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
**Phase I:** Equity for All:
Identifying student performance gaps in math

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**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

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?

Data-driven decision-making tends to be like an assembly-like process.

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
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
Institutional Context:
Structures and Skills

Groups of practitioners inquire into campus problem through the examination of data

Practitioners draw on skills and expertise to transform raw data (numerical, textual, observational, etc.) into usable knowledge

Individuals apply this new knowledge to their day-to-day practices in the institutional environment

“PROBLEM”
Inquiry Model

IR (Data)

Gaps in Educational Outcomes

Inquiry into Causes of Gap

Wrestle with Data

Practical Knowledge, Purposeful Change, Informed Solutions

Evaluation of Implemented Solutions
Inquiry Model

IR (Data)

MATH 110 Success Rate: 35%

Student Interviews Student Survey Classroom Audit

Solutions Addressing Identified Causes

Evaluation of Implemented Solutions
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”

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

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?

- About how students perceive their math class/instructor
- Factors students identify in facilitating learning in the classroom
- About myself as an instructor
Actions Taken by Practitioner-Researchers
as a result of learning

- How did I change/revise my teaching practices?
- Was anything I learned difficult to hear/confront?
- How did I change personally?
  Professionally?
Thoughts on Being a Practitioner Researcher

- The beginning stage
- The interview process
- Afterthoughts
Thank You!

Hannah Alford
halford@lbcc.edu

Linda Bell
lbell@lbcc.edu

Kristin Hartford
khartford@lbcc.edu