

Exploring Elementary Teachers' Classroom Discussion Puzzles: A Cross-Disciplinary Analysis

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Abstract: We present a cross-disciplinary analysis of the puzzles and tensions elementary teachers experience as they conduct classroom discussion. We describe two teachers' framings and sense-making about the puzzle of *how (much) to steer discussion in light of instructional goals*, considering similarities and differences across teachers and disciplines.

This work is part of a project to understand how elementary teachers learn to conduct classroom discussions in ways that support deep disciplinary learning and seek to disrupt settled expectations of disciplines, children, and teaching (Bang, Warren, Rosebery, & Medin, 2012). We assume that systems of oppression permeate teaching and learning, for example, through curriculum structures, how subject matter is constituted, and privileged ways of speaking and acting (Bang et al, 2012; Esmonde & Booker, 2016).

This poster shares how we have sought to understand the puzzles and tensions that elementary teachers experience as they conduct classroom discussion. We focus on puzzles because they provide windows into teacher sense-making and they may reveal opportunities to work with teachers around their own concerns at the intersection of disciplines, classroom discourse, and power. When teachers frame and try to make sense of puzzles and tensions, they draw upon practices, curriculum materials, and categories for labeling students (Hall & Horn, 2012) that inevitably reflect the dominant ideologies of society, school disciplines, and disciplinary knowing (Louie, 2020).

We are interested in understanding how teachers' puzzles and tensions might be similar and different across school disciplines. While elementary teachers typically work with one group of children across content areas, researchers have tended to approach studying and supporting teachers' practice from the perspective of a particular discipline (e.g., mathematics). We seek to understand how the puzzles and tensions that emerge for teachers might be shaped by school disciplines, and how they can serve to make visible the contradictions and dominant ideologies of larger systems.

Methods

To date, we have conducted interview cycles with five teachers. Cycles include a pre-interview, video-based reflection interviews (one each in mathematics, science, and/or ELA), and a post-interview. In the video-based interviews, teachers, and sometimes researchers, pause the video of classroom discussion at moments that seem important or puzzling. Then, teachers describe and unpack these moments. Our analysis focuses on teacher responses to these moments and to interview questions meant to elicit puzzles. We began by selecting two teachers whose responses provided interesting contrasts. We used open coding in order to identify and refine our descriptions of recurrent puzzles and tensions. Focusing on one puzzle at a time, we developed memos examining the framings, concepts, categories, and assumptions evident in teachers' talk, then sought to understand similarities and differences across teachers and content areas.

Findings and discussion

Our analysis has surfaced fifteen puzzles that are recurrent in teachers' interview responses. Some of these include the following: how to support equitable participation, how (much) to steer discussion in light of instructional goals, and interpreting resources children bring to school. The concepts and assumptions that teachers draw on to frame and make sense of these puzzles differ across teachers and disciplines. We are beginning to orient this analysis to describe the patchworks of ideologies present in teachers' responses and the relations of power that that structure these ideologies (Louie, 2020).

For example, Table 1 shows examples of two teachers' different framings of the puzzle *how (much) to steer discussion in light of goals*. As Ms. Y described her discussions across disciplines, she puzzled about how to work with students' contributions to make progress toward collective understandings, recognizing that "honoring students' ideas" might come in tension with where she "wanted to go." Our analysis of Ms. Y's talk highlighted ideas such as collective orientation toward knowledge-building, focus on conceptual understandings underlying curriculum goals, and the sense of a predetermined direction for the discussion.

In contrast, Ms. K did not frame her practice across disciplines as guided by an overarching puzzle. Instead, she discussed different puzzles that came up as she interpreted individual students' contributions in light of a particular skill she wanted to develop and decided how to guide that student or introduce a new idea. These foci were closely tied to curriculum documents and standards. In addition, within each discipline, Ms. K had moments where she expressed uncertainty about her interpretations of and responses to students in relation to what her curriculum privileged: in ELA, she wondered what it meant for students to focus on an "important text element"; in mathematics she questioned how "pushing" students to adopt "efficient" strategies, rather than using their own strategies, would impact them. We analyze these as examples where reform-oriented practices, translated into standards and objectives, are taken up to re-inscribe settled hierarchies of disciplinary knowing. We are interested in Ms. K's moments of uncertainty as potential openings to work with her to question these hierarchies and the ways they shape moments of interaction among Ms. K, her students, and disciplinary practices and materials.

Researchers have explored teacher sense-making around puzzles and tensions as an important avenue toward shifting practices and systems. We aim to contribute to this work by considering individual teachers' thinking across elementary disciplines and by seeking to understand how teachers' puzzles illuminate—and suggest possibilities for disrupting—settled expectations of children, teachers, and disciplines. We hope to engage with the ICLS community around ongoing questions in this work. For example, we are curious to discuss: (1) analytic methods for surfacing ideologies underlying teachers' reflections, particularly when teachers' talk focuses on the micro- and meso-level aspects of their practice; and (2) implications of this analysis for future work with teachers.

Table 1: Examples of Two Teachers' Framings of the Puzzle *How (Much) to Steer Discussion*

	Ms. K. (Second Grade)	Ms. Y. (Fifth Grade)
Math	How to introduce a specific mathematical strategy into conversation. <i>I was hoping that the counting up would come up, which it didn't quite, so I had to manufacture that a little bit.</i>	How to work with students' contributions to guide them toward collective understanding of a pre-determined mathematical idea. <i>The kids brought up different things, so it was just fun, I mean that's part of discussions, it's fun to just kind of take what they're saying and go with it, and then always bring it back to what you want to talk about as well.</i>
Science	How to draw out questions that are the focus of the subsequent lesson. <i>It definitely led to me pushing the seed idea from [] because I knew that she would get there, and then that the kernels are seeds, and that we should break them open.</i>	How to work with students' contributions to guide them toward collective understanding of a pre-determined scientific idea. <i>I think in science, ideas can come about in so many different ways... but you're trying to get them towards an idea, as much as honoring whatever they're saying.</i>
ELA	How to help students focus on important text elements. <i>I think there's some students that have a challenging time noticing like yes there are differences but is the difference important to the overall story... So that is something we will really have to work on.</i>	[Did not conduct video-based interview]

References

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