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

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http://www.colorado.edu/education/staar
STAAR: Supporting the Transition from Arithmetic to Algebraic Reasoning

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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
The Problem-Solving Cycle

Workshop 1: Solve problem and develop lesson plans

Workshop 2: The teacher’s role

Workshop 3: Student thinking

Videotaping the lesson: Implementation of problem
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
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