“Bringing New Things To Light”: An Emerging Process Model for Insight-Based Professional Development

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Introduction and Theoretical Framing
Teacher noticing, which encompasses how teachers attend to and interpret a wide range of cues in the classroom environment, is an essential aspect of teaching practice and requires intentional cultivation throughout a teacher’s career (Mason, 2009). Professional development (PD) affords one potential avenue for developing teacher noticing.

A PD program can be characterized by its pedagogical approach, which falls on a spectrum of teacher agency in terms of both content and enactment (Borko, 2004; Kennedy, 2016).

- Insight-based approaches (Kennedy, 2016) are less constraining and align with an inquiry stance in which teachers generate their own learning (Cochran-Smith & Lytle, 2009; Mason, 2009).
- Due to the highly variable and personal nature of teacher noticing (Erickson, 2011; Mason, 2009), PD is intended to develop teacher noticing calls for an insight-based approach.

Design-based research provides a lens on how to create collaborative environments and relationships that facilitate the generative processes of insight and concept formation. (Rørdam & Vosvoest, 2016; Enghström, 2011; Pennewill et al, 2011)

Research Questions
1. How do teacher participants engage in and experience collaborative inquiry and design as a generative process for teacher learning?
2. What conditions and practices do participants experience as worthwhile for their learning, and how do those features relate?

Study Context
CoATTEND: Multi-year PD program with teachers and community youth leaders to co-develop teacher noticing for equity in mathematics classrooms

Participants: Secondary mathematics teachers (n = 4) and community leaders (n = 3) in a local school district

Components and Format: Participatory action research involving summer institutes, video-based data analysis, co-writing, and co-designing professional learning and teacher education experiences

Data and Analytic Approach
Reflective interviews (n = 6)
Conducted one-on-one, averaging 1 hour
Retrospective on the PD program to date

Noticing interviews (n = 22)
Conducted one-on-one, averaging 1 hour
Collaborative analysis of classroom video

Team Meetings (n = 28)
Included all participants, ranging from 1 to 2 hours
Reflection activities, collaborative analysis, design

In vivo coding: highlighting key words and phrases in reflective interviews
Fine-grained analysis at the word and phrase level

Reduction: grouping 300+ terms to create 54 terms occurring across interviews

Process modeling: Using chronology and conceptual links among terms to explain how those features relate

Coarse-grained analysis at the episode level

Findings

Model Key:
- General Conditions: Grouping all terms
- Core Conditions: Key terms from the PD program to date
- Discipline Conditions: Key terms from the field of mathematics

Building Awareness
- Making Visible
- Observing
- Naming

Collaborative Elaboration
- Exploring Context
- Making connections
- Reflecting

Learning Through Design
- Articulating Concepts
- Summarizing
- Making useful

Empirical Support: Key Statements from Reflective Interviews

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<td><strong>Teacher 4</strong></td>
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<td>This grant was something I was already interested in and passionate about, and you weren’t going to force me in a different direction. I don’t just keep my history private. I had to be open to that subsystem for me to take it seriously. I never had to do anything about the problem of practice before.</td>
<td>We always say, “Oh, I could take a video of my classes and look at it, but what are we doing?” One of the things that I most had been that most party presenting on what going on.</td>
<td>I have heard the whole group, everybody had impact and meaning, and off each other. We come together and create something that you didn’t create alone.</td>
<td>It wouldn’t happen the same with my department because there’s a longterm diagram of each other.</td>
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<td>We’re people, we’re not easily, we’re not emotional. It was just an awkward letter to the people, and I had to go through it more than I normally do.</td>
<td>You had done what you did for your future and just become internalized. What I think this process did was make us into an adult, it being not. I think of all we have that “Oh, I don’t have to go doing that.” So, it was able to that and equality. I like that it was meaningful.</td>
<td>I was just finding my way, but I don’t regret you’re doing them. When you’re in the things, you just focus on that. When something that a feedback into your own end, it informs you on things that you could not consider.</td>
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<th><strong>Essential Conditions: Emotional Safety</strong></th>
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Discussion

Insight-based Process Model explicates how the conditions and practices of the CoATTEND PD afforded the emergence of new concepts.

- Conditions based in authentic and purposeful relationship building
- Subject matter that is both complex and relevant to teaching practice
- Practices and tools that fit the subject matter and are nuanced and powerful for expansive thinking
- Meaningful design work that demands articulation of new concepts

Formative intervention (Enghström, 2011) provides a framework for understanding this process of developing new concepts in an institutional context:

- Double stimulation involves the exploration of a problem area (first stimulation) using mediating tools (second stimulation).
- By addressing the problem area of teacher noticing for equity using the mediating tools of collaborative analysis and design, CoATTEND participants developed and articulated new and expansive concepts in teaching practice.

- Future research: What role do tensions and contradictions play in developing new insights through inquiry?

Implications for teacher learning:

- Through this process, practitioners become agents in the effort to improve teaching (Kennedy, 2016).
- Positioning teachers as agents in understanding and addressing problems of practice leads to sustained improvement (Pennewill et al, 2011).
- Future research: Does applying this model to other PD designs create the conditions for insight-based teacher learning?

References