Curricular design and implementation as a site of teacher expertise and learning

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Curricular design and implementation as a site of teacher expertise and learning

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Previously, research about teacher expertise has adhered to relatively fixed notions of teacher expertise. However, in this study, we share data from teacher study group (TSG) meetings, which demonstrate a dynamic understanding of teacher expertise. In these meetings, teachers discursively positioned themselves, their colleagues, and the research team as both experts and learners as they engaged in a community of enquiry around questions of curriculum design and implementation. We argue that teachers’ dynamic and multiple positionings generated especially striking opportunities for learning. As teachers externalized their expert knowledge, their assumptions were brought forth to be examined, challenged, and reconsidered, thus opening space for further learning. We argue that these TSGs thus existed as a site for teacher learning, in which teacher dialog around curricular design, redesign, and the student learning that occurred in the lessons influenced their own learning about their students’ capabilities. We make a case for further research that explores how teacher expertise is interwoven with episodes of teacher learning. We assert that a complex understanding of teacher expertise, grounded in principles of learning occurring through social interaction, has important implications for how the field should move forward in its approach to fostering teacher learning throughout teachers’ careers.

Keywords: collaborative professional development; positioning; teacher learning; teacher knowledge; teacher study group

If we want schools to produce more powerful learning on the part of students, we have to offer more powerful learning opportunities to teachers. (Feiman-Nemser, 2001, pp. 1013–1014)

Grounded in an understanding of the positive impact of teachers’ knowledge on student learning outcomes (e.g. Berliner, 2001; Darling-Hammond, 2000), this study began as an examination of opportunities for teacher learning that took place in teacher study groups (TSGs). These TSGs were part of a larger research project we undertook with kindergarten and fourth-grade teachers, as well as special education and English for speakers of other languages (ESOL) specialists, in one urban school with a large population of English language learners (ELLs). The purpose of our
project was to develop a cross-age peer tutoring (CAPT) reading intervention program designed to support vocabulary development and reading comprehension of the ELL kindergartners and fourth graders who worked in little buddy-big buddy pairs in the program. Prior to implementing the program, we hypothesized that teacher interactions around the ‘official’ content of the TSG meetings would provide important learning opportunities for teachers, and it was this facet of teacher learning that we originally envisioned studying. However, data analysis revealed a more striking aspect of teacher interactions in the TSGs. We found that TSG meetings functioned as a site where teachers positioned themselves and one another as both learners and experts as they engaged in two types of work with researchers: design and redesign of the lessons they would teach in the CAPT program, and examination of students’ interactions during CAPT buddy lessons. Our study is guided by the following question: How does teachers’ participation in a community of enquiry centered around curriculum design and implementation create opportunities for teacher learning? Intrigued by teachers’ multiple positionings as they interacted in TSGs, we examine how their dynamic interactions from positions as both learners and experts created opportunities for teacher learning.

Our study is in keeping with Webster-Wright’s (2009) call for a deeper understanding of ‘how professionals continue learning through their working lives’ (p. 704). She argues for the ‘need to move beyond the current focus on how best to provide [professional development] activities toward understanding more about the fundamental question of how professionals learn’ (pp. 704–705). We argue that our examination of teachers’ participation in TSGs as a community of enquiry (Duckworth, 1986, 1997, 2006; Zellermayer & Tabak, 2006) responds to Webster-Wright’s call to better understand how teachers learn. We also found Masuda’s (2010) characterization of how TSGs contribute to teacher learning helpful to our analysis of teacher learning: ‘The teacher study group can be an enunciative space, where teachers can unpack issues and broader discourses beyond the “technicalities of teaching” and by doing so, gain ownership into their work’ (p. 479). We use Masuda’s term ‘enunciative space’ to conceptualize the TSGs as a space for interaction in which the teachers dynamically shared ideas through dialog. As we discuss below, their dialog indeed transcended ‘the technicalities of teaching’ (Masuda, 2010, p. 479) by focusing upon the content of their work (curriculum) and the learning of their students.

