Discourse and Transparency: Avoiding Agnosticism in Our Work with Teachers

Beth Herbel-Eisenmann
Michigan State University

In this paper, I draw on instances of work that I have done with my teacher-researcher and teacher-educator-researcher colleagues in the U.S. and Canada to ask readers to explore and reflect on their own practice as teacher educators. These explorations prompt readers to make transparent some of the underlying Discourses (i.e., associated assumptions, meaning, values, beliefs, and so on) and influencing factors that inform and impact their work. Alongside these instances and explorations, I share some of the important lessons these colleagues have taught me about equity in professional development contexts.

In my title, I write about "avoiding agnosticism." I used to associate the word agnosticism with religion until I read an Editorial by Peter Sullivan in the *Journal of Mathematics Teacher Education*. He pointed out that agnosticism's broader definition is "being uncertain or uncommitted to a certain thing" (Sullivan, 2006, p. 307). I chose this word not because of its focus on uncertainty, which I do not think needs to be avoided because it may be a necessity to reflective practice. Rather, being uncommitted was what I want to advocate we avoid, as mathematics teacher educators. I do not mean to say that I think people in mathematics teacher education are uncommitted, *per se*, because I do think we are committed to quality teacher education, more broadly. Instead, the version of 'uncommittedness' I focus on here is more tacit than that and, thus, something we need to make more transparent. In the same ways that we often ask prospective and practicing teachers to explore their beliefs, values, commitments, and constraints, I think we, too, as teacher educators need to do more of this. My hope is that this paper will prompt readers to explore questions like, *What do you think is at the core of your practices as a mathematics teacher educator? What do you value? At a deeper level, what hidden assumptions and "Discourses" (Gee, 2014) are embedded in these practices, beliefs, and values?* This last question is important because, as Phelan (2015) points out:

> *Discourses organize meanings and practices and allow certain ways of thinking and acting to be considered correct or acceptable, while others are viewed as incorrect or unimaginable (p. 97).*

Moreover, because Discourses underlie what we often treat as "normal" or "common sense," I hope this paper pushes us to make more transparent some of

the Discourses that underlie our work. It is only through transparency that we can decide whether what is being treated as "correct" or "acceptable" is, in fact, equitable.

An Introduction Via Analogy

At this point in time, I strongly believe that, like teaching children, teacher education is primarily about relationships. I play out an extended analogy about "teacher education as relationships" in order to set the stage for the remainder of this paper. I do not think of teacher education as being just *any* kind of relationship. Rather I am committed to relationships that are not possible in typical professional development (PD) that takes place in schools all over the U.S. By "typical" PD, I mean the kind where: someone other than teachers (e.g., a curriculum specialist, mathematics specialist, or administrator) decides who to bring in as an 'expert' based often on related policies that have been adopted at the state or district level. Typically the PD is made up of a short-term workshop or presentations that focus on telling or showing teachers what they should do. The values and purposes are determined ahead of time, often with little contextual knowledge of the place in which the PD is happening. All of the teachers are expected to attend and sometimes the PD days are built into the school calendar as a way to mandate teacher attendance. Teachers have little agency in this process. This description matches the PD I attended as a teacher, the PD that all of the teachers I have worked with have experienced, and has been described in Judith Warren Little's (1990) large-scale work in the U.S. as being some of the most common experiences teachers have.

Making use of my extended analogy of teacher education as relationships, my current view on these one-shot workshops can be captured by how I think about brief love affairs. Like brief love affairs, one-shot workshops begin with an initial recognition of someone—an attraction to someone personally (across the room at a party, for example) or professionally (when one receives a phone call from a school where they explain why you are the perfect person to come to do the PD) for their expertise. The potential for pleasure may feel worth it: the excitement of the pursuit and novelty in the former case; the offer of a nice stipend for the two hours work with teachers and, if you are a dynamic speaker, the overhearing of teacher comments who excitedly leave the room, talking about how interesting the PD was. Quickly, however, the reality can set in: the lack of commitment, the potential dishonesty. The "I'll call you tomorrow" that never happens; the, "Oh, yea, that was interesting, but I don't have time for that" talk from teachers in the hallways. The bigger Discourses that might get perpetuated about women, in the one case, and about academics and teachers and their work, in the other. I stop here for brevity's sake. I want to emphasize that there are other kinds of relationships and other kinds of short- and long-term consequences

to work with teachers. In the following sections, I return to this broader analogy of teacher education as relationships to frame some of the examples I share from my work.

