



# Increasing capacity for professional growth through inquiry: Focus on process

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#### **Quick Background**



- Successful Transitions to College: Collaboration for Alignment to the Common Core State Standards
- A 3-year project funded by the College Spark Washington Community Grants Program, Eastern Washington University, the Community Colleges of Spokane, and Spokane area high schools

## Successful Transitions Partnership

University & College Partners	Public School District Partners	
Eastern Washington University	Cheney Public Schools	
	Columbia Public Schools	
Community Colleges of Spokane	Deer Park Public Schools	
Spokane Community College	Lind-Ritzville Public Schools	
Spokane Falls Community College	Mead Public Schools	
	Spokane Public Schools	
	West Valley School District	



#### How did we start?

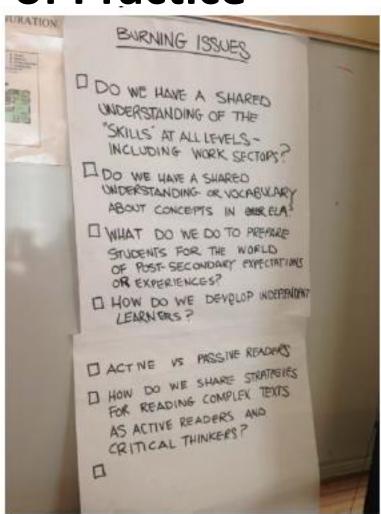


- Cross-sector cohorts of mathematics instructors were created
- Instructors visited one another's classrooms, and focused on student activity and experience

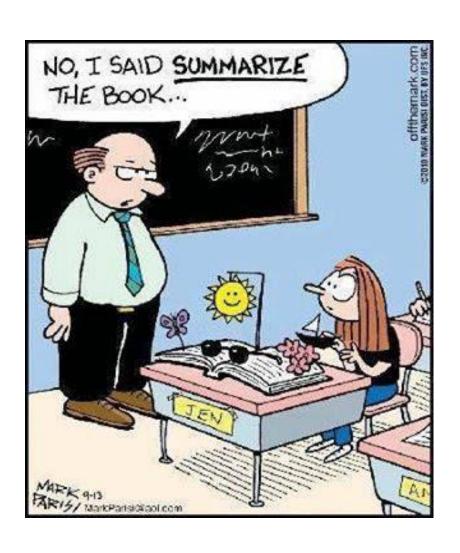
#### **Explored Problems of Practice**

#### Participants:

- Observed each others' students.
- Focused on the CCSS
   Portraits and Standards for Mathematical Practices.
- Brainstormed and shared ideas, then...
- then finally, ...



#### Identified a specific problem of practice



- Get students to use appropriate resources other than the teacher without prompt.
- Foster independent learning and critical thinking.
- Improve ability to read for content and think critically about what they read.



#### Math Problems of Practice



- Get students to use appropriate resources other than the teacher without prompt.
- We haven't given explicit attention to fostering independent learning and critical thinking.
- Students need to improve their ability to read for content and think critically about what they read.
- Addressing student difficulties with applying or transferring prerequisite skills and knowledge to calculus.
- Too often math is taught without students understanding its "meaning."



## **The Inquiry Process**



## Instructor-Driven **Professional** Development **Through Collaborative Inquiry**

Investigate shared problem

Share and connect learning

You are the experts on your students, your disciplines, and on teaching.

Learn with and from colleagues

Act, reflect, and refine practice

Seek expertise and perspectives of others beyond the group

Use evidence and data



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#### Use evidence and data



#### **Summary of Data Analysis Strategies**

Research Type	Types of Data	Data Analysis
Descriptive	Data are in the form of text, audio, video, or numbers (see the next four types of types of descriptive data)	Narrative analysis Rubric analysis Computing descriptive statistics
Case Study	Data are in the form of text, audio, or video.  Data include open- and closed-ended responses, questionnaires, records, excerpts, quotations, correspondence, official reports, and surveys	Narrative analysis
Observation	Data are in the form of text, audio, or video.  Data include detailed description of activities, participant behaviors, and human interactions	Narrative analysis Computing descriptive statistics



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#### Act, reflect, and refine practice

• Act: What? (your tool implementation, including data collection and analysis)

 Reflect: So what? Questions on Worksheet

Refine: Now what?
 Questions on worksheet



## A Case Study



#### The Case of an Algebra Cohort









#### **Successful Transitions Big Picture**

#### Improvement Target

Decrease rates of placement into developmental mathematics by 4%

Increase first-year introductory-level mathematics course pass rates by 4%.

#### Problems of Practice

Improve students' ability to read math texts for content understanding.

Foster students' independent learning skills and dispositions.

Address students' difficulties with applying prerequisite skills.

Help students develop as critical thinkers and problem solvers.

#### Classroom based Solutions

Write quality anticipation guides, and create criteria for guides.

Create and use an observation protocol that measures student independent learning skills.

Use common assessment questions and analyze student work to find gaps. Use results to find or create resources to help fill gaps.

Develop a rubric that could be used across multiple situations that require perseverance.



## Partnership Timeline



2014-15 2015-16 2016-17

Organize for collaborative improvement work

Identify
problems of
practice, form
cohorts &
develop work
plans/timelines

Execute plans.
Develop/test
solutions to
agreed-upon
problems of
practice.

Populate
toolkit w/
solutions.
Reflect on first
round
approach. Plan
second cycle
approach.

Execute plan.
Develop/test
second cycle
solutions.
Populate
toolkit.
Determine next
steps.

# Share work and connect learning



Knowledge products from this type of professional learning consist of shared ideas that can be treated as public objects that can be jointly constructed, stored, and improved. (Heibert)





## **Sharing our work**



# Check for "toolkit" items in late November.

https://sites.ewu.edu/successfultransitions/



#### Contacts and ...



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