

**“Working with” as a Methodological Stance:
Collaborating with Students in Teaching, Writing, and Research**

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Pre-published, post-refereed version of:

Siry, C. & Zawatski, E. (2011). “Working with” as a methodological stance: Collaborating with students in teaching, writing, and research. Invited contribution to *The International Journal of Qualitative Studies in Education*, 24 (3), 343-361.

Available at Taylor and Francis online:

<http://www.tandfonline.com/doi/abs/10.1080/09518398.2010.539581#preview>

Introduction

Before this course, I was one of those people who thought of taking a course (and of teaching) as an individual endeavor. I never thought of it any other way because it was how I experienced teaching in all the courses I had taken. I can remember thinking about how annoyed I was that I was going to have to work with other students in this class, especially those I didn't know. I imagined them being lazy or uncooperative. Anything that could go wrong with a partnership I imagined would happen in my experiences working with the other students. I remember thinking about the amount of time it would take to meet and discuss, even after Chris said we would do most of the planning together in class time. However, once the course began and I began to collaborate, the negatives I had imagined began to dissipate and I realized how beneficial it was to have someone to bounce ideas off of. (Beth, journal entry)

This paper is about “working with” others in classrooms. In the above reflection, Beth (a pre-service teacher) writes about her experiences as a participant in a field-based science methods course that incorporates collaborative teaching and planning as central components of learning to teach. We, the authors of this paper, were participants in this course in the fall of 2007. Chris (the first author) was the instructor, and Beth (the second author) was a student. Within this course, participants met twice weekly; with one session devoted to coteaching science to children in an elementary school and a second session occurring on campus to engage in dialogue around our experiences in the classroom. Science teaching was a shared event, as we all worked together to develop a unit that we then taught collaboratively within the same elementary classroom on a weekly basis for one semester.

This critically oriented research, and the teaching in the course in which the research was conducted, is driven by one central question: How can we find ways in education and educational research to work *across* and *around* hierarchical institutional structures when working with our students? We have wondered, what are ways that we can examine our individual lived experiences together, and is it possible to work with each other to develop identities as teachers that are not predicated on power differentials? Our opening vignette situates our primary focus on shared

responsibility through collaborative methods. In the sections that follow, we examine specific ways we approached teaching together, researching together, and learning together, and we elaborate on collaboration as a methodological stance to push against existing hierarchical structures of teacher > student, researcher > researched, and self > other¹. We detail how a collaborative approach served to work towards achieving polysemicity and highlighting difference, and we discuss how we learned about each other and learned about teaching. Ultimately, we draw pedagogical implications for teacher education courses as a place to deconstruct the notions of “teacher” and “student” and emphasize the multiplicity of perspectives in classrooms while supporting the co-construction of relationships built upon learning together.

Situating our study: A collaborative field-based framework to learning to teach

Elementary classrooms are multifaceted, unique contexts, and teaching and learning are extremely complex processes. The field of teacher education has long been trying to prepare pre-service teachers for the complexities of teaching and learning. One approach has been to situate teacher preparation “in the field” of classrooms. Our research examines field-based experiences for pre-service teachers within a methods course designed to be partially based in an elementary classroom. Off-campus methods courses are not new, and the call for courses to emphasize interactions that approximate what might be found in real teaching situations has existed for decades (e.g. Drumheller & Paris, 1966; Ashenfelter & Hanson, 1971). However, despite substantial literature concerning field experiences and practica for pre-service teachers (e.g., ten Dam & Blom, 2006), there is surprisingly little recent literature that concerns field-based methods courses specifically.

Many programs have clinical experience or practica, yet they rarely provide opportunities for pre-service teachers to teach *with* their colleagues in schools. Our

study focuses on a methods course in particular and examines the role of cotaught lessons in which all course members participate in teaching, and thus in learning to teach, science together in classrooms. As the opening reflection alludes to, in these *collaborative field-based science methods courses* participants work together to develop lessons to teach to elementary-aged children. In the teaching of the science lessons, the course participants (including Chris, the instructor) work together in the same classroom. These shared teaching experiences then provide the basis for critical, reflexive analyses of children’s learning and our teaching, as the interpretations of events are discussed by members of the group in cogenerative dialogues (Tobin & Roth, 2006). Cogenerative dialogues are a key structure to this course, as these conversations provide the opportunity for reflexively considering shared experiences with the explicit purpose of revealing different perspectives and considering plans of action to improve teaching and learning.

Pushing back on reductionist teacher “training”

Current pressures in teacher education policy are creating a trend away from equity-oriented, professionalized approaches to learning how to teach, and towards a renewed focus on teacher-as-technician approaches that define teaching in terms of discreet skills and testable knowledge (Sleeter, 2008). Teacher education is dominated by an emphasis on measurable outcomes and skills, often with the specific focus on preparing children to be successful on standardized tests. This reliance on steps and processes frames teaching as a low-skill activity, and reduces teaching to passing on a set of discreet facts and limited meanings to be reproduced (Kincheloe, 2003). In these reductionistic approaches to teacher education, pre-service teachers “are often preoccupied with learning the “how to”, with “what works” or with mastering the best way to teach a given body of knowledge” (Giroux, 2003, p. 208). Rather than

attempting to reconstruct a given set of facts, the teacher education course that we write about herein is based upon the view that meanings reside within and through collective relationships and interactions. With that understanding, and by collaborating to construct experiences within an education course, participants can be supported in producing knowledge about teaching and learning together. In doing so, they are positioned to critically push back against the forces that assume that standards and strict accountability equate with gaining knowledge.