Two Inspirations for My Work

This stance was not my original stance about teacher PD, rather it is a stance I have developed as I have collaborated with teachers, in honour of their perspectives, the relationships I have developed with them, and the "ah-ha!" moments I have experienced working with them. This stance also has developed in resistance to the fact that the typical PD experience described above is still something teachers experience every year of their professional lives. The teachers with whom I have collaborated have found these experiences quite disempowering. As one of them said:

> *We're just never, ever, ever, ever, ever treated with autonomy or to think that what we think would be best,*
> *Or to think about what's important and do it for a long time,*
> *Or to be supported in what you think is best over a long time…that structure [of being part of a study group and doing action research over three years] was so foreign to me. (Teacher-Researcher Interview)*

This kind of relationship—not being treated with autonomy, being treated as if you do not know what is best, and feeling that you are not supported—is not a healthy one. In fact, if we examine the kind of Discourses embedded in this pervasive practice, we see: someone (other than teachers) knows what teachers need to know and do; all the teachers need the same thing; context is not important; teaching is fairly simple because it can be broken down into things one *does*, teachers only need to follow someone else's suggestions to teach better; and the process of enacting those suggestions is simple so no follow-up is needed. Typical 'professional' development experiences, I would argue, perpetuate Discourses that de-professionalize teachers and teaching.

The second inspiration for the work that I do might be captured in terms of a relationship like an "overly critical parent" or the person who is outside of some experience you have and, when you talk about issues you may have related to this experience, this person mainly critiques and points out insufficiencies, but offers little or no suggestions for what to do differently. This is a bit of an overstatement, but when I was first introduced to research on mathematics classroom discourse, I was surprised at the overly critical tone in some of this work. I had just recently been teaching grades 7-9 mathematics and, given the critical nature of this work, looked for more information about what teachers might do differently. As a secondary mathematics teacher, I had a lot of coursework in mathematics but had never been exposed to information like that

which I read in this literature. I wondered why we would think mathematics teachers would do anything different from what was being reported.

I also noticed that there was little focus in this research on the role of 'common sense' in the discourse practices and that there were no descriptions of collaborations with the teachers to work through dilemmas and issues with them. Instead, the articles were more distance reports of what happened in the classroom discourse. Some of the Discourses that these kinds of reports could perpetuate include: delegitimising 'insider' perspectives (Cochran-Smith & Lytle, 1993), maintaining a divide between research and practice, and assuming that teachers should 'step out' of and question their own Discourses in ways that most people, in general, do not. Some of the work that I have done over the past 10 years has been in response to this "overly critical parent" relationship.

Background on Collaboration

As way of background, I describe a long-term collaboration I had with a group of eight secondary mathematics teachers and Michelle Cirillo, who was a PhD student at the time. From 2004-2010, we worked together to better understand how mathematics teachers' beliefs and practices might change over time when they were part of a study group reading about mathematics classroom discourse and engaging in cycles of action research (see Herbel-Eisenmann and Cirillo, 2009). We spent a year (2005-2006) collecting base-line data on each teacher's background, beliefs, and current mathematics classroom discourse practices through video-recording four weeks of their classroom interactions across the school year. We then read and discussed many books, articles, and book chapters focused on classroom discourse and mathematics classroom discourse. After a few months of reading about action research, each teacher designated a focus for her/his first cycle of action research and then spent two years engaging in cycles of action research (including collecting and analysing data, reading additional literature, and reframing the focus as appropriate). The teacher-researchers also provided member checks for analyses that we did related to the overarching project goals.

