

# Designing PD: Selecting Goals

- Given the breadth of content included in state mathematics/science standards, and the limited time available for PD, choices need to be made.

# Designing PD: Selecting Goals

- Consider whether you want to do a formal assessment of teacher content-related needs to help decide where to focus PD
- Avoid spending so much time and money on identifying needs that you don't have the resources to address those needs.

- Focusing PD on content-related needs that teachers identify can help ensure ownership.
- But teachers may not know what they don't know.

- District mathematics/science supervisors can provide insights about teacher content-related needs.
- Or you can base decisions on student achievement data, the “bottom line” for parents and policy-makers.

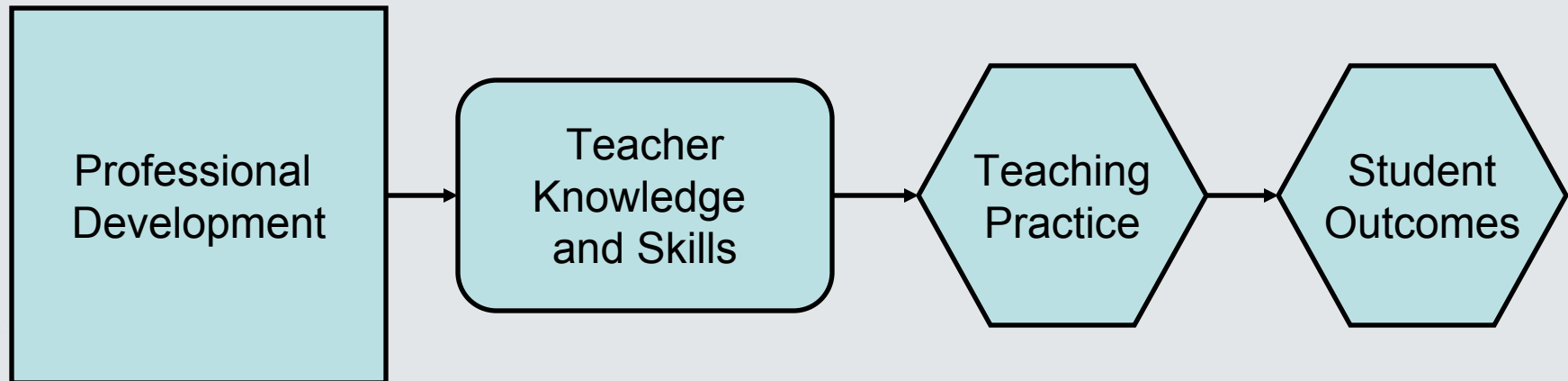
## In choosing content foci, consider:

- Will deepening teacher content knowledge make a difference in the quality of teaching and learning?
- Do you have the capacity to deepen teacher content knowledge in that area?

# Justifying the need for PD

- You are in charge of providing PD mathematics/science teachers in a district. The school board asks: “Why are you providing PD for high school teachers with college and graduate degrees in their disciplines? Don’t they already know the content?”
- Discuss how you would respond. (10 minutes)

# Simplified Logic Model for Professional Development



# Teacher content knowledge matters...

- For teaching practice, for example, in:
  - Implementing curriculum materials
  - Selecting assessment tasks

34 studies in mathematics education

12 studies in science education



# Teacher content knowledge matters...

For student outcomes:

- Students of teachers with stronger content knowledge have higher achievement scores than other students, in particular for achievement measures of conceptual understanding
- Students of teachers who hold an incorrect idea are more likely than other students to hold the same incorrect idea

4 studies in mathematics education

3 studies in science education

# At the break...

- If you are here without a team member, and have not been paired, please go to the registration desk at the break.
- The next session will start at 10:40 am.

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