Developing Research Questions for Myth Busting in Adult Education

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NRS
National Reporting System
for Adult Education

Goals of 2013 Regional Workshop

- Help states use NRS and other data to better understand an issue that affects their programs,
- Provide training to state teams to improve their capacity to conduct research and data analysis on their own, and
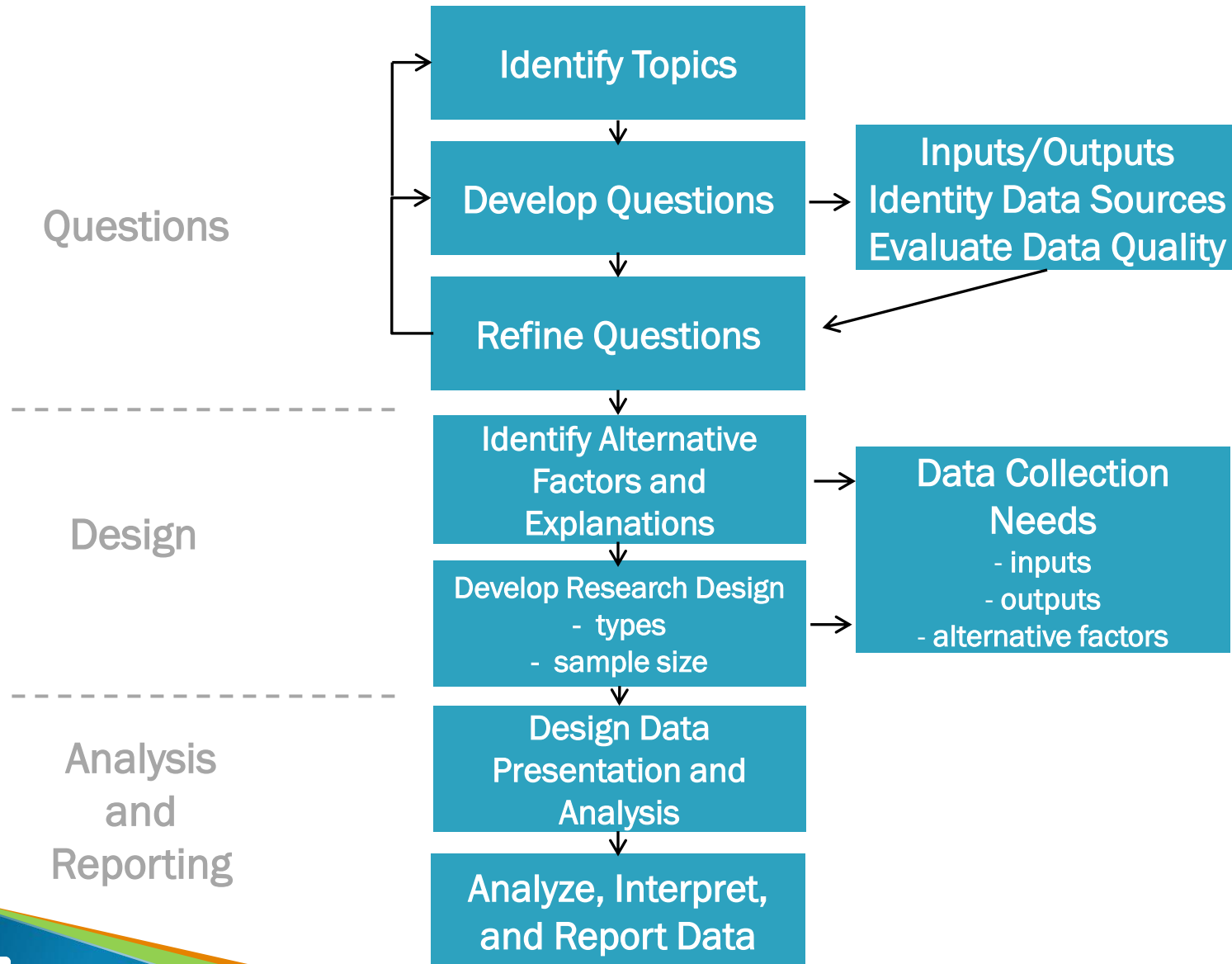- Build a data-driven knowledge base in adult education

Purpose of the Webinar is to…

▸ Introduce the NRS research & evaluation planning model

▸ Help states identify their research topics and develop initial research questions before the regional workshop

 ○ Know what makes a good research question

 ○ Define the "inputs" and "outputs" to study

 ○ Identify the data sources and data elements

 ○ Evaluate the availability and quality of the data sources

Planning Model

Questions

- Identify Topics
- Develop Questions → Inputs/Outputs Identity Data Sources Evaluate Data Quality
- Refine Questions

Design

- Identify Alternative Factors and Explanations → Data Collection Needs
  - inputs
  - outputs
  - alternative factors
- Develop Research Design
  - types
  - sample size

Analysis and Reporting

- Design Data Presentation and Analysis
- Analyze, Interpret, and Report Data

Identify Topics

What do you want to investigate?