In the next few sections, I share two investigations of the study group setting and related contemplations about my practice as a mathematics teacher educator. The investigations relate to my trying to develop different kinds of relationships than typical PD in my work with teachers. The contemplations will make transparent some of the things I have learned from this work. I believe that this kind of contemplation of our practices as mathematics teacher educators can lead us down a path of Discourses that forge relationships and advocate for the professionalism of teaching, which could lead to a more equitable treatment of teachers, more broadly. I return to this point later.

Investigation 1: Professed Beliefs and Practices

In this first investigation, I focus on a relationship that only became apparent to me after study group data were analysed. The relationship I think this captures is that of an "unreflective mentor" or working with someone who is maybe more experienced than you are, but who mentors in the same way s/he was mentored. It was not until a few years into the project that I made explicit to myself some of my own professed beliefs about work with teachers going into the project. This reflection was prompted by the fact that, in the fourth year of the project, I began to wonder whether I was being as helpful as I might be to the teachers as they investigated and tried to be more purposeful about their discourse practices. One belief that I went into this work with was that teachers' practical knowledge was different from, but just as important as, knowledge published in academic journals. For example, teachers' practical knowledge is often more contextually grounded, localized, nuanced, and meaningful to practice than knowledge published in academic journals. Its standards are guided by trustworthiness rather than some form of 'validity' as is often described in academic research (Zeichner & Noffke, 2001). Like others who engage in collaborative teacher research, I want to challenge "the hegemony of an exclusively university-generated knowledge base for teaching" (Cochran-Smith & Lytle, 1999; c.f. Atweh, 2004; Cochran-Smith & Lytle, 1993; Zeichner & Noffke, 2001).

Lord (1994) had also convinced me that engaging in "critical colleagueship" was necessary for transforming practice. Lord's framework that described critical colleagueship included, for example:

- *Creating and sustaining productive disequilibrium through self-reflection, collegial dialogue, and on-going critique.*
- *Embracing fundamental intellectual virtues (such as openness to new ideas, willingness to reject weak practices or flimsy reasoning when faced with countervailing evidence and sound arguments, accepting responsibility for acquiring and using relevant information in technical arguments, assuming collective responsibility for creating a professional record of teachers' research and experimentation) (pp. 192-193).*

In particular, these notions about critique and how one expresses "intellectual virtues" were compelling to me and I tried to work on them in the study group and during discussions of my collaborators' action research projects.

I was fortunate to have these aspects of my practice as a teacher educator interrogated when two PhD students with whom I worked agreed to investigate the PD interactions (see Males, Otten, & Herbel-Eisenmann, 2010). The research question addressed was: What are the features of challenging interactions in each of the phases of the PD (i.e., study group discussions versus action research discussions) and how do challenging interactions relate to critical colleagueship, in particular, intellectual virtues, found? "Challenging interactions" were defined

as interactions in which the teacher-researchers or teacher-educator-researchers probed or used questions to push individuals to think more deeply about an idea or a particular practice. Very briefly, we found: 1) There were many more challenges during study group discussions than during action research discussions; and 2) The teacher-researchers used stories as the basis for their reasoning, rather than a form of argumentation.

What did this investigation make me contemplate as a mathematics teacher educator? This idea of "intellectual virtues" involves practices more like academic university discourse than discourse practices outside of academia. I realized that my enculturation into academic culture made me value these virtues in new ways; they were not something I experienced in PD as a classroom teacher. I have now come to think of these project meetings as a "hybrid space"—not a course in which I am trying to mentor graduate students to become researchers, but also not an informal dinner party with friends.

