COLORADOR University of Colorado Boulder

Supporting Teachers in Schools to Improve their Instructional Practice Janette Klingner and Hilda Borko

Introduction

We describe two collaborative projects as illustrative cases of DBIR principles: CSR Colorado and Implementing the Problem-Solving Cycle. The two projects take place in different large, urban school districts in a mountain state.

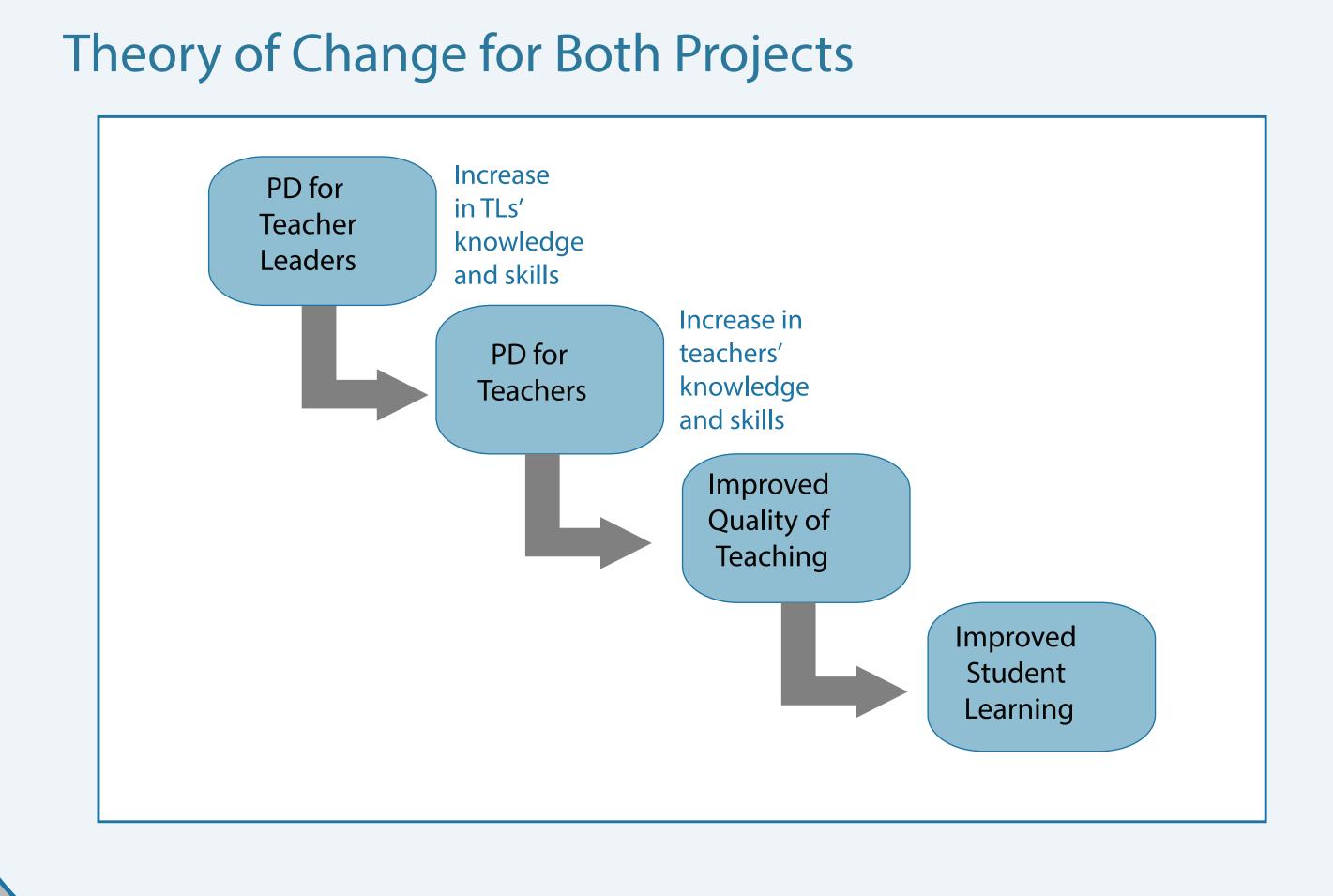
Goals of the projects: To create scalable models of professional development (PD) and study the conditions of their effectiveness (Coburn, 2003).

DBIR Principle 1: A focus on persistent problems of practice from multiple stakeholder's perspectives.

 Both projects focus on improving the quality of teaching in middle school content classrooms (science, social studies, & languages arts for CSR Colorado; mathematics for the Problem-Solving Cycle)

DBIR Principle 2: A commitment to iterative, collaborative design.