The overlapping experience of co-constructing a field-based course and co-constructing research around the course is our focus in this paper, as we posit alternatives to teacher “training” and traditional hierarchical structures. Maxine Greene (1995) emphasizes that seeking alternatives might lead to new approaches as “once we can see our givens as contingencies, then we may have an opportunity to posit alternative ways of living and valuing and to make choices” (p. 23). Our collaborations occurred through a combination of the field-based course and a subsequent research group that examined what was accomplished within the course. Greene’s emphasis on making choices connects with the focus of the course and our collaborative research, as it is in creating opportunities for teachers to explore and develop their own strategies to engage students in meaningful, relevant work that we seek alternatives to the status quo. In this search for alternatives, we can counter the false notion that teaching methods can be removed from the subject being taught, and that this in turn can be removed from processes occurring within classrooms.

The complexities of collaboration

Key to our experiences is that they are based on collaboration. Distinct from cooperation, in which individual efforts are generally accomplished side-by-side, collaboration refers to the work of a diverse group focused on coordinating individual

efforts to complete a common task, and to complete it together (Ares, 2008). Within educational research specifically, a focus on collaboration can bring diverse perspectives to interpretation and subvert the false notion of a single truth (Author, accepted a). The phrase “*working with*” in this paper’s title illustrates the methodological, pedagogical foundation of collaboration emphasized through our framework to a field-based methods course. Cogenerative dialogues, coteaching, and coresearching all served as approaches for collaboration during and after the course. Cogenerative dialogues are structured discussions between participants in educational situations, generally with a focus on improving practice. Cogenerative dialogues can afford opportunities to “identify and review what seems to work and what does not, especially practices and schema that disadvantage participants” (Tobin & Roth, 2006, p. 81). They have been transformative in a wide variety of teaching and learning situations, including for resolving conflict in classrooms (Martin, 2005), expanding roles by positioning students as researchers (Elmesky & Tobin, 2005), and as professional development and evaluation of in-service teachers (Martin & Scantlebury, 2009). Coteaching connects with cogenerative dialogue as together these approaches provide the opportunity for teachers to reflexively consider events they have shared with the purpose of improving teaching.²

Our explicit focus on working together to co-construct science teaching experiences emphasizes a two-fold perspective: first, the desire to understand the perspectives of others, and second, the focus on learning by assuming (and sharing) responsibility for teaching and learning. Dialogical encounters structured around collaboration are intended to push against the institutionally embedded notions of the role of “teacher” and the role of “student”, as it is the students who construct the teaching and learning experiences.

Within this particular collaborative field-based framework, coteaching and cogenerative dialogue have been shown to facilitate collective responsibility for teaching science (Author, accepted b) and for supporting new teachers’ developing sense of themselves as professionals (Author, 2010). Further, this structure mediated pre-service teachers’ identities as new teachers of science and their sense of belonging and solidarity (Author, 2009). Herein we narrow and deepen our interpretive focus to consider the specific ways this process generated, and was generated by, a methodological, epistemological approach to plurality grounded in the complexities of collaboration.

Producing knowledge on learning to teach together

We utilize cowriting to highlight what happened within our course from personal, individual perspectives. In working towards a polyvocality within writing and research, we often write from a voice of “we”. However, we stress that part of our epistemology requires the seeking of a plurality of perspectives, and requires recognizing individual differences. Through our polyvocality, we emphasize working towards polysemicity that acknowledges and welcomes difference. For that reason we intentionally interrupt the textual voice of *we* with the voice of *I*, and textboxes serve to set off these perspectives as we seek to “disrupt the narrative of ‘we’ with the thoughts of the ‘I’” (Author, accepted a). These distinctive written voices highlight the multiple, situated, shifting positions and perspectives that we hold at any given time and come together *around*, and *as*, data to analyze and interpret as we draw connections. Collaborative co-writing is what Dorothy Lander and Leona English (2000) refer to as “second-person knowing” (p. 346) – coming to know the other so that there can be a search for understanding across difference. As we collaboratively produced knowledge on our experiences through this manuscript, transcript excerpts

guided our writing. We present moments that have passed, and layer upon these our current responses within textboxes, as we theorize together the ways this process emphasized the plurality of experiences and the value of communicating across difference. We stress that no moment can be captured and re/presented completely, and in the retelling and reframing, it always becomes something new.

