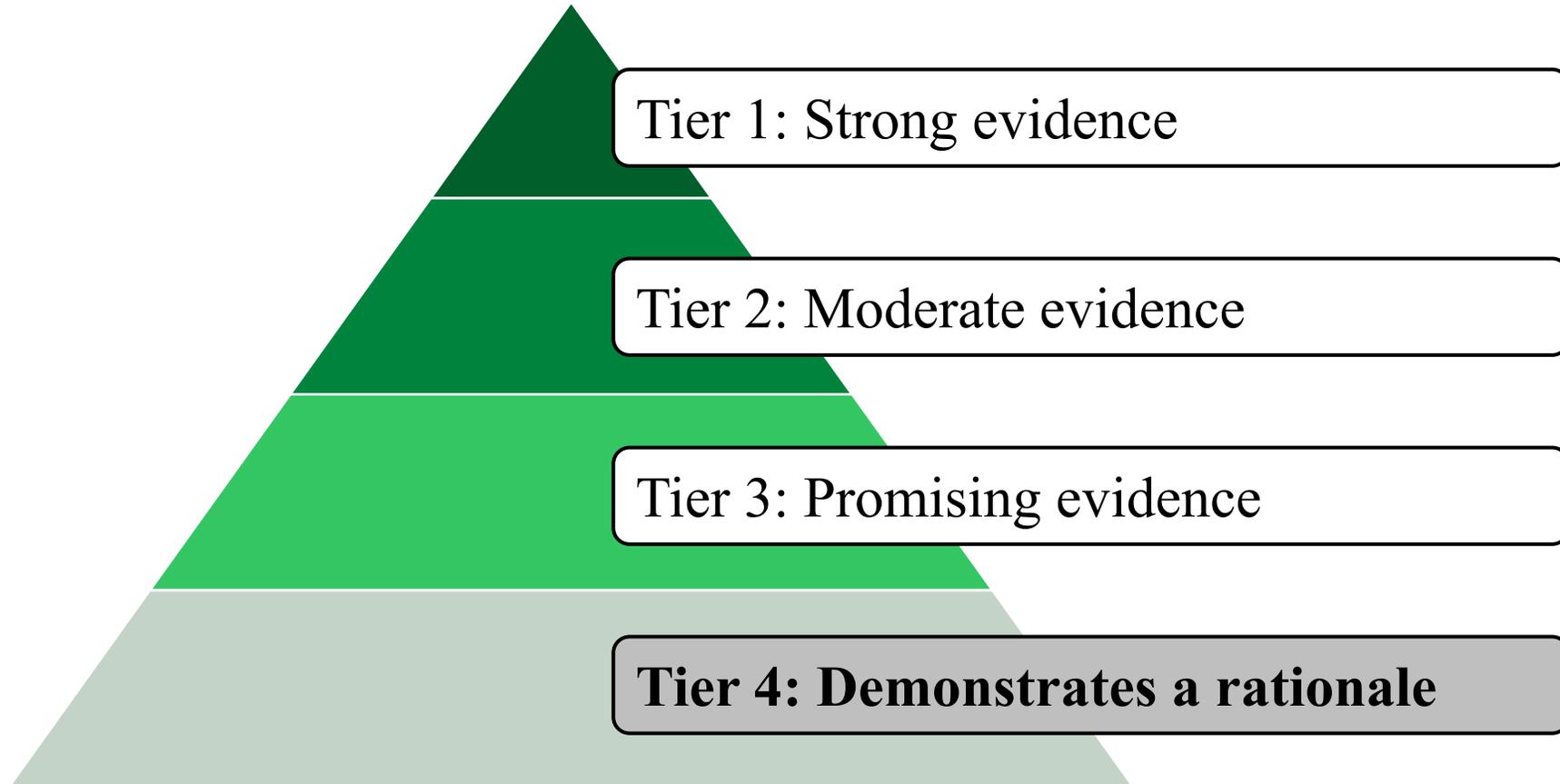
You earn a point if you identify at least one key word that helped you know the study included statistical controls.

HINT: In session 2 we discussed the Reviews of Individual Studies (that may be a good place to look for studies).

# ESSA tier 4: Demonstrates a rationale



# Four tiers of evidence under ESSA



# Knowledge review check 2

(1 point) Which of the following is not a requirement for a strategy to qualify for tier 4?