**Literature review**

Although research on teacher learning through practice-based collaborative inquiry has been established for some time (Clark & Florio-Ruane, 2001; Cohen, 1981; Little, 1987; Meirink, Meijer, & Verloop, 2007), recent standards-based school reform efforts to improve student learning have brought forth a renewed focus on the importance of teacher learning (Day & Sachs, 2004), the rationale being that if students are going to meet new performance measures, teachers also need support in how to teach differently (Fishman, Marx, Best, & Tal, 2003; Wilson & Berne, 1999). As Feiman-Nemser (2001) has asserted: ‘Unless teachers have access to serious and sustained learning opportunities at every stage in their career, they are unlikely to teach in ways that meet demanding new standards for student learning or to participate in the solution of educational problems’ (p. 1014).

New ways of understanding how teacher learning occurs have developed alongside greater attention to the importance of teacher learning. Rooted in the social...
constructivist paradigm (e.g. Lave & Wenger, 1991; Rogoff, 1994; Vygotsky, 1978; Wenger, 1998; Wertsch, 1991), many educational researchers have reexamined the kinds of professional development and learning experiences that are available to teachers as they grow over the course of a career. Whereas traditional attempts to support teachers’ professional learning came from top-down, fragmented, one-shot professional development experiences (Ball & Cohen, 1999; Day & Sachs, 2004), more recent approaches recommend that teachers have opportunities to explore questions situated in their own practices (Putnam & Borko, 1997) by engaging in both individual reflection and co-construction within a community of professionals (Abdal-Haqq, 1995; Hawley & Valli, 1999).

Related research has argued that teachers must be involved in decision-making about curriculum if they are to implement new approaches in their instruction effectively (Deketelaere & Kelchtermans, 2006). As Parke and Coble (1997) argue:

> The literature reveals that when teachers do not understand the intent of the curricula design, when they feel pressured to make changes, or they do not have a voice in curriculum decisions, they simply remold the new curriculum to fit their traditional practice. (p. 774; see also Franke, Carpenter, Levi, & Fennema, 2001; Wilson & Berne, 1999)

In contrast, Parke and Coble continue, opportunities for teacher learning emerge from meaningful engagement with colleagues about curriculum: ‘Professional development that is transformational in nature shifts the focus from teacher training workshops to environments promoting teacher professionalism within a community of educators’ (p. 774). Clandinin (1986) corroborates this perspective with her assertion that teachers should be active participants in curriculum decisions: ‘In part, the lack of success of curriculum implementation efforts derives from the use of a perspective which minimizes the teacher as an active, autonomous agent and a holder and user of practical knowledge’ (p. 9).

Although several research studies in science education have investigated teachers’ involvement in curricular design as an opportunity for teacher professional development (George & Lubben, 2002; Jeanpierre, Oberhauser, & Freeman, 2005; Luft, 2001; Parke & Coble, 1997), these studies have focused more on curriculum reform outcomes and less on the processes that contribute to curriculum reform (Stolk, De Jong, Bulte, & Pilot, 2011), such as teacher interaction and learning around the development of curriculum. Additionally, while the growing body of work that examines teacher learning and development has, in some instances, examined teachers’ co-constructed interactions around teaching (e.g. Clark & Florio-Ruane, 2001; Grossman, Wineburg, & Woolworth, 2001; Hollins, 2009; Little, 2002, 2003), this work has not explored teachers’ fluid positions as learners and experts. We argue that this dynamism is important to explore in teachers’ continued professional growth, particularly as professional development through site-based learning communities continues to gain momentum. Identifying teacher development as occurring through teachers’ interaction from a multiplicity of positions may help us to identify important features and participation structures for teacher interaction in communities of enquiry.

