

Understanding the Fidelity of Implementation and Scalability of Mathematics Professional Development Curricula

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Question(s) for Discussion: How can we examine the fidelity of implementation of professional development (PD) curricula and modules, and how do we bring our PD to scale?

Session Description: A number of researchers have defined fidelity of implementation as the extent to which facilitators follow the written materials, such as whether they implement recommended classroom practices or cover the content. While useful, these conceptions of fidelity are limited, as they fail to consider the character or quality of the implementation. An alternative conception of fidelity (also referred to as “integrity”) focuses on the alignment between the program developers’ intended opportunities to learn and the facilitator’s enactment of these opportunities. The nature and extent of alignment is most clearly revealed in the adaptations that facilitators make in the program and the reasoning behind the adaptations. The overall goal of the session is to begin a dialogue among DR-K12 grantees about conceptualizing and investigating fidelity of implementation by offering the beginnings of a synthesis of findings across three mathematics PD programs. We will address the following issues:

- What do we mean by “fidelity of implementation?”
- What approaches has each project taken to assessing fidelity?
- What issues arise when judging fidelity to a complex, multi-faceted program?
- What kinds of adaptations do facilitators make when enacting a program; what are criteria for deciding whether a modification is productive or not?
- Are there patterns in the kinds of adaptations that were productive? “fatal”?
- What are implications for the design of facilitation supports for PD on a large scale?

The following three projects will participate:

- **Toward a Scalable Model of Mathematics PD** is field-testing the Problem-Solving Cycle model of PD and accompanying facilitation materials and support for middle school mathematics instructional leaders in a large urban school district. Researchers are documenting and analyzing the range and quality of implementation, nature of adaptations, preparation, and support needed by the instructional leaders, and the impact of the PD on instructional leaders, teachers, and students.
- **Learning and Teaching Geometry** is creating five video-case modules focused on classroom instruction. These materials are designed to support middle school mathematics teachers’ development of the mathematics knowledge for teaching related to geometric similarity. The project also attends explicitly to facilitation: materials are designed to support facilitators’ adherence to developers’ goals and intentions when enacting sessions. Field testing of the materials includes investigation of the challenges facilitators face and the adaptations they make when using the materials.
- **Supporting Staff Developers** investigates how two PD programs are being enacted by district-based facilitators. Both programs are designed to help teachers improve mathematics education for students with disabilities. The project is currently conducting case studies of 10 sites, examining the productive and unproductive adaptations facilitators are making to the materials, and their reasoning about the ways they are enacting the PD programs.

Each of these projects will use 15 minutes to describe their program and address the questions listed above. Following the presentations, the panelists will take 10 minutes to discuss similarities/differences in the projects’ approaches. The final 20 minutes will be a discussion among the entire group in order for audience members to share their experiences and perspectives.