Activity worksheet:
Developing pilot study research questions

Activity instructions:

With the early learning inventory (ELI) pilot logic model in mind, consider what research questions are most important with respect to the ELI's validity, implementation in the field, and outcomes associated with its use in the field. Review the proposed research questions, modify them, and propose additional research questions. In addition, begin to brainstorm what data sources currently exist to answer the research questions and what new data may need to be collected.

Validation research questions:

1. From a psychometric perspective, what distinct **domains** does the ELI validly measure?

2. Do any of the items exhibit **potential bias for student subgroups** (examination of differential item functioning)?

3. Do teachers use **rating categories** for each item as intended (examination of rating scale functioning)?

4. To what extent do ratings provide **information about individual student abilities** (examination of potential rater error)?

Other research questions:

Data sources needed to answer research questions:

Implementation research questions:

1. To what extent did the **ELI training and resources** prepare teachers to effectively implement the ELI?

2. How did teachers report using **the ELI in the classroom**?

3. How did teachers describe their interactions with the **ELI technological platform**? What modifications would teachers make?

4. What were the **key facilitators and challenges** for teachers implementing the ELI?

Other research questions:

Data sources needed to answer research questions:

Outcomes research questions:

Correlation study design question options:

1. Is teachers' use of the ELI associated with increased **teacher efficacy** to support individual students' needs?

2. Is teachers' use of the ELI associated with increased use of **effective data-use practices**?

3. Is teachers' use of the ELI associated with greater **student academic achievement**?

4. Is teachers' use of the ELI associated with greater **parent-teacher communication** in kindergarten?

Causal impact study design question options:

1. Does the ELI increase **teacher efficacy** to support individual students' needs?

2. Does the ELI increase teachers' use of **effective data-use practices**?

3. Does the ELI increase **student academic achievement**?

4. Does the ELI improve **parent-teacher communication** in kindergarten?

Other research questions:

Data sources needed to answer research questions: