

Math Faculty as Ethnographers:



Learning from Students' Math Experiences

Hannah Alford
Research Analyst

Linda Bell
Kristin Hartford
Math Faculty

Long Beach City College



Session Objectives

- Describe a process that leads to contextualized problem-defining and context-specific practices
- Describe the difference between the student deficit model and the inquiry model to address low success in math
- Describe how math faculty at LBCC, by engaging in inquiry activities, were able to re-conceptualize their practices



Background

- 🌐 **Phase I:** Equity for All:

Identifying student performance gaps in math

Funded by the Lumina Foundation and the Chancellor's Office, in collaboration with the Center for Urban Education

- 🌐 **Phase II:** Math Student Success Project:

Math faculty as “evidence team” investigated the “whys” to explain poor student performance in math, especially in MATH 110 (Beginning Algebra)

Funded by the Title V Basic Skills Grant



Student Deficit Model





Student Deficit Model

**Institutional
Research
Office
(Data)**

**Success
Rate in
MATH 110:
35%**

**Solutions:
Learning
Community**

**No Solutions:
Student are
Coming to us
Under-prepared**



Why Engage Faculty?

- ④ Data-driven decision-making tends to be like an assembly-like process
- ④ Organizational Learning is required for meaningful change

“To form relevant and effective ideas, we must first be acquainted with and take notice of actual conditions. Otherwise our ideals become vacuous or else filled with a content drawn from Utopia”

-John Dewey

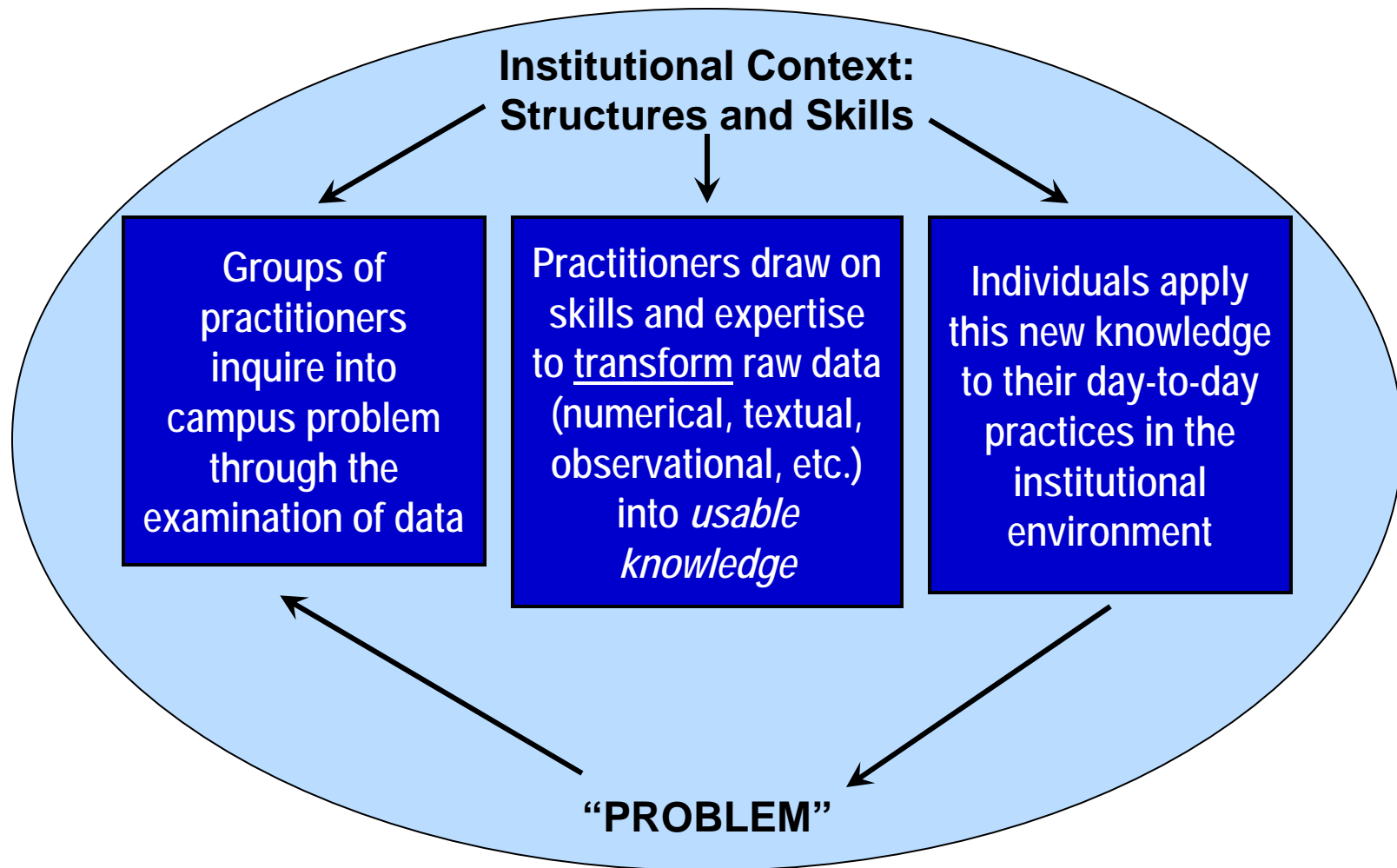


Organizational Learning

- Learning organizations “acquire new ideas that lead to improvements in the way they conduct business” (addresses a problem) (Garvin, 1993)
- Learning is done by individuals (deans, faculty, counselors) who are members of an organizational entity (college, division, academic department)
- Organizational culture and structures can promote or inhibit learning