**Theoretical framework**

Research investigating teacher learning as situated in teachers’ own experiences and practices have emerged from sociocultural approaches to understanding teacher learning (Borg, 2003, 2006; Cross, 2010; Elbaz-Luwisch & Orland-Barak, 2013;
Johnson, 2006, 2009; Johnson & Golombek, 2003; Zellermeyer & Tabak, 2006). Scholars working from a sociocultural framework have shifted from a perspective of teachers as receivers of information to a view of teachers as creators of meaning, heavily influenced by their own autobiographies (e.g. Clandinin, 1986; Connelly & Clandinin, 1986; Johnson, 2009) and their interactions with other people and tools (Putnam & Borko, 2000). Johnson and Golombek (2003) argue that a sociocultural lens makes visible ‘how various tools work to create a mediational space in which teachers can externalize their current understandings and then reconceptualize and recontextualize their understandings and develop new ways of engaging in the activities associated with teaching’ (p. 735; see also Martin-Beltrán & Peercy, 2014). This externalization or articulation of learning with others may lead to transformation of knowledge from tacit knowledge (Polanyi, 1958) to more explicit knowledge.

In addition to sociocultural theory (Vygotsky, 1978), we draw upon work in positioning theory (Davies & Harré, 1990; Harré, Moghaddam, Cairnie, Rothbart, & Sabat, 2009) to investigate teacher learning as socially situated in the moment-to-moment interactions of teachers within the TSGs in this study. Positioning theory emphasizes the importance of discursive interaction in constituting one’s own continually shifting positions, as well as contributing to the positionings of others. As Davies and Harré (1990) explain, ‘An individual emerges through the processes of social interaction, not as a relatively fixed end product but as one who is constituted and reconstituted through the various discursive practices in which they participate’ (p. 46). Harré et al. (2009) further articulate this framing of position in later work, stating, ‘Positioning is something which happens in the course of an interaction; as such it is a discursive process’ (p. 10).

We use work on positioning to frame the social interactions among teachers in TSG meetings, and the ways in which they positioned themselves and others are key to our analysis in this study. Specifically, we explore how their dynamic interactions from positions as both learners and experts created opportunities for teacher learning. Because we examine teachers’ positionings as both learners and experts, we define how we conceptualize both teacher learning and expertise in turn, below.

We understand teacher learning as developing through the interaction of teachers’ personal experiences and their situatedness in social relationships. Teacher learning can be examined through multiple sources of evidence, including observation of their practices; exploration of the work, activities, and learning of their students; and examination of the way the teachers talk about and conceptualize their work as teachers. It is this latter feature of teacher learning, their talk about their work as teachers, which we examine here. Further, because teacher learning occurs in the context of their lived experiences, we explore teacher learning as it co-mingles with the expertise they bring to the table about their own settings, experiences, and practices.

Teacher expertise is a complex construct (e.g. Berliner, 2001; Tsui, 2003) because it is context-dependent, nonlinear (Beckett & Hager, 2002; Dall’Alba & Sandberg, 2006; Glazer & Hannafin, 2006; Grimmelt, MacKinnon, Erickson, & Riecken, 1990; Webster-Wright, 2009), and develops iteratively (Calderhead, 1993; Clark & Yinger, 1987; Kagan & Tippins, 1992; Tsui, 2003.) Expertise is further complicated because experience does not necessarily result in expertise (Bereiter & Scardamalia, 1993; Berliner, 2001; Hattie, 2003; Tsui, 2003).

Bereiter and Scardamalia’s (1993) framing of expertise as a process rather than a state allowed us to examine teachers as engaged in dynamic relations that
simultaneously involved processes of both learning and sharing knowledge. We argue that as teachers participate in a space in which they share what they feel they know (expertise), they have the opportunity to externalize, examine, and challenge their assumptions, or ‘knowledge,’ thus creating further opportunities for learning. We found this framing of expertise helpful because it enabled us to define expertise as made visible, nurtured, and challenged through interactions in which the teachers situated themselves and others around them in positions as learners and experts as they shared their experiences and ideas. In this way, we positioned expertise and learning as continually in dialog with one another, and explored how teachers positioned themselves and others as both experts and learners in interview, survey, and TSG data.

