Characterizing the Facilitator’s Role in the Problem-Solving Cycle Model of Professional Development

Hilda Borko, Jennifer Jacobs, and Karen Koellner
http://www.colorado.edu/education/staar
STAAR: Supporting the Transition from Arithmetic to Algebraic Reasoning

University of Colorado Professional Development Research Team

- Hilda Borko
- Karen Koellner
- Jennifer Jacobs
- Jeffrey Frykholm
- Kim Bunning
- Eric Eiteljorg
- Mary Nelson
- Mary Pittman
- Sarah Roberts
- Craig Schneider
Situative Perspective on Teacher Learning

• Teacher learning
  • A social process
  • Situated in social and cultural contexts

• Tools for teacher learning
  • Professional learning communities
  • Artifacts of practice

• Community around video
Workshop 1: Doing for Planning

Solving the problem

Teaching the lesson
Workshop 2: The Teacher’s Role

Student work

Discussing the video
Workshop 3: Student Thinking

Small group work

Reconsidering the problem
Scaling Up the PSC Model

Design Experiment
- To develop, implement & study the model

Preparing to Scale Up the Model
- Documented the 3 iterations of the PSC
  - Interviewed facilitators & teachers
  - Videotaped workshops
  - Collected artifacts
- Analyzed the role of the facilitator
- Developed a Facilitator’s Guide
The Facilitator’s Role in Workshop 1 (Doing for Planning)

Selecting the Task

- Multiple concepts & skills
- Accessible, multiple entry & exit points
- Challenging for teachers, appropriate for students

Supporting Teachers’ Work on the Task

Supporting the Lesson Planning Process
The Facilitator’s Role in Workshop 2
(Exploring the Teacher’s Role)

Selecting the Topic

Selecting Video Clips

- Relevant to teachers
- Short
- Motivates instructional change
- Challenging

Preparing Guiding Questions

Supporting Teachers’ Reflections
The Facilitator’s Role in Workshop 3  
(Exploring Student Thinking)

Selecting Video Clips & Student Work
- Unique solution method or reasoning
- Obstacles
- Range of student reasoning

Preparing Guiding Questions

Supporting Teachers’ Reflections
Overarching Roles of the PSC Facilitator

- Support Mathematics Learning
- Support Pedagogical Change
- Foster a Professional Learning Community
Preparing Facilitators to Implement the PSC – Current Pilot

- Facilitator’s Guide Draft
- Piloting with Math Coaches
- Refining Materials
- Documenting the Process