The research project: Contextualizing “us”

This is a study of lived experiences, and hermeneutic phenomenology shed light on the contextual aspects of individual experiences and provided a meaningful way to represent and learn about experiences. Phenomenology describes how one orients to lived experience; hermeneutics describes how one interprets the “texts” of life. A hermeneutic approach seeks a “fusion of horizons” (Gadamer, 2004), with a horizon being all that we can “see” from where we are as historically, culturally situated individuals. As people come together in dialogue, they each bring their own perspectives and histories. Fusing horizons does not require turning these differences into sameness; quite the contrary, it clarifies the dialogue that occurs between what is familiar and what is unfamiliar and makes it clear that there is never a complete understanding. Thus, interpretation is central to approaching knowledge, and each person’s interpretation is different (Warnke, 1987). The emphasis in our course hermeneutically was on understanding and interpreting concepts while building upon personal situatedness. Phenomenology layers well with hermeneutics as it supports trying to arrive at a description of phenomena; “from a phenomenological point of view, to do research is always to question the way we experience the world, to want to know the world in which we live as human beings” (van Manen, 1990, p. 5). This approach does not look at a problem per se, or for a solution, it looks at an experience and tries to see things through others’ points of view. Thus, a hermeneutic

phenomenological approach provided a way of capturing different ways of knowing and understanding, as it provided insight into the essence of experiences for ourselves and for each other. As we consider how relationships manifested themselves within the context of this study and how we worked to deconstruct and then reconstruct the roles of “teacher” and “student”, we next summarize the structures of the course to contextualize the discussion that follows.

The course

This photo shows a typical cogenerative dialogue from our course. There are eight people around a table, though not all are visible. The table was created by participants each session, as the classroom actually had individual desks. Before each meeting, people moved the desks so that we could sit together. Participants did not select “set” seats, and simply sat around the table in different spots each week. In this photo, Author B is at the top of the table, and she was sharing with the group the details of an interaction with a child during the previous science lesson, and there is evidence of the typical focus of the group on whoever was speaking at a given moment.

<< INSERT FIGURE 1 HERE >>

Many of our cogenerative dialogues³ focused on the lessons we were coteaching in the elementary classroom, and a central focus was discussing what happened in the previous week (from our varied perspectives) and using these experiences to construct the upcoming science lessons.

Chris: It important for me as an instructor of a course to not only say that I value people’s input, but to be ready to accept their suggestions - even if perhaps it is not what I might have tried to do in the classroom. This can be difficult sometimes, as there are often my “favorite” activities. But it is crucial that I open myself up to the suggestions of others, even if it means not being able to implement activities that I might consider to be the “best” activity at that moment.

Cogenerative dialogues were central, as they provided a space for revealing differing perspectives, experiences, and opinions. Importantly, a key motive within cogenerative dialogues is to “enact forms of culture that expand the agency of all participants and produce agreements on how to enact curricula differently in a classroom so as to afford improvements in the quality of teaching and learning” (Tobin & Roth, 2006, p. 88). Combined with cogenerative dialogues, coteaching served as a central approach to learning how to teach, and coresearching mediated learning how to research one’s practice. As a whole, this approach provided polysemic perspectives in our teaching and research.

The context

Our course⁴ met twice weekly over 15 weeks, once each week on the college campus and once at a local elementary school. There were 7 pre-service teacher participants; three were Juniors and four were Seniors. Chris was the instructor of the course, and had been a faculty member at the college for 4 years. Chris’s background includes having taught elementary science, and at the time of the study she was beginning her third year as a doctoral student. The elementary school is a K-5 school with approximately 500 children enrolled the year of our collaboration. The college is a small private college located about 30 minutes outside a major metropolitan area in the northeastern United States. There were less than 2000 undergraduate students in the college as a whole, and the undergraduate teacher preparation program consisted of approximately 65 students enrolled in the childhood education program (leading to state certification for 1st through 6th grade).

The research process

This research is part of a larger study on the role of collaborative field-based science methods courses, which documents and analyzes six semester-long courses. In this paper, we write about the fall 2007 semester, in which all cogenerative dialogues and cotaught lessons were videotaped, and these served as the central data source for this study. Our joint analyses began after the course concluded, as Chris invited participants to join a research group that met bi-weekly for the following semester. All members of the course during fall 2007 participated in research afterwards to varying degrees, depending on their time and interest, and numerous collaborative papers and presentations have emerged from this study (e.g.; Author, accepted). As a critical ethnography (Carspecken, 1996), the research project was a lens to examine the forces acting upon teachers and students, and to consider issues of power and authority as manifested in educational institutions (McLaren, 2007).

Beth and two other pre-service teachers chose to participate in a weekly research group, and our initial analyses consisted of discussing within this group our recollections of course events. From these discussions, we decided to view videos individually and then discuss them in research meetings. Overall, our analytic interpretative process was quite messy, as structures emerged and shifted with our needs. For this particular manuscript, we drew on autoethnographic and co/autoethnographic methods to frame our analysis (Coia & Taylor, 2009). These analyses led to an initial focus on the ways collaboration and the focus on working together structured our individual and collective experiences in the course. As we began to conceptualize this paper specifically, we considered the broad question of *What did the structure of collaborative practices enable in the context of a field-based methods course?* In holding this initial question, we then narrowed our focus to specific ways this structure revealed and supported a methodological stance towards

working together around and against hierarchies, and how this in turn supported pre-service teachers in understanding the multilogical, polysemic ways we each make sense of our own experiences as we work with others.