We next elaborate on the methods we used to investigate the opportunities afforded by the TSG meetings for teachers to take up positions as both learners and experts, and how positioning themselves as experts enhanced their opportunities for learning. We were not concerned with whether teachers were actually experts by a specific measure, but rather were interested in how the TSGs provided spaces for teachers to position themselves as experts within the context of their own experiential knowledge about their students.

**Methods and data sources**

The setting for this study was Kennedy Elementary, a highly diverse elementary school in a busy metropolitan area in the mid-Atlantic United States. The school had 53% ESOL students and 88% of students received Free and Reduced Meals. Participants in the study included two kindergarten teachers, two fourth-grade teachers, three ESOL teachers, and one special educator. These teachers and their students were part of a CAPT reading intervention program targeting ELL students, initiated by the researchers. Kennedy was chosen by the researchers due to its large population of ELL students, and teachers were chosen based upon their positions as kindergarten teachers, fourth-grade teachers, ESOL or other support specialists, and their willingness and interest in participating.

**The reading program**

The CAPT program was comprised of 16 lessons (eight teacher-led and eight buddy-led) co-developed by the researchers and partnering teachers as part of an intervention study aimed at improving the vocabulary knowledge and reading comprehension skills of ELLs. Over the course of six months in the fall, researchers developed drafts of lessons, shared them with the teachers, received teacher feedback, and made revisions to the lessons based on teachers’ suggested modifications to the lessons.

In the spring, teachers implemented the recently co-developed eight teacher-led and eight buddy-led lessons in their classrooms. Lessons occurred during the school day, twice a week with one one-hour, teacher-led and 145-min buddy-led lesson per week, for eight weeks in April and May. During buddy-led lessons, students were paired in kindergarten (little buddies) and fourth-grade (big buddies) teams to engage in literacy activities together. Half of the kindergartners went to the fourth-grade classroom, and half of the fourth graders went to the kindergarten classroom. During buddy lessons, kindergartners described and showed their personalized,
theme-related drawings to the fourth graders, then the fourth graders led kindergartners in a read-aloud of books related to the two themes of ‘rights and responsibilities’ and ‘caring for the environment.’ Additionally, the buddies played a question-and-answer game in which big buddies asked questions that related to the text, connected the themes with their background knowledge, and encouraged little buddies to use vocabulary words in context. The program was taught in addition to the students’ regular reading curriculum.

Teacher study groups

Working from research findings that TSGs are ‘a viable form of professional development for in-service teachers that promotes reflection on their own teaching practices and increases pedagogical knowledge through social interaction and co-construction of knowledge’ (Masuda, 2010, p. 469), the research team decided to embed TSGs within the design of the CAPT program, as a way to support teachers in implementing the CAPT lessons, to provide opportunities for teacher professional development, and to create a forum in which teachers could share ideas with one another and researchers for how to design and improve curriculum and materials for lessons as the lessons were being piloted and redesigned. The design for TSGs in this project included a total of 10 90-min TSGs held throughout the academic year to support teacher learning about the five research-based core areas that underpinned the CAPT program (explicit instruction in vocabulary, explicit strategies instruction for reading comprehension, the value of peer interaction for language growth, the use of multimedia to provide extralinguistic support and motivation, and scaffolds for ELL learning). Six of the TSG meetings occurred in the fall and four occurred in the spring during implementation of the CAPT lessons. In the first meeting, the TSG participants assisted researchers in choosing which themes, books, and focal words to use in the program. Each meeting thereafter centered around one of the five core components of the CAPT program: (1) multidimensional vocabulary instruction, which includes asking students to say and use words in personal contexts with frequent examples and comprehension checks; (2) improving reading comprehension through questioning strategies (focused on QAR, Raphael, 1982, 1984); (3) supporting ELLs through providing comprehensible input, and providing opportunities for interaction that enable learners to connect textual concepts to their cultural and linguistic backgrounds; (4) student–student and teacher–teacher collaboration; and (5) incorporation of multimedia, especially vocabulary-rich videos, in instruction. Each fall meeting adhered to the structure (recommended by Gersten, Dimino, Jayanthi, Kim, & Santoro, 2010) of a warm-up discussion, followed by presentation by a university team member about one of the five core components of the CAPT program listed above, and collaborative analysis by the teachers of lesson plans that they would implement in spring. The four spring TSG meetings focused on pairing students for optimal interactions, logistics for implementation, feedback on lesson content and materials based on using them with students, and reflecting on the program at the end of implementation.