 Although both projects began with interventions developed in earlier projects, they used iterative, collaborative designs to develop models for building district capacity to take up the interventions and sustain them without external resources.



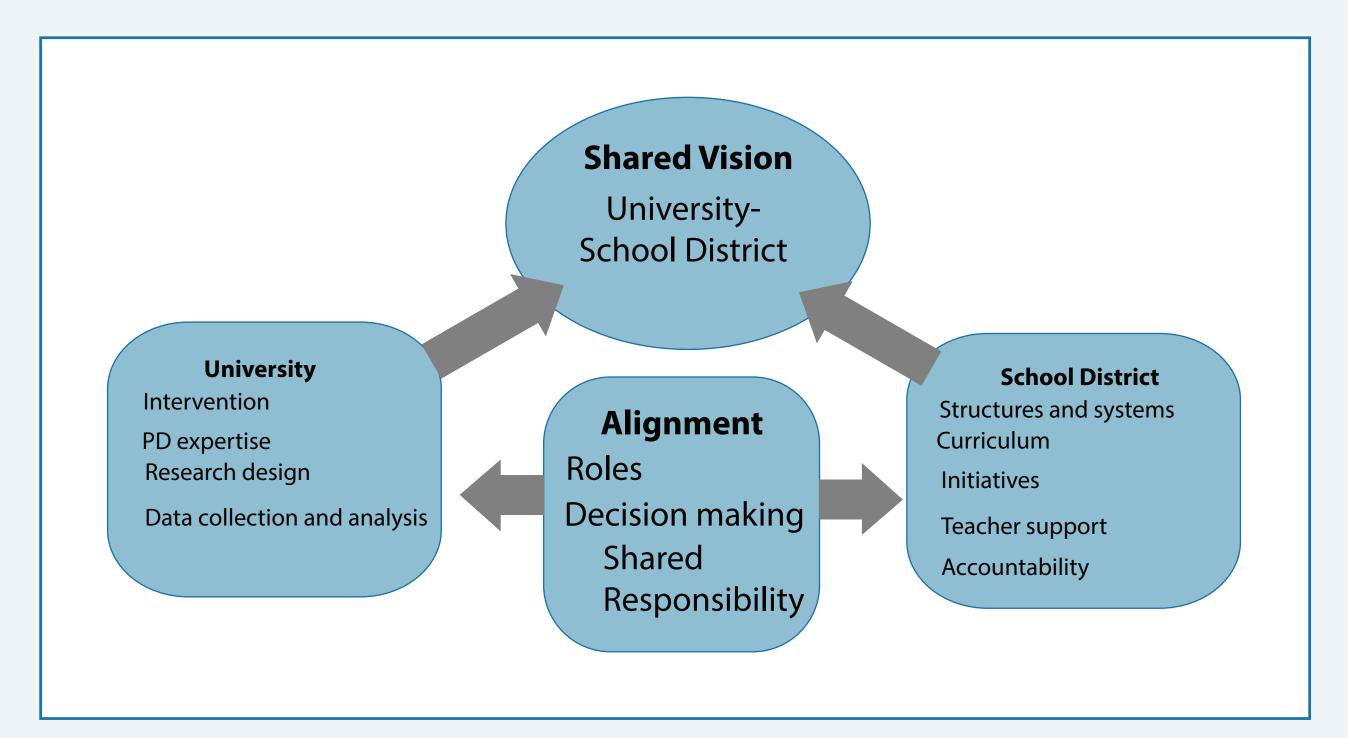
CSR Colorado

Through PD and ongoing support, middle school teachers learn to use Collaborative Strategic Reading (CSR) in their diverse, heterogeneous classrooms. From the beginning, the research team has collaborated closely with school district partners (including to write the grant proposal that led to funding). The district envisions CSR as a catalyst for change and adopted it as a district practice.