- A research or evaluation topic
  - e.g., Is the new program effective? Who is participating, and how much?
- A myth or other topic you are curious about
  - e.g., Is it true that "teacher PD doesn't make a difference?"

Example Topics

Research or Evaluation

▸ Persistence and instruction
  ○ Relationship between attendance and gains
  ○ Effectiveness of blended instructional modalities

▸ Postsecondary pipeline and outcomes
  ○ Degree attainment rates of literacy students
  ○ Effectiveness of a managed enrollment policy

▸ Professional development
  ○ Relationship between expenditures per teacher on PD and student gains
  ○ Effectiveness of teacher PD and credentialing program

Example Topics—cont.

Myths About Adult Education

▶ Persistence and learning
- Adult education students don't remain in the program long enough to learn
- It takes too long for low–literate students to learn

▶ Long–term outcomes
- Adult education fails to prepare students for postsecondary education and training
- Adult students want jobs, not postsecondary ed

▶ Professional development
- Teachers don't need training, good teachers are just good teachers naturally

Develop Questions

An ineffective question is:
  - Too general
  - Has several questions embedded
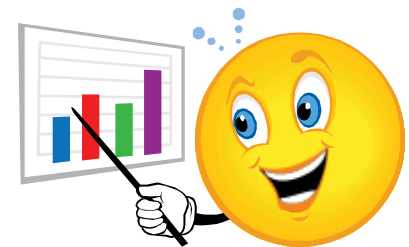 - Cannot be answered with available time and resources

Develop Questions

A good research question is...

- Clearly stated
- Simple
- Focused and specific
- Possible to address with the time and data available

Importance of a Well-formed Question

- Defines what the research will address
- Focuses the topic
- Identifies the data you need
- Suggests appropriate designs
- Helps determine conclusions you can draw

Develop Questions

▸ For example, if we want to explore the myth, "good teachers don't need training; they are just good naturally," we can test indicators of teacher training to see if they make a difference (…and bust the myth)

Poor Question	Good Question	Better Question
What makes a good teacher?	Does student learning differ by type of teacher?	Do students in classes taught by teachers who have *more education, training,* and *experience* have higher post-test scores?

Defining Inputs and Outputs

▸ Inputs are the intervention or student/teacher factors you want to study

▸ Outputs are the outcomes you are interested in

▸ Inputs/outputs need to be specified; made measurable

Q: How would we make the following input and output measurable?

Is attendance [input] related to learning [output]?

Developing Good Questions

Two more examples…

Poor Question	Good Question	Better Question
Is my program effective for all students?	Do different types of students in my program have better program outcomes than others?	How does attainment of a GED, entry into employment, and education gain differ by student age and ethnicity?
How long do students have to be in our program to be helped?	Does longer retention in our classes help our students learn more?	What is the average and range of instructional hours attended among students who gained an educational functioning level?

Identify Data Sources

- After the question is clear and de-constructed, you can identify data sources
- Existing data: available from your NRS data base
- Other extant data sources
- Additional data collection may be needed, e.g.:
    - Questionnaires, surveys
    - Interviews
    - Classroom observations

Questions and Sources

Topic	NRS Data in Database	Other Data Possibly in Program Database	Data May Not be in Database
Are teacher characteristics related to student learning gains?			
Teachers	Teacher certification and years of experience beginning with PY2012	Teacher's full- or part-time status, age, gender, ethnicity	Teacher education, professional development
Learning Gains	Educational functioning level, level advancement	Test scores	None

Examples from the ELC

- One of KY's questions
  - Do students enrolled in counties participating in the "managed program pilot" have higher rates of GED® attainment than students in other counties?
- Data source
  - State's NRS database
- Data elements
  - Inputs = Program participation status (in pilot/not in pilot), program and student characteristics
  - Outputs = GED® attainment indicator

Examples from the ELC—cont.

- One of MD's questions
  - Do students in programs that spend more on professional development per teacher have larger CASAS test score gains?
- Data Sources
  - State's NRS database
  - Web-based survey of programs
- Data Elements
  - Inputs = Program name, PD expenditures per teacher, student characteristics
  - Outputs = CASAS test score gains

Data and Time Availability

- Keep in mind that you can only study a question that your data can answer
- If you are thinking about collecting new data to answer your question, think about what is *feasible* to collect given the time and resources available

Next Steps: Getting Ready for the Summer Workshop

▸ Think about the topic and research question that you want to investigate

▸ Bring a list of data sources and data elements that you could use

▸ Fill out the webinar worksheet and bring to the summer NRS training—you will share this information with other states on the first day and work to refine your question

▸ Also bring a laptop with Excel to do some simple analysis activities

Questions?