In keeping with the aims of TSGs as identified in the literature, an important purpose of the group meetings was to provide a forum for teacher learning, which the researchers originally envisioned would occur primarily through the discussion and instruction based on the five pillars of the CAPT program. However, what became more salient to our interest in opportunities for teacher learning in the CAPT project
were the teachers’ interactions as they engaged together in an iterative process to revise, implement, and again revise CAPT lessons. We found that in these interactions, teachers positioned one another and themselves as both learners and experts, as they gained information from TSG content and peer interaction, but also recommended curriculum revisions based on their expertise about their students, and the activities and practices that they felt would be effective for them. Specifically, teachers shared their expertise about student engagement during lessons, the kinds of linguistic and cognitive demands they encountered in the lesson materials, the kinds of support students needed to participate in the lessons, and whether the curriculum was sufficiently complex and cognitively demanding for their students (see Figure 1).

In this project, we utilized a recursive process of curriculum design. We used time during TSG meetings to discuss the research-based practices that constituted the five core areas in CAPT, and intertwined the theoretical bases of CAPT with iterative design and revision of the CAPT curriculum based on teacher input. The initial revisions to CAPT lessons based on teacher feedback occurred before the teachers taught the lessons in their classrooms. In the fall, teachers gave their input and feedback on CAPT lessons during the first six TSGs, as well as in written surveys that they submitted after TSG meetings one through five. The research team then used teacher input to revise lesson content prior to implementation of the lessons. During implementation of the 16 CAPT lessons in the spring, teachers gave additional recommendations for curriculum redesign in TSG meetings and in brief interviews conducted after each lesson. After implementing the CAPT program, teachers provided additional feedback to researchers during TSGs based upon what they found effective and ineffective for students (see Figure 2 for a visual representation of the iterative process of curriculum design used in this project).

![Figure 1. Areas of teacher expertise regarding CAPT curriculum.](image-url)
Data collection and analysis

Data collection included teacher interviews before and after CAPT implementation, as well as after each CAPT lesson, surveys at the mid-point and end of the program, and participant observation at all 10 TSG meetings. In the TSG meetings, the research team audio recorded with at least two devices, took field notes, and both audio and video recorded the last two TSG sessions.

To analyze data, we first read teacher surveys, transcripts of interviews conducted with teachers both before and after lesson implementation, and field notes from TSG meetings, to gain a broad picture of teachers’ experiences throughout the year. Due to the extended time for interaction and discussion within TSG meetings, the data from TSG field notes emerged as the richest source of information regarding teachers’ learning while participating in CAPT. We therefore looked more closely at the field notes from TSG sessions, as well as revisiting audio and video recordings of TSG meetings for details missing in field notes.

We used the constant comparative method (Strauss & Corbin, 1998) to identify emergent themes in the field notes. While coding TSG field notes, we noted that TSGs manifested themselves as a shared time and space for teachers to come together and engage in socially distributed learning. With further coding, we observed instances in which teachers questioned and challenged one another, discussed how to scaffold and support students, co-constructed understandings of students’ proficiency and ability, made suggestions about curriculum, and changed their perceptions about their students. We began to note that most opportunities for teacher learning occurred in the context of two types of teacher interactions during TSGs: (1) discussions about curriculum design and (2) discussion about students’ participation in CAPT. We thus used those as the main nodes for coding and

![Figure 2. Iterative process of CAPT curriculum design.](image-url)
analysis. We found that within these two main categories (teacher learning from curriculum design and teacher learning about students), teachers demonstrated instances of sharing expertise to enhance the CAPT curriculum and also learning from implementing the CAPT lessons. We then returned to audio and video data to transcribe and more carefully examine interactions between teachers related to the themes of curriculum design and student participation in CAPT.

This coding process allowed us to examine the coexistence of teacher learning and teacher expertise, as they manifested themselves through teachers’ interactions in TSGs. For the purposes of this paper, we selected six key excerpts that were representative of the dialogic nature of teacher learning and expertise in the larger data-set.

Findings

From the outset, this project positioned teachers as both learning from and bringing expertise to designing and redesigning the CAPT program. In the first TSG meeting we held with the teacher participants, the research team emphasized the co-constructed nature of the project. When describing the program, one of the lead investigators on the research team described the critical importance of teacher feedback in the project to teachers in the following way: ‘Teachers will help us design [the curriculum for the CAPT program]…it doesn’t exist.’ Analysis of the data showed that while the ‘official’ professional development content of TSGs provided opportunities for learning that the teacher participants in this study valued, a more striking feature of the TSGs was that they were an enunciative space (Masuda, 2010) in which teachers participated in a dynamic learner-expert exchange, as they collaborated around a common set of activities. We argue that teacher learning emerged as they were simultaneously called upon to bring their knowledge to the process of designing and redesigning the curriculum of the CAPT program, and to consider student learning from the CAPT lessons. This process was iterative and dynamic, as the CAPT program was being developed *in vivo*: researchers created lesson drafts; then teachers and researchers examined, discussed, and modified lesson content during TSG meetings. Teachers, observed by the research team, then implemented the modified lessons with students, and returned to TSG meetings to share their successes and challenges, as well as further feedback and ideas about modifications to lesson content and practices to enhance student learning.

Our approaches to program design, research design, and analysis were in keeping with Feiman-Nemser’s (2001) argument that ‘Professional development takes place through serious, on-going conversation…in communities of practice…and focuses on the particulars of teaching, learning, subject matter, and students’ (emphasis added, p. 1042). During TSG meetings, the teachers participating in implementing the CAPT program engaged in sustained, ongoing conversations with one another and the research team about specific lesson content and practices before and after they enacted the CAPT lessons in their classrooms. Below we detail two main themes that emerged in our analyses regarding opportunities for teachers to both learn and share expertise: the curriculum design process, and student learning.

While discussions of teachers’ expert knowledge are not new (e.g. Berliner, 1986, 2001; Shulman, 1986, 1987), our view of teachers as experts helped us frame and examine teacher *learning* within the context of teachers’ expertise. We thus examined teachers’ learning processes as they were informed and enhanced by teachers’
positioning of themselves and their colleagues as experts. We assert that an important aspect of teachers’ ongoing professional development is situated in their opportunities to enunciate both their expertise and their queries as learners in community with colleagues. Below we show how the enunciative space of the TSGs we study here provided a forum in which this dynamic positioning was possible for the teachers.

Teachers as learners and experts about curriculum design

An important feature of teacher participation in designing the CAPT curriculum took place before teachers implemented the lessons in their classrooms. It occurred in the form of teachers providing ideas and feedback about which vocabulary words to focus on in the lessons, how to provide enough contexts for those words, and whether their students would be able to understand and use the words based on support and explanations provided in the researcher-created lesson drafts. Below we share two examples transcribed from audio recordings in which teachers both shared expert knowledge and learned from one another as they discussed how to provide examples to their students that would help them comprehend two focal vocabulary words in CAPT lessons: ‘exchange’ and ‘citizen.’

‘I like that’: Teaching ‘exchange.’

In the first excerpt below, three of the teacher participants in the TSG, Kelly (a fourth-grade ESOL teacher), Laura (a fourth-grade teacher), and Amanda (a kindergarten teacher), worked in a small group to discuss how to define and explain the word ‘exchange’ to the kindergarten and fourth-grade buddies.

EXCERPT 1

LAURA: [begins brainstorming what exchange means with her group] Somebody gave you something, you give them something back.
KELLY: Uh-huh.
LAURA: Words that you can easily act out.
AMANDA: With kindergarten, it’s all about sharing. So [she gives an example of what she would say to her kindergarten students] ‘Ok, share this, and they’ll share something else while you use it. And then trade it’…
LAURA: [breaks in to build on Kelly’s example] I could exchange them, yeah.
KELLY: [continues her example about exchanging shoes] - -I liked the shoes, so we went back to the store, and we had to exchange them. So that’s the idea of you’re getting something of the same kind.
LAURA: [agrees] Mmm. Yeah.
RESEARCHER 1: So what would be a definition, then? ’Cause these are examples, right, of exchanges?
KELLY: Well in the story, are they exchanging for the same thing…?
RESEARCHER 2: Ohhhh, they just say there was an exchange. [To Researchers 1 and 3] Right, like the duck [in the story]?
AMANDA: [suggests a definition] A trade, a trade...

LAURA: A lot of kids say switch, too. They say switch. Switch might be a good [choice]. Yes, ‘Let’s switch.’ In fourth grade, definitely [fourth graders definitely use this word].

AMANDA: [building on Laura’s use of ‘switch’ and providing an example for how she could model the meaning of ‘switch’ in her kindergarten classroom] I have my kids in a circle, so if...they all have crayons but a different color. [If I say] ‘Everyone switch to the right,’ so they are all giving it away, but getting something else. So they’re still exchanging. It could be a crayon, a different color crayon. So they’re all doing it, they’re still getting a new one.

LAURA: Switch. It’s very simple, just one word and you know what’s happening. ‘So let’s switch.’ That’s what kids do. ‘Let’s switch seats’... I think the little kids would understand it too.

In the excerpt above, the teachers negotiated a shared understanding of how the word ‘switch’ could be used as a synonym for ‘exchange’ that both fourth graders and kindergartners would understand. Throughout the episode, they drew upon their expertise about fourth grade and kindergarten background knowledge and instructional supports they would need. Through sharing their expertise and drawing on their colleagues’ suggestions, they co-constructed instructional practices, including how to model exchanging something, as well as generating synonyms for exchange, moving the discussion of synonyms from share, to trade, to switch. After Laura initiated conversation about ‘switch’ as a synonym for exchange (‘A lot of kids say switch, too’), Amanda validated it as a word she could model with her kindergartners (‘Everyone switch to the right’). During their conversation, Kelly and Laura both shared their expertise about what fourth graders would comprehend, while Amanda brought her expert knowledge as a kindergarten teacher about how to provide support that her kindergartners would understand. Thus, the teachers demonstrated their expertise as they generated a definition of ‘exchange’ that was situated in their embedded understanding of the students who would be learning and using the word in their upcoming lesson. During this episode we see that expert and learner positions are constantly shifting, fluid, and at times simultaneous: while teachers shared their expert knowledge about their kindergartners and fourth graders, they simultaneously learned from one another’s suggestions about how to scaffold vocabulary for students as they co-constructed their definition of exchange.

The teachers’ interactions around the word exchange, in which they provided expert knowledge and simultaneously co-constructed their understanding of the kinds of language and examples that are relevant to students and more likely to lead to learning, led to significant re-design and implementation of this lesson. In fact, Laura, Kelly, and Amanda’s co-constructed ideas became part of the curriculum. Our research team incorporated the following definition in the curriculum: ‘When you exchange, you give someone something and they give something to you.’ Further building on teachers’ co-constructed ideas (which Amanda synthesized with ‘they all have crayons but a different color. [If I say] “Everyone switch to the right,” so they are all giving it away, but getting something else. So they’re still exchanging …’), the research team added the following prompts for teachers to use in the lesson:

- If you give your friend a gift and they give you a gift, do you exchange gifts? If you let me borrow your marker, did we exchange?