Given this new view of project meetings as hybrid spaces, I began to question my assumptions about what intellectual virtues might look and sound like. My unarticulated belief going into the project was that teachers would engage in the kind of practices that I learned in academic settings. If I chose to maintain this belief, however, then how was I to make sense of the fact that the teachers chose to use story telling as a form of reasoning? If I continued to maintain this view of intellectual virtues, then what might be some of the unintended consequences of this belief? I turned to the discourse literature to better understand what difference this might belief might make. Two potential unintended consequences emerged from my reading.

First, in literature about "floor" development, I learned that there are at least two kinds of floors: singly-developed floors (SDFs) and collaboratively-developed floors (CDFs) (Edelsky, 1993). Singly-developed floors are characterized by "monologues, single party control, hierarchical interaction where turn takers stand out from non-turn takers and floors are won or lost (Edelsky, 1993, p. 221), whereas collaboratively-developed floors include "more informal, cooperative ventures which [provide] both a cover of 'anonymity' for assertive language use and a comfortable backdrop against which [participants] can display a fuller range of language" (Edelsky, 1993, p. 221). The evidence-based argumentation discourse I had expected had much in common with SDFs. More importantly, I learned that research has shown that men, in mixed-gender meetings, participate more equally with women during CDFs rather than dominating the floor, as they were found to do in SDFs. During CDFs, women were also shown to take on the role of questioner in ways that they did not in SDFs. During CDFs, then, women and men might be more likely to interact as equals than they might in meetings that are based on SDFs. It may be that SDFs

that are characteristic of academic discourse are not appropriate for these hybrid spaces and they may perpetuate gender inequity.

One reaction to this finding might be that I needed to change my practice by establishing different norms for interaction that are more like academic argumentation. For example, I could make the norms of intellectual virtue more explicit, explaining to teacher-researchers how to interact in ways that might be valued by academic researchers. Yet, as someone who values practical knowledge, this option seems limited and might de-value practical knowledge. From the discourse literature, I also learned that narratives play an important role in developing complex understandings and are important persuasive tools. For example, Florio-Ruane (2001) examined the narratives that prospective teachers told during a study group focused on culture and literacy and found that narratives were part of an important, intellectual process that helped prospective teachers learn about themselves and their role in teaching. Through discussions, the narratives built upon one another and moved the joint work of the group forward, acting as a scaffold with peers and/or more experienced others and resulting in a deeper understanding of culture and identity. Florio-Ruane argued that participants formed "a kind of connected knowing" (p. 136) through their narratives. Furthermore, I learned from Juzwik (2009) that narratives serve a performance function by which teachers were able to identify with others in order to persuade them. Attending to stories as rhetorical devices could help me to understand how narratives persuade in more subtle ways than explicit claims-evidence argumentation.

I now understand that I need to pay closer attention to how the floor is being developed in project meetings and that I need to listen carefully to when, how and why teacher-researchers tell the kinds of stories they do. I also need to consider the ways in which these stories construct a complex understanding of classroom discourse through tracing how the narratives build on the thematics of each other. If stories are important sense-making tools for teachers, then my practice should develop toward knowing when stories stall the work or when they help us move forward. According to Florio-Ruane (personal communication, January, 2010), these skills can be developed through careful listening, discussions with teachers, continued reflection, and systematic investigation.

Investigation 2: Exploring Discourse-Related Ideas *with* Teachers

This second investigation (see Herbel-Eisenmann, Drake, & Cirillo, 2009) of the study group interactions is an example of my trying to work in opposition to the "overly critical parent" relationship I described earlier. This example illustrates what might happen when we develop a collaborative relationship with teacher-researchers over a period of time and how those relationship can help us see

anew particular ideas that are primarily written about in articles by university researchers.