Working “with”...

Next we examine three different findings related to engaging in collaborative practices in the context of our course and research, as this approach has (1) mediated our learning about teaching as a collective endeavor, (2) highlighted the importance and differences in individual experiences, and (3) supported us in reconsidering, and reconstructing, the role of teacher. We discuss these findings in this section and surround them in meaning with examples and discussions relative to the implications of working “with”.

Working “with”... to learn about teaching as a collective endeavor

Grounded in sociocultural theory, we consider teaching and learning as cultural enactment (Sewell, 1999). As such, we conceive of knowledge as socially constructed, and thus enacted. Cogenerative dialogues supported the co-construction and enactment of knowledge as they provided an opportunity to revisit classroom events. Reflexive knowledge production was ongoing, as we met to plan teaching activities, discuss events that occurred in the elementary classroom, and share successes, challenges, and new ideas. The following excerpt⁵ is of an interaction between Olga, Kate, Barb, Eileen and Chris as they share, debate, and build upon previous experiences in planning an upcoming activity originally planned to incorporate children’s written reflections on their science lessons.

Olga: I think that if we have the kids write their thoughts down, it will take too long. They are re:ally slow writers.

- Kate: what if the data sheets we develop have some writing though, and that each table of kids work together to generate a sentence that sums up their idea, and then all the kids at that table can write that sentence.
- Barb: or, we could build on that idea and then also have a sentence with a blank at the end that they fill in, like it would say, my favorite part of this science activity was, and have a blank space.
- Eileen: I don't know about that idea-
- Barb: well, then they can think back together on the activity and think of their own words that are what they liked.

After three minutes of discussion of a similar activity Barb had seen in a classroom observation, they return to the idea of worksheets for their lesson, and the interaction continues with the follow exchange:

- Krista: maybe it won't take too long if we ask them to do this as part of our lessons and we can just do [it]
- Kate: [do] we have to get it done? Can't we just have it as a choice and then if we get to it we get to it?-
- Barb: maybe we could suggest to Mrs. Nevins that she have a science journal? She has to teach so::: much writing, she could have them write about what they did with us in their journal, then we can focus on the science. If she incorporates it into her language time, then we can have them just write those individual words and we combine everything.
- Chris: well, if many of our lessons will use a weekly data sheet for organizing our activities, this idea of connecting it with their existing journals might work really well – should we suggest it to her and see what she says?

This interaction began with Olga expressing her hesitation that too much of their (very limited) time in the classroom would be taken up by the students writing their reflections to the activity. In response to her comment, two possible ways to incorporate a summarized approach to writing are introduced, as Kate suggests the groups of children decide on one sentence, and Barb counters that there could be a blank space for children to complete individually. Eileen is clearly skeptical as she

states *I don't know about that idea*, to which Barb clarifies her justification of the fill-in-the-blank idea as something that would allow the students to contribute their own ideas to the worksheets. These pre-service teachers had taught only one other lesson together, which was the first lesson most of them had ever taught. As the conversation unfolded, Barb introduced an activity she had seen in another classroom, and she brought these experiences to the group with an exchange that lasted over 3 minutes, concerning her observations similar to her suggestion. In refocusing to the activity they were trying to develop, Krista suggests having the students write quickly, but Kate interjects her thoughts on having the sheet as an option (*Can't we just have it as a choice and then if we get to it we get to it?*). As the exchange concludes, Chris reminds the group that they had decided previously to use weekly data sheets, and thus having the writing as a choice would connect with the structure they already planned, and she turns to a consideration of the classroom teacher with *should we suggest it to her and see what she says?*

It is critical to provide opportunity for dialogue to open up the space to reveal different perspectives on teaching and learning. For us, cogenerative dialogues and coteaching provided the structures to do this, as they served as a method and a methodology for moving towards a multiplicity of perspectives in the collective construction of the course.

Beth: Coteaching allowed us to feel supported not only by Chris, as the professor, like maybe in a traditional student-teaching approach to a lesson, but as much by our peers as well. The attitude while we were teaching was more of a “one for all, and all for one” sentiment, because of the investment we have all made in the lessons and the relationships we formed through the constant dialogues we had.

Through the structure of shared responsibility we have pushed back on the traditional notion of the classroom as a place of individual successes and instead have created an environment where collaboration is central to working toward the success of each and

everyone involved. Collaboration can paint a clearer picture of multiple meanings, as collective organization and creation of thoughts can be a transformative experience for participants. Lander and English situate their perspective on collaboration as “relational and responsive knowledge” (2000, p. 348), and in this perspective they draw on Mikhail Bakhtin’s (1984, p.110) conception of truth: “Truth is not to be found inside the head of an individual person, it is born between people collectively searching for truth, in the process of their dialogic interaction.” In collectively searching for “truth” in the way that Bakhtin framed it, working “with” takes an endless path, as we envision the possibilities of working with: thinking with, talking with, teaching with, learning with, empathizing with, crying with, laughing with....