- A. The strategy is supported by a well-articulated logic model or theory of action.
- B. The strategy has demonstrated statistically significant, positive findings in a peer-reviewed, published study.
- C. A study is underway to examine the effects of the strategy on the outcomes of interest.

Put your answer in the chat box.

## Tier 4: Demonstrates a rationale

- A well-specified logic model that explains how intervention is likely to improve outcomes.
- An effort to study the effects is currently or will be underway.

## Tier 4: Requirement 1

- **A well-specified logic model that explains how intervention is likely to improve outcomes.**
- An effort to study the effects is currently or will be underway.

# What is meant by *well-specified logic model*?

Does not need to specifically be a logic model but must outline why the intervention is expected to improve outcomes and establish a rationale, which could include the following:

- Logic model
- Theory of change
- Literature review

Regardless of what is presented, it must be well specified and establish a rationale for the intervention. *Well specified* means:

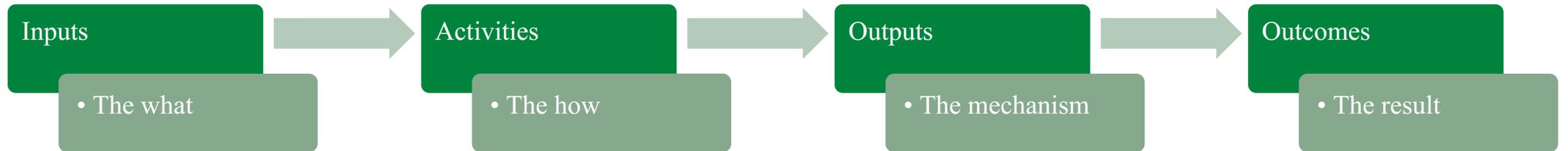
- Specific
- Measurable
- Grounded in rigorous research

# What is a logic model?

Logic models help to visually outline what an intervention is and what it can reasonably accomplish.