The university research team is intentionally working with multiple levels of the school system, focusing not only on improving classroom practice through CSR, but also on integrating CSR support structures into the district's PD and teacher support infrastructure:

- Teacher Leaders
- Teacher Effectiveness Coaches
- PD for principals

Expertise of the Partners



Components of the project include:

- collaborative planning and implementation with district leaders and the district's CSR team
- differentiated PD for teachers
- in class coaching and other in class support
- mentoring for principals
- model lesson plans and other classroom resources and materials
- certification for accomplished CSR teachers

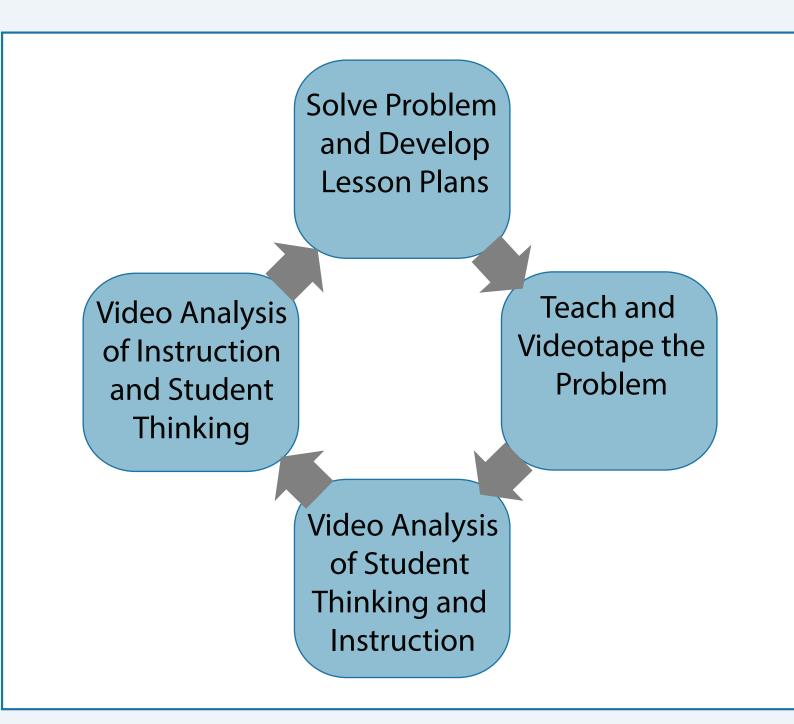
We are striving to go beyond surface structures and procedures, such as the routines, activities, and/or materials associated with CSR, and consciously work to promote the beliefs, norms, and principles underlying the approach (Coburn, 2003).

We have learned:

- The value of building relationships, establishing mutual trust and respect, sharing expertise, and understanding our different cultures (i.e. university and district)
- The importance of going beyond making sure CSR is aligned with other district initiatives to actually become ingrained in the fabric of the district, so that CSR becomes "what we do"
- The necessity of clear messaging around fidelity

DBIR has added clarity and a guiding framework as we move forward. DBIR principles have helped us think about the iterative nature of data collection and analysis. Initial findings have lead to multiple refinements in our work.

The Problem-Solving Cycle



A highly adaptive, long-term approach to mathematics professional development:

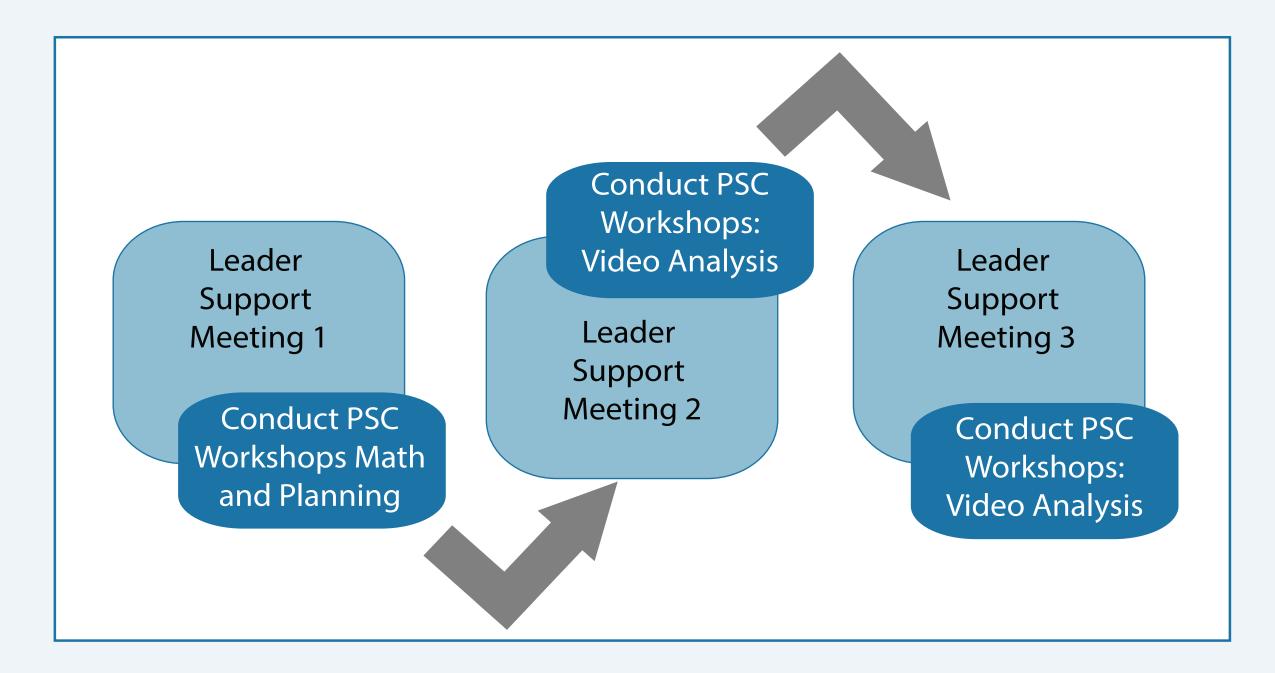
- Series of three interconnected PD workshops organized around a rich mathematics task
- Task enables teachers to share a common learning, planning, and teaching experience
- Each cycle uses a different task and highlights specific topics related to learning and teaching
- Mathematical focus of tasks, and learning and teaching topics, determined by needs and interests of participants