Working “with”... to highlight the phenomenological, individual experience

At times, our dialogues revealed moments that we saw really differently from our situated perspectives, and this highlighted the need for different voices and points of view. The following exchange is from an encounter in which Beth and Eileen discuss their two very different interactions during the same lesson.

Beth: I feel like, at least the kids at my table, didn’t really know what to DO at the tables. I feel like the explanations we give need to make sure that they are clear, so that they know what they need to do before they leave the rug, because once they get to the tables [with the science activities] it is IMPOSSIBLE to stop them to tell them what they are expected to try to do. I mean, I was the ONLY one at that table, so I had to really walk around and make sure they understood what to do, which was fine, but they started really confused, and I don’t know if it was because of the transition where they had to first start at the rug and then go to the table? Somehow it all got lost-

Chris: that’s interesting, it also was something very new too, which they hadn’t done before, so that could have contributed, did anyone else find that at their tables?

Eileen: well, I had something a bit different as I had ONE kid who really didn’t know what to draw, so I said, well, maybe draw that frog, because he was talking about

frogs and butterflies, so he drew a frog.

Chris: OK, so how did that work out?

Eileen: he was unfocused though, he kept looking around, and trying to think of what to draw.

Kaylie: that doesn't mean he was unfocused, remember that there were a lot of us there, and that can be exciting too.

This episode presents an example in which two people clearly had quite different experiences in the same classroom. Beth begins by explaining her position that the children needed clear explanations in discussions (which occurred “on the rug”) before they moved to tables. As she explains in a frustrated tone that the children

began confused (*somehow it all got lost*), Eileen responds by sharing that her dilemma was quite different, as with raised eyebrows she shakes her head from side to side and says *I had one kid who really didn't know*

Chris: I have learned from teaching this course that we are often surprised by the differences in our interpretations and experiences in the same elementary classroom. We spend a lot of time planning lessons together that we think will go “well”, and discover that things rarely go as planned, as children interact with our activities in many different ways. Having weekly dialogues with an explicit purpose of improving our teaching provides an ongoing structure to emphasize the complexity of teaching.

what to draw. She continues to state her thoughts that the child was not focused on the activity (*he was unfocused though, he kept looking around, and trying to think of what to draw*).

Alfred Schutz (1967) discussed the importance of other-awareness (Fremdverstehen), which we position as a critical methodological consideration for teaching and research. He wrote that knowledge is on the inside and on the outside, and thus the only way to know about the “inside” is to ask the other person. Part of our focus on collaborative structures provided a space to talk out individual thoughts and experiences, especially as related to learning about children. This other-awareness

emphasizes the importance of working with others to explore their understandings.

We cannot know whether or not the child was unfocused, but clearly his reaction surprised Eileen, and this opened the conversation to discussing possibilities.

Recognizing students’ different reactions emphasizes the value of turning to colleagues and sharing perspectives, and listening to / learning from each other’s experiences and concerns. Christa Albrecht-Crane has argued that the process of becoming teachers should involve creating new ways of relating to one another. She writes that teachers should not focus on discovering “the truth in one’s teaching, but rather to use one’s teaching to arrive at a multiplicity of truth-making relationships”

(2005, p. 492). The conversation in this encounter continued, with Kaylie discussing the possibility that the boy was simply distracted by us as extra adults in the classroom, as she

Beth: I see that I evolved in respect to being understanding and accepting of others’ opinions. With good communication and the understanding that everyone has differing, valid opinions, it is possible to find middle ground, to agree, or to agree to disagree.

immediately responds with *that doesn’t mean he was unfocused* while leaning into the table and shakes her head side to side. She emphasizes her point by adding that *there were a lot of us there, and that can be exciting too*.

Coming together across a variety of perspectives and positions requires being open to ideas different from our own. Joe Kincheloe advocated radical listening, that is, listening to another person or reading another person’s work with the explicit purpose of trying to understand their perspectives and working to understand “their standpoints and axiological commitments” (Tobin, 2009, p. 505). As we made explicit the dimensions of difference between us, we stressed the need to listen, and the need to empathize, and we focused on how this was manifested within the field-based course and within the production of knowledge through our collaborative research.

We opened ourselves up to others’ perspectives and tried to listen to experiences that were perhaps different than our own (while trying to avoid imposing our own perspectives on these).

Working “with” ... to reconstruct the role of a teacher

Traditionally we see that, in classrooms, teachers are expected to “know” and learners are expected “not to know”; in our experiences this has been the case in pre-service teacher education as well, with the professor often positioned as the person with the knowledge to provide. In contrast, we found that in cogenerating understandings through dialogues and collaboration, the knowledge was co-created by course participants. The following interaction occurred mid-way through the semester, as we discussed our experiences together thus far. The conversation began with the resistance participants had initially felt towards the unfamiliar concept of co-constructing their own learning and teaching experiences (as Beth alludes to in the opening vignette). Chris asks the group to consider their initial resistance within the educational structures they had experienced as students thus far, and the conversation turns to contrast previous experiences with their encounters within the collaborative course.