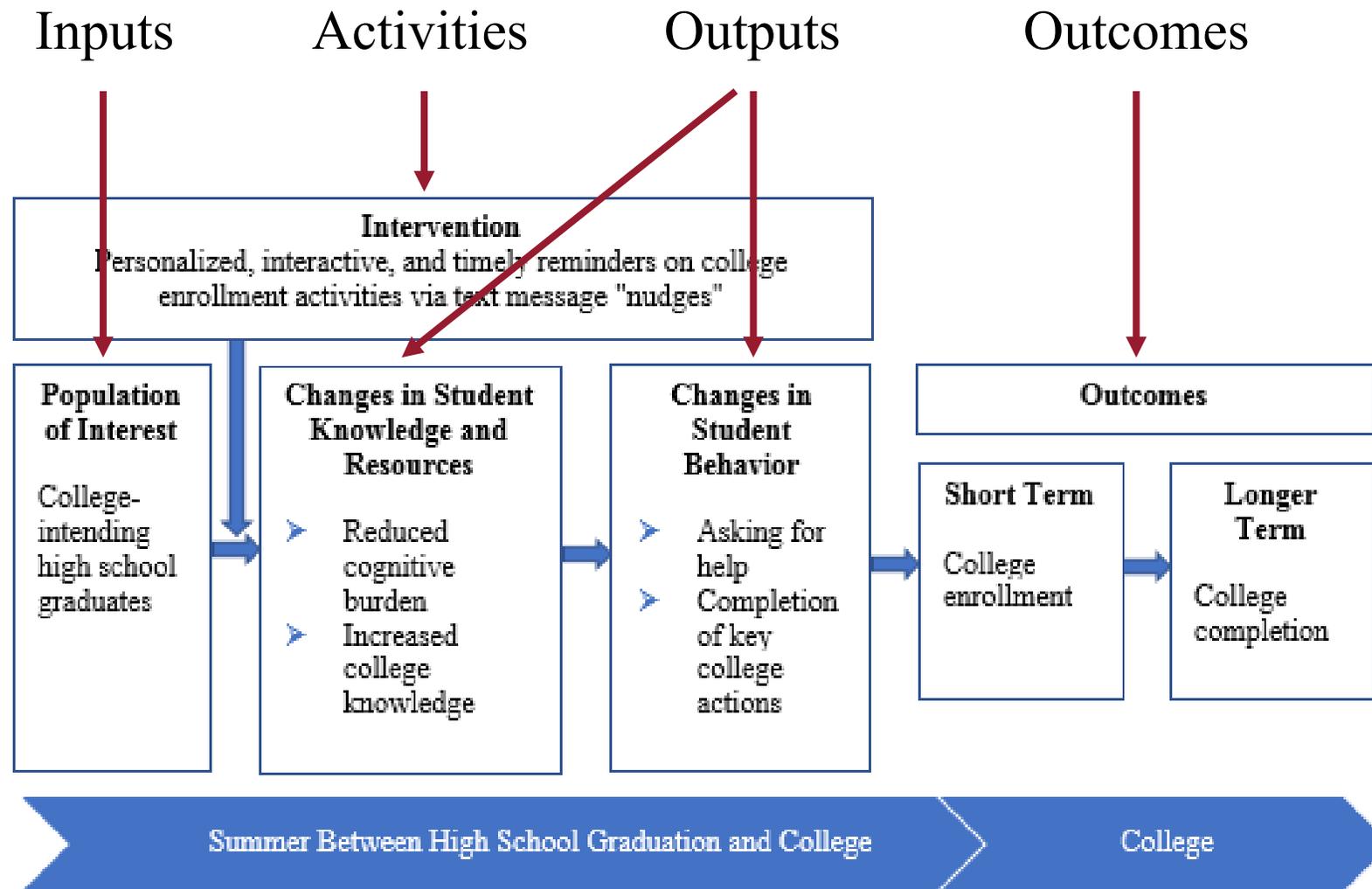
BUT

Logic models also outline what an intervention is NOT.



Logic models can take lots of different forms, formats, and structures. The important thing to remember is that the logic model should describe what is needed, what will be done, and what will change as a result.

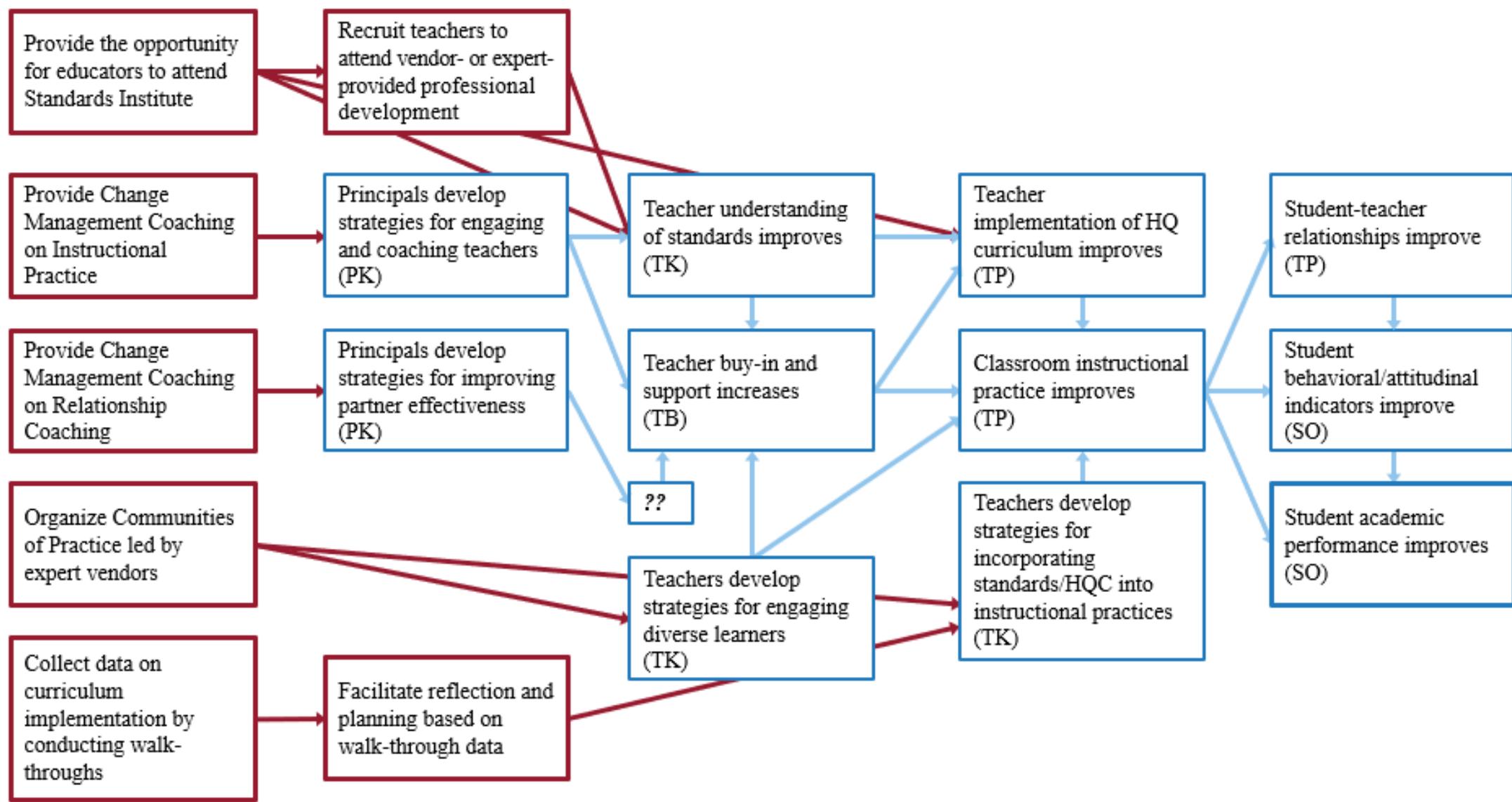
# Examples



Assumption	Problem	Solution	Activity	Short-Term Outcome	Long-Term Outcome
Teacher shortage due to retention AND recruitment	Need to recruit more teachers to address teacher shortages	Convince more teacher candidates to remain after graduation	Teacher recruitment coordinator	Place 50 candidates	City recruitment mirrors surrounding suburbs
Good publicity and media will improve recruitment and retention.	Need to retain more teachers to address teacher shortages	Convince more nonteachers to enter the teaching career	Teach Now Here	Public awareness increase	Retention rate increases by 10 percentage points
Investments in school climate professional development will connect to teacher retention.	The teaching career (and teachers) is not elevated sufficiently	Convince current teachers to remain in the classroom	Teach Today	Recruit 20 student athletes	Teaching career more widely appreciated and respected by public
Investments in infrastructure or teacher projects will improve retention.		Celebrate teachers and teaching by drawing attention to the craft	Teacher recruitment coordinator	Recruit 50 candidates from partner schools	Improve quality of teaching workforce
			Teacher retention forum	Identify reasons teachers leave (1) city and (2) career	
			Teacher celebration	Identify strategies to retain teachers	
			Teacher lunches	Celebrate 200 teachers	
			Teacher events	Celebrate 200 teachers	
			Professional development	Deliver 10 climate strategies to 100 teachers/admins	

**KEY: PK (principal knowledge), TK (teacher knowledge), TP (teacher practice), TB (teacher beliefs), SO (student outcomes); red boxes (activities), blue boxes (outcomes)**

- Inputs**
- Curriculum grants
  - Curriculum ratings
  - Current activities
  - Existing school supports



# Create logic model

Visit MI Strategy Bank and select an intervention.

What are the required inputs?

What activities take place?

How will you measure the success of the intervention?

## Tier 4: Requirement 2

- A well-specified logic model that explains how intervention is likely to improve outcomes.
- **An effort to study the effects is currently or will be underway.**

# What does this mean?

Research needs to be planned, underway, or completed.

- **Planned**

- Is there currently a grant, evaluation contract, or other evidence that an evaluation will be conducted?

- **Underway**

- Is there currently a study taking place? What initial findings can be shared? Who is conducting the evaluation?

- **Completed**

- Has an evaluation been completed but is still being reviewed? What are the preliminary findings?

# What is *not* considered tier 4?

Tier 4 is *not* a catchall for anything that does not meet the requirements of tiers 1–3!

These types of publications might give insight into potential strategies but rarely review or describe methods used to evaluate a strategy.



Promotional materials



Blog posts



Magazine articles



Books



Websites

# Scavenger hunt!

You have 5 minutes.

Find as many examples of evidence of educational interventions that meet *none* of the requirements for ESSA evidence tiers 1–4. Each example is worth 1 point.

Hint: Promotional materials, blog posts, websites, and testimonials are all good examples.

# Wrapping up



# Questions?



# Thank you!



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