One central discourse-related idea that the teacher-researchers in this project talked about and became interested in exploring in their practice was the idea of "revoicing" or "the reuttering of another person's speech through repetition, expansion, rephrasing, and reporting" (Forman, Larreamendy-Joerns, et al., 1998, p. 531; originally introduced by O'Connor & Michaels, 1993; 1996). Mathematics education researchers have labelled this idea as "powerful" (e.g., Franke, Kazemi, & Battey, 2007) -especially in relation to the more typical Initiate-Respond-Evaluate (Mehan, 1979) interaction pattern. The reported evidence related to the impact of revoicing, however, is sparse. We also know little about how teachers and students think about various discourse moves, including revoicing. I would argue that it is difficult to know how revoicing might be powerful unless we understand how it is interpreted by teachers and students, the people who are actually engaged in these discourse practices.

In this investigation, we took seriously the need for mathematics education researchers and teacher educators to better understand revoicing from teachers' perspectives. The questions we sought to answer were: What did the teacher-researchers talk about when they talked about revoicing? How did they talk about revoicing? How did their ways of talking about revoicing change over time?

We found that the teacher researchers highlighted the multiple (and often simultaneous) forms, functions and meanings of revoicing. They also recognized the fact that revoicing could have intended and unintended meanings. From their insider perspective, they worried that students may have different interpretations than they did, as teachers and adults in the classroom. Many of the functions they identified related to issues of authority, power, control, and ownership of ideas. For example, teachers repeatedly distinguished situations when repeating a student might be appropriate versus when rephrasing might be appropriate. The distinction between repeating and rephrasing was related to some of the dilemmas they faced in thinking about revoicing in their own classrooms. The teacher-researchers seemed to associate repeating with allowing students to maintain ownership of their ideas, whereas rephrasing seemed to shift the ownership or control from the student to the teacher. They especially worried that, if they rephrased too much, the students would no longer see the ideas as their own. On the other hand, rephrasing was also seen as an initial step toward helping students gain facility with mathematical discourse, whereas repeating seemed more often to serve the purposes of amplification or encouraging students to listen to each other's ideas. Finally, the teacher-researchers highlighted the fact that the context mattered to their interpretations of revoicing. Their interpretations, for example, focused on contextual information like which

class period they were in, the nature of prior experiences they had with particular students, and where they were in relationship to developing content ideas.

In contrast to these issues the teacher-researchers raised, publications written by university researchers tended to do quite different things. Typically, for example, university research clarifies and defines complex phenomenon in ways that reduce the messiness of the ideas. The interpretations they offer are from their outsider perspective view, often drawing on particular theoretical or discursive frameworks that make sense to them. Finally, the only place "context" appears in these publications is in the methods section when researchers describe the research context. The kinds of context the teacher-researchers described as being important is typically not included in the findings of research articles.

This investigation helped me to contemplate the fact that practical knowledge unearths the messiness and nuance of teachers' work. Knowing more about teachers' perspectives help me to better understand what they do and why they do it. I also learned that the lenses being brought to the work on revoicing (and many other discourse-related constructs) needed to be augmented to account for issues of power, control, ownership and authority. These shifts in my thinking had a strong impact on my work since 2010, for example, inspiring another long-term collaboration with David Wagner and a group of teachers in Canada to understand issues of authority (Wagner & Herbel-Eisenmann, 2014a; 2014b). From a more practical stance, this inquiry also provided a useful process for reflecting on and improving my practice as a teacher educator and an author of PD materials (Herbel-Eisenmann, Cirillo, Steele, Otten & Johnson, forthcoming). We have since then used this process to improve a set of professional development materials we have been developing and piloting (c.f. Herbel-Eisenmann, Steele, & Cirillo, 2013). After some of the piloting of these materials, we investigated how teachers talked about the mathematics register (Herbel-Eisenmann, Johnson, Otten, Cirillo, & Steele, 2015) and about positioning in their classrooms (Cavanna & Herbel-Eisenmann, 2014; Suh, Theakston Musselman, Herbel-Eisenmann, & Steele, 2013). We were able to use what we learned to improve the activities and the support materials for facilitators.

Conclusion: Obligation to Relationships and Advocacy

The two investigations and contemplations I shared have brought me to a clearer understanding of the kinds of relationships I am trying to work toward and how to work toward what I now think of as "healthy relationships" with teachers. These relationships are based on genuineness, honesty, commitment from both sides, support, communication, and not on false pretense or promises to 'fix' someone or something. They require on-going reflection on what aspects work in the relationship, for whom, and why.

I see an obligation now to work toward healthy relationships because they are a form of advocacy for teachers. Although we often talk to teachers about advocating for the children with whom they work, as teacher educators, we have to consider our own power to advocate for teachers, too. In a policy context like the U.S. in 2001 where national leaders put into place No Child Left Behind (a program that substantially increased the testing requirements to increase accountability (see Linn, Baker, & Betebenner, 2002)), state policymakers proclaim that teachers are just glorified babysitters and need to be monitored through things like students' test scores, and neoliberalism is the underpinning view guiding decision-making, I see an obligation to take a stance of commitment to stand up for teachers. I believe we need to: let policymakers and decision-makers know and understand that one-shot workshops are not healthy relationships nor are they ways to support teachers to improve their practice; say no when districts call us to do one-shot workshops and explain to them why we are saying no; and to resist these Discourses of de-professionalisation, despite the potential "feel good" things I mentioned when I compared them to brief love affairs.

I end with a declaration and plea for mathematics teacher educators to *avoid agnosticism*. Some of the ways we can get started are to: make explicit the analogies/metaphors of our work in order to make transparent our (often tacit) beliefs and values; unearth the embedded assumptions in order to understand the Discourses we are treating as common sense so we can make purposeful decisions about disrupting inequitable practices; explore phenomenon *alongside* teachers; and commit to healthy relationships and advocacy. If we expect teachers to work toward equitable practices with their students, we must also work toward more equitable systems and practices for teachers.

Acknowledgement: The research reported in this paper was supported by the National Science Foundation (Award #0829306, Herbel-Eisenmann, PI; Award # 0918117, Herbel-Eisenmann, PI, Cirillo & Steele, co-PIs) in the U.S. and by the Social Sciences and Humanities Council (Wagner, PI) in Canada.

References

Atweh, B. (2004). Understanding for changing and changing for understanding. In P. Valero & R. Zevenbergen (Eds.), *Researching the socio-political dimensions of mathematics education, Volume 35* (pp. 187-205). Springer: New York.

Cavanna, J. & Herbel-Eisenmann, B. (July, 2014). Teachers' talk and take-up of positioning. Short research paper presented at the *Joint Meeting of the International Group for the Psychology of Mathematics Education and the North American Chapter of the International Group for the Psychology of Mathematics Education.* Vancouver, British Columbia.

Cochran-Smith, M. & Lytle, S.L. (Eds.) (1993). *Inside/outside: Teacher research and knowledge*. New York: Teachers College Press.

Cochran-Smith, M., & Lytle, S. L. (1999). The teacher research movement: A decade later. *Educational Researcher*, *28*(7), 15-25.

Edelsky, C. (1993). Who's got the floor? In D. Tannen (Ed.), *Gender and conversational interaction* (pp. 189-227). New York: Oxford University Press.

Florio-Ruane, S. (2001). *Teacher education and the cultural imagination: Autobiography, conversation, and narrative*. Mahwah, NJ: Lawrence Erlbaum Associates.

Forman, E.A., Larreamendy-Joerns, J., Stein, M.K., & Brown, C.A. (1998). "You're going to have to find out which and prove it": Collective argumentation in a mathematics classroom. *Learning and Instruction, 8*(6), 527-548.

Franke, M., Kazemi, E., & Battey, D. (2007). Understanding teaching and classroom practice in mathematics. In F. Lester (Ed.), *Second handbook of research on mathematics teaching and learning* (pp. 225-256). Charlotte, NC: Information Age Publishing and Reston, VA: NCTM.