Beth: I feel like you see us being on the same plane as you, where in other courses, the teacher, the professors, they talk down [and]

Kate: [it’s] very much they’re the teachers and we are the students

Beth: yeah. Even though WE are supposed to not do that in our classroom, like with the kids, we are supposed to make them feel like it is our classroom together, yet a lot of our education professors make it their class,

Chris: how do you mean?

Beth: well, if you don’t do their work, the way they want it, to this specific way, then you get a bad grade.

Chris: but there is a million different ways to do it right-

Beth well, exactly, that's what I mean, and that's what we are supposed to learn as teachers, but the others don't seem to see it that way

Beth and Kate explain their thoughts on professors in other courses as the ones who control the knowledge. They refer to their positionings as students, and the higher positioning of professors, with their comments *they talk down* and *they're the teachers and we are the students*. Granted, in the institutional structures of a college course certainly they are in the role of “students”, however their point in this interaction is greater than role. It correlates to their future roles as teachers, as Beth points out with her comment that *Even though we are supposed to not do that in our classroom, like with the kids*.

We see this sense of “being on the same plane” between the group as something that was mediated by our explicit focus on collaborative structures. This evolved over time, as our relationships shifted through the complex combination of ongoing dialogue, open-ended activities, flexible expectations, and sharing of responsibility for teaching the children.

Beth: Chris expected that our ideas, observations, and difficulties, were shared as pieces of the learning. What we had to say was important to her. The structure allowed for us to become a group of teachers working together, and the lines dividing her as teacher from us as students disappeared. I believe this is what it all comes down to. It was never about her "agenda". It was always about us, and what we needed to succeed in teaching science, so that the curriculum came from us, instead of making us come to the curriculum.

The course structure of weekly dialogues provided a space to ask important questions – how are structures and roles within them set up to perpetuate power? Why is teacher education structured the way it is? How can we correlate our own learning within our course with how we can collaborate with, and cogenerate knowledge with, our future students and colleagues? Who controls the knowledge? What do we do

about prescribed curricula and standards? Key to approaching these questions is deconstructing the role of teacher and the role of student. However, deconstructing is not enough, as the critical element is how we *reconstruct* these roles. “Transformative intellectuals need to develop a discourse that unites the language of critique with the language of possibility, so that social educators recognize that they can make changes” (Giroux, 2003, p. 211). In this process of reconstructing the roles of teacher and student, we generated local theory about teaching and learning with the overt purpose of drawing connections to our practices as educators. The questions we asked have shed light on the possibilities for the participants as future teachers to be able to work within, around, and across existing structures. Being open to other possibilities mediates making changes and expanding roles and we hope this extends to their schools.

Chris: As we deconstructed the deeply embedded notions of teacher and student and worked with collaborative pedagogies and research methodologies, my students became positioned as more than simply “subjects” of my research, and I have both sought to inform the research with their perspectives and also sought to share their perspectives with others.

Returning to the complexities of co-

To draw all of the discussions in this paper together, we return to the notion of collaboration and highlight certain themes running through our experiences, and thus through this paper as one set of representations of these experiences. As members of the group negotiated the structure of the course and their teaching experiences, they needed to be open to embracing multi-logicality (Kincheloe, 2008) and acknowledge that there are multiple realities and different ways of interpreting events in one’s lifeworld. As we worked towards multilogicality and an epistemology of plurality, one that both seeks and *requires* a multitude of perspectives, a key question to consider is, why is this relevant in teacher education specifically? Through this

process, we connected to future roles as elementary teachers and how groundings in complex methodologies can carry through to views on classroom teaching and learning with their future students. Participants became positioned as knowledge producers, rather than as consumers of a hegemonic truth. An important consideration for a science methods course

Beth: When Chris initially said she wanted us to share what we were thinking about our lessons, I automatically associated this with telling her what I thought she wanted to hear. We expected that to be her job as the professor. However, only a few weeks later we were all involved in a discussion about Krista’ lesson which is presented above (section). We are all posing questions, providing suggestions and critically analyzing the ideas in regards to what we had seen in the classroom so far. We were no longer students waiting for a professor to tell us what to do or how to look at a lesson; Instead, we were teachers and collaborators, providing advice to Krista based on what we each knew about elementary teaching.

specifically is that the co-construction of activities challenged the notion that there is one right method for teaching science. In addition to the vignettes presented herein to illustrate ways participants perceived an activity, there were myriad similar interactions in which the purposes and outcomes of science were discussed, debated, and made sense of.

Conducting research that expands roles and contests hierarchies

Cowriting and coresearching contest the traditional epistemological / ontological hierarchies’ that position researcher above researched, and in sharing research we not only expand our roles but also work to push back against the “cult of the expert” (Kincheloe, 2003). We don’t want the purpose of research to be only the production of theory isolated from practice. Indeed, it is the improvement of practice that is of

Chris: In researching pre-service teacher education, a primary concern is improving practice of all participants. I continually have asked myself, how am I helping to produce useful knowledge, and who is this knowledge useful for?

utmost importance to us, and this is the purpose for us in examining and interpreting experiences through collaboratively researching.

Inherent in structuring ways of working *with* is a focus on seeking to achieve a polysemic understanding. Polyphonic methods are a necessity as we attempt to represent what happened in a given situation. However, it is not enough to have multiple voices, as they could all be saying the same thing. Thus, this research has emerged through a theoretical stance that dialogue is required to work towards polysemia, as in the shared creation of text representing differing perspectives and understandings we push the boundaries of what it means to do research. Knowing that we all bring our own experiences, expectations, and contexts to a situation (and thus we each see the same moments differently), it becomes imperative to seek to illuminate the meaning we give to moments that might initially seem the same.

We link our experiences and expectations that have grown from coteaching and coresearching with embracing complexity and notions of difference. We needed to turn back upon our experiences to reflexively become aware of our different perspectives, and in that process, we evolved in our understandings of our experiences and of ourselves. “When you and I are immediately involved with each other, every experience is colored by that involvement” (Schutz, 1967, p. 167). We contend that the process of becoming aware is one that can be open and dialogic, as we learned to embrace the realities of social life that remind us that everyone experiences the world differently.

Central to this is power in all its forms, and we considered dominant forms of power and how they shape our experiences. As we discussed the power that we are aware of, we tried to reveal power structures that we might be unaware of. We also sought to recognize the power structures that are inherent in what we do - for

example, ultimately, Chris had to give grades and meet the objectives of the course set by the college, and the participants needed to complete the course and ideally be positioned to pass teacher certification exams. However, how we go about this does not have to be top-down and hierarchical, and together we discussed possibilities for grading, as participants developed assignments that met objectives set by the college and met their own needs. In this way, multiple options for completing course expectations emerged from the group. Within collaborative structures that included such explicit conversations we worked to reveal and analyze how power shapes what we do as teachers and as learners within institutions.

Such collective approaches to teaching, learning, and researching together can support a reciprocity within what we do, and such reciprocity “implies give and take, a mutual negotiation of meaning and power” (Lather, 1991, p.57). It is this give-and-take that is carefully negotiated along with the negotiating of co-constructed meanings of teaching and learning. Our main focus has been examining the purposes of education and educational research (as we see it), and positioning coteaching / cowriting / coresearching as ways to co-construct experiences in the academy to the benefit of all participants in teaching and research (and, of course, our students). Doing this within teacher education required dialogue focused on connections between our current roles as teacher and students and the participants’ future roles as teachers. Tricia Kress (this issue) calls for “stepping out of the academic brew,” to focus on the authority we bring as teachers and critique this authority in order to work to purposefully break it down. In the process of transforming together the structures of our course, we worked to head Kress’s call to “flatten knowledge hierarchies” (this issue, page).

Where do we go from here?

Reflecting on our experiences teaching and researching together has led us to recognize a struggle with what comes next, and we ask of each other, *What happens after we leave these situations?* Collectively we learned to teach science, as we learned about teaching, and learned about each other. Participants exhibited increased agency in a wide variety of situations, and we felt able to take (and share) responsibility for teaching and learning. Yet the reality is that there have been moments outside of our course in which participants found themselves no longer positioned as producers of knowledge in the same vein. The following is an excerpt from written conversation in the genre of metalogue that guided the creation of this manuscript. The use of metalogue can constitute an approach to collective remembering (Roth & Tobin, 2004). We use this excerpt to illustrate the conceptualizations and conversations that emerged through the process of producing knowledge together, particularly as we explored our struggle with what comes next.

Beth: After being in such a collaborative setting as the science methods course with you [Chris], and making such a personal transformation in seeing how beneficial working together can be, I have had difficulties in working with others who do not wish to share responsibility in the classroom, both in the college classroom and the elementary classroom. After taking your class I moved on to another semester of undergraduate classes that fit the traditional method of teacher-directed. I had to “bite my tongue” and stop myself from raising my hand after realizing my attempts to share information would fall on deaf ears, both from the professor and the other students. Recently in a class where we were required to work with elementary school students in a group, a peer said to me, “Why do we have to do this? Didn’t we already have to work with a student for another course? I just want to get this class over with.” As I listened to her share her opinion, I couldn’t help but think that other people must feel this way too.

Chris: These are good points that you bring up Beth, and we have spoken during the past years a bit about how your development through our course has also caused some dilemmas for you – in that you aren’t always in the role that you *can* share responsibility – that is really important to talk about openly. I’m thinking about this idea that I have been struggling with relative to working with people who don’t see the need for collaboration and trying to share responsibilities the way that I do. I believe really it is okay for different

people to experience a moment in different ways, in fact, I think that is probably how every moment is at every time. However, what do we do in situations when the difference is that the others aren't comfortable with the idea of polysemicity and are looking for sameness?

Beth: Recently I have also been in situations where co-workers will not share responsibilities within the classroom, either giving away or taking all of it. Communication is difficult with other professionals who see teaching as a solo activity, especially when you think of it as collaborative. After experiencing firsthand the benefits of collaboration it is difficult to understand why others don't try to work with their colleagues more often. However, it highlights an opportunity for me to be open to them, and show them what they are missing out on, if they are perhaps willing to try to work together a little at a time.

As we work to change the structures that we can change, we recognize those that are harder to change, and it is precisely these that we keep in our collective focus moving forward. “Authority” is an important consideration for pre-service teachers in particular, as issues of classroom management and administrative structures are generally paramount concerns as they begin to frame themselves as teachers. Ira Shor and Paulo Freire (1987) wrote on the possibilities for liberatory pedagogies to transform education, and they drew a distinction between authority and authoritarianism. We have discovered together that while authority in classrooms might be unavoidable, we ought to be “open to sharing it and having the students emerge as co-directors of the curriculum” (Shor & Freire, 1991, p. 91). Recognizing authority within a given structure does not need to be authoritative, and our dialogical structure has supported the breakdown of authoritarianistic approaches as we worked together towards transformation within ourselves as teachers and learners.

The dilemma still remains of what to do when those around us do not share our desire for breaking down hierarchical structures. In fact, as Beth mentions in her last textbox, she was not initially invested in this notion either. The questions remain for us; how do we deal with those who seek sameness? What do we when those who we are “with” don't want to share responsibilities or collaborate? As we consider

these questions, we wonder if it perhaps in continually “walking the walk” as we remain open to difference that we can persist at breaking down the hierarchies that exist, and ideally allow and encourage others to join us in the process.

The paradox of documenting research

This paper attempts to weave a narrative perspective of our experiences within and around a collaborative field-based science methods course. It is not intended to present the “truth”, as there are many truths, and we envision that we could write a very different paper if two different participants from the same course constructed it. We recognize that this presents a paradox, given that there is no complete truth on the one hand, yet on the other hand we try within research to present something as close to authentic to the moment as possible (Hølge-Hazelton & Krøjer, 2010), and we stress that what we present herein is our individual and shared sense-making around the possibilities in working in collaboration.

Implications for practice and moving forward

We have generated perspectives relevant for what we do in our future teaching through considering the complexities of the collaborations we experienced. As we have come to ways of knowing constructed together, around a shared purpose of teaching and learning to teach science, we recognize that what is “known” and experienced is inherently different from person to person. There are implications of this work to teacher education programs, as it emphasizes the importance of establishing a focus in teacher education on learning how to teach through holistic, “real-world” experiences, coupled with substantial opportunities for reflection, discussion, and action. While there are certainly many teacher education programs

with practica or other types of field-based experiences, it is not the norm that pre-service teachers and faculty share these. Emphasizing such an approach requires a shift in the focus of field experiences to being in classrooms together with a focus on reflexive experiences and generating dialogic understandings.

Our initial research question was: What did the structure of collaborative practices enable in the context of a field-based methods course? As we examined different ways we worked with each other, our analyses led us to frame the ways we came to hold (often shared) meanings around our differences in three distinct ways: we learned about teaching as a collective endeavor, highlighted individual experiences, and reconsidered and reconstructed the role of teacher. Though we have pulled them apart here for the sake of interpretation and discussion, these emphases are interwoven, and ultimately layer together to support us as we focus on conducting research that expands roles and contests hierarchies.

We have explored herein some of the ways in which we worked with each other and we see a wide variety of opportunities for working “with”; theorizing with, researching with, talking with, writing with, being with, thinking with... In doing so, our examination of relationships between individuals and the collective have been framed by our taking apart and examining the roles of “teacher” and “student” with the purpose of reconstructing these in ways that are not predicated on authoritative constructions, as we examined some meanings of “working with”. For us, this research has served to emphasize the importance of acknowledging that we not ever standing alone (as a teacher or student) when we are in a classroom.

Beth: It is powerful to see your peers as teachers and as learners; I hope that I can support my future students in sharing responsibility and learning from each other.

Figure 1. Listening to one another.

1. The use of > emerged from discussions with Carolyne Ali-Khan. We gratefully acknowledge her contribution and support of this work.
2. For a comprehensive discussion of coteaching and of cogenerative dialogues, please see the following review chapters from: *World of science education: Handbook of research in North America* (2009). W-R. Roth and K. Tobin [eds]. Rotterdam: Sense Publishers: Bayne, G.U. Cogenerative dialogues: The creation of interstitial culture in the New York metropolis, p.513-528; Martin, S.N. Learning to teach science, p. 567-586.
3. Coteaching and cogenerative dialogue for us are interwoven and inseparable, yet for the purpose of discussion and analysis we draw them apart here.
4. The specific structure and unfolding of one semester of such a course is described in Author (in production). Emphasizing collaborative practices in learning to teach: Coteaching and cogenerative dialogue in a field-based methods course. *Teaching Education*.
5. Transcript notations were adapted from Roth (2006) who cites Gail Jefferson (e.g., 1989) as his source. The following conventions were used:

<u>really</u>	Underline indicates emphasis or stress in delivery
ALL	Capital letters are used when an utterance is louder than the surrounding talk
idea-	The hyphen mark indicates a sudden stop.
wa::s	Each colon indicates approximately 0.1 second lengthening of sounds longer than normal
done?	Punctuation marks are used as characteristics of speech rather than grammar features
just do [it]	Square brackets indicate overlapping speech

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