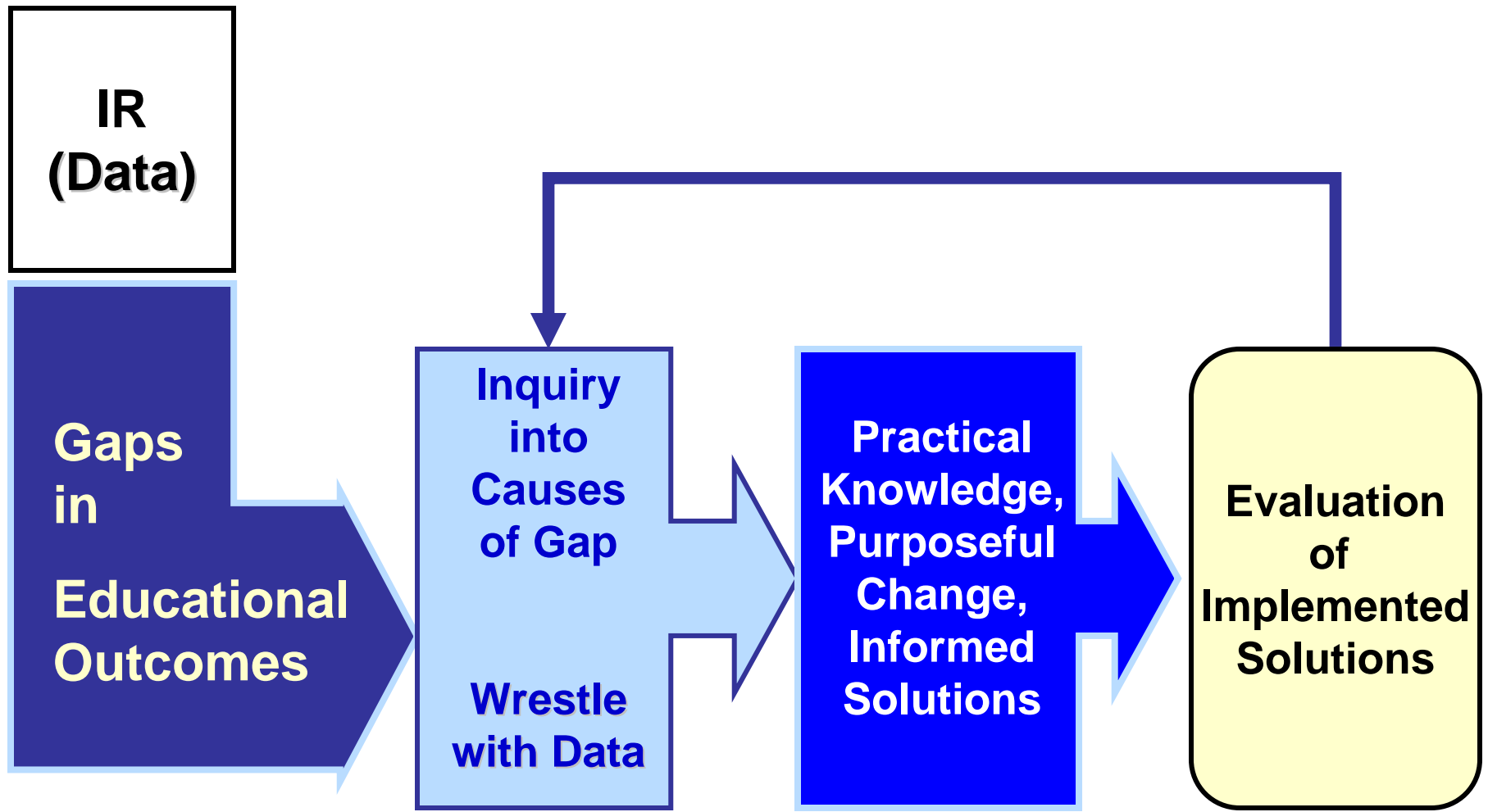


Interactive Organizational Learning Model



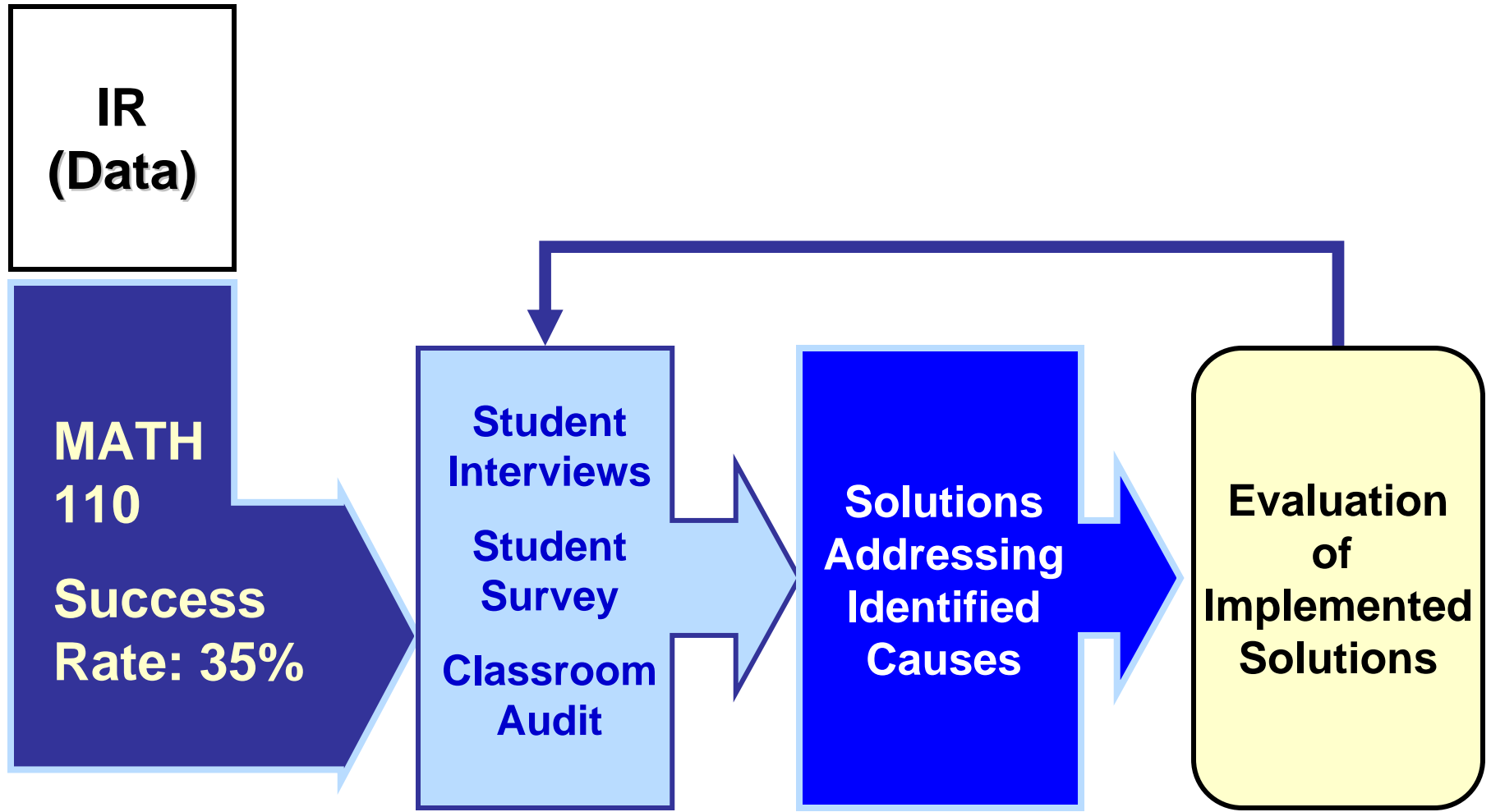


Inquiry Model





Inquiry Model





Inquiry Activities: Math Student Success Project

- **Data inquiry using administrative data**

Reading levels and math success

- **Student survey**

Student's backgrounds and study habits

- **Faculty survey**

Engagement in specific teaching practices enhancing learning

- **Student Interview (Math histories)**

Student histories in learning math; student perception of the math classroom and math instructors



Creating the "Evidence Team"

- ① Faculty are invited to join
 - ① Full time and part time faculty

- ① Why did I join the team?



The Interview Process

- 🌐 Recruiting students to participate
- 🌐 Scheduling interviews
Difficulties
- 🌐 Recording sessions
- 🌐 Surprises/variations in experiences with different students



What Did We Learn?

- ④ About how students perceive their math class/instructor
- ④ Factors students identify in facilitating learning in the classroom
- ④ About myself as an instructor



Actions Taken by Practitioner-Researchers *as a result of learning*

- ① How did I change/revise my teaching practices?
- ① Was anything I learned difficult to hear/confront?
- ① How did I change personally?
Professionally?



Thoughts on Being a Practitioner Researcher

- ① The beginning stage
- ② The interview process
- ③ Afterthoughts



Thank You!

 Hannah Alford
halford@lbcc.edu

 Linda Bell
lbell@lbcc.edu

 Kristin Hartford
khartford@lbcc.edu