Gee, J.P. (2014). *An introduction to discourse analysis: Theory and method, 4th Edition.* Routledge: New York.

Herbel-Eisenmann, B., Cirillo, M. (Eds.) (2009). *Promoting purposeful discourse: Teacher research in mathematics classrooms.* Reston, VA: NCTM.

Herbel-Eisenmann, B., Cirillo, M., Steele, M.D., Otten, S., & Johnson, K. (forthcoming). *Mathematics discourse in secondary classrooms: A case-based professional development curriculum.*

Herbel-Eisenmann, B., Drake, C., & Cirillo, M. (2009). "Muddying the clear waters": Teacher's take-up of the linguistic idea of revoicing. *Teaching and Teacher Education, 25*(2), 268-277.

Herbel-Eisenmann, B., Johnson, K., Otten, S., Cirillo, M. & Steele, M. (in press). Mapping talk about the mathematics register in a secondary mathematics teacher study group. *Journal of Mathematical Behavior*, DOI 10.1016/j.mathb.2014.09.003.

Herbel-Eisenmann, B., Steele, M.D., & Cirillo, M. (2013). (Developing) teacher discourse moves: A framework for professional development. *Mathematics Teacher Educator, 1*(2), 181-196.

Juzwik, M.M. (2009). *A rhetoric of teaching: Performing Holocaust narratives in a literacy classroom*. Cresskill, NJ: Hampton Press.

Linn, R. L., Baker, E. L., & Betebenner, D. W. (2002). Accountability systems: Implications of requirements of the no child left behind act of 2001. *Educational Researcher*, *31*(6), 3-16.

Little, J.W. (1990). Conditions of professional development in secondary schools. *The contexts of teaching in secondary schools: Teacher's realities,* 187-223.

Lord, B. (1994). Teachers' professional development: Critical colleagueship and the role of professional communities. In *The future of education: Perspectives on national standards in America* (pp. 175-204). New York: College Entrance Examination Board.

Males, L., Otten, S., & Herbel-Eisenmann, B. (2010). Challenges of critical colleagueship: Examining and reflecting on mathematics teacher study group interactions. *Journal of Mathematics Teacher Education, Special Issue on Teacher Change, 13*(6), 459-471.

Mehan, H. (1979). *Learning lessons.* Cambridge, MA: Harvard University Press.

O'Connor, M.C. & Michaels, S. (1993). Aligning academic task and participation status through revoicing: Analysis of a classroom discourse strategy. *Anthropology & Education Quarterly, 24*, 318-335.

O'Connor, M.C. & Michaels, S. (1996). Shifting participant frameworks: Orchestrating thinking practices in group discussion. In D. Hicks (Ed.) *Discourse, learning, and schooling* (pp. 63-103). New York: Cambridge University Press.

Phelan, A.M. (2015). *Curriculum theorizing and teacher education: Complicating conjunctions*, New York: Routledge.

Suh, H.J., Theakston Musselman, A., Herbel-Eisenmann, B., & Steele, M.D. (October, 2013). Teacher positioning and agency to act: Talking about "low-level" students. Research paper presented at the 35th annual meeting of the *North American Chapter of the International Group for the Psychology of Mathematics Education,* Chicago, IL.

Sullivan. P. (2006). Dichotomies, dilemmas, and ambiguity: Coping with complexity. *Journal of Mathematics Teacher Education, 9*, 307-311.

Wagner, D. & Herbel-Eisenmann, B. (2014a). Identifying authority structures in mathematics classroom discourse—a case of a teacher's early experience in a new context, *ZDM, 46*(6), 871-882.

Wagner, D. & Herbel-Eisenmann, B. (2014b). Mathematics teachers' representations of authority. *Journal of Mathematics Teacher Education, 17*, 201-225.

Zeichner, K. M., & Noffke, S. E. (2001). Practitioner research. In V. Richardson (Ed.), *Handbook of research on teaching*, *4th Edition* (pp. 298-330), New York: MacMillan.