The University - District Partnership

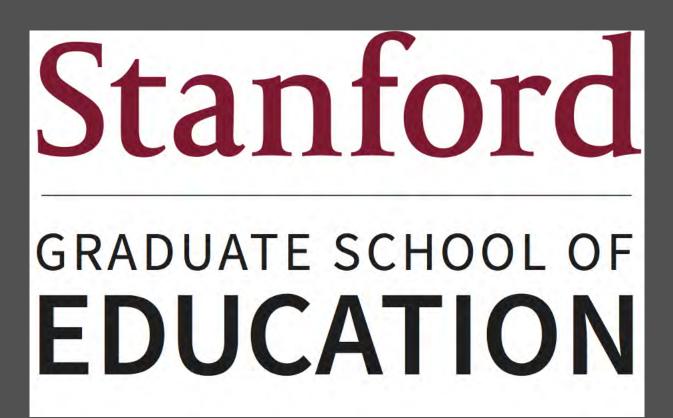
The research team and district personnel worked together to develop the capacity of middle school mathematics teacher leaders to conduct the PSC in their schools.

- *Research team*: Jennifer Jacobs, University of Colorado; Karen Koellner, Hunter College; Hilda Borko, Stanford University
- *Design goals*: To develop a model for preparing sire-based Teachers Leaders
- *Research focus*: The TLs' ability to implement the PSC with integrity; and the impact of the PSC on teachers' knowledge and practices, and student achievement

Mathematics Leadership Preparation Model



Teacher Leaders at each school participate in three, fullday leadership preparation meetings, led by experienced PSC facilitators, during each PSC cycle. These meetings are designed to assist the TLs in planning all aspects of their PSC workshops.



Implementing the PSC at Scale & Shifting Ownership

- An adapted version of the PSC is the PD model for district middle school math departments
- The Secondary Mathematics Coordinator has assumed full ownership of the PSC model
- The research team has developed a working model of mathematics leadership presentation

We believe that one important factor in this success was each party's flexibility and willingness to comprise.

Conclusion Conclusion Although both projects followed DBIR principles, they

- differed in some key ways: • How the projects gained access to their districts: In CSR, the primary contact was the Chief Academic Officer. In the iPSC project, the primary person was the Secondary Mathematics Coordinator.
- *How the projects address fidelity*: Both emphasize the key principles of their approaches, yet iPSC is more flexible and designed to be adapted to fit the local context, whereas as part of a randomized control trial, CSR is less flexible.

These projects illustrate how complicated it can be to take classroom level design research to scale across multiple levels of large urban districts. DBIR principles guided our work.

DBIR Principle 3: A concern with developing theory related to both classroom learning and implementation through systematic inquiry.

• The focus of theory development is on "ideas about how to support classroom learning [and] how to prepare teachers and administrators to implement programs" (Penuel et al., 2011, p. 333), and what it takes to bring such efforts to scale.

DBIR Principle 4: A concern with developing capacity for sustaining change in systems.

• Each project's goals include implementation in multiple schools. Key district leaders played an essential role early on in each project. To be sustained, these programs also must be embraced and become part of the very fabric of the district (Coburn, 2003).

Both projects are successful examples of university research teams working in partnership with school districts to implement research-based instructional improvement programs. Yet each experienced some difficulties along the way. A DBIR lens helps to explain the successes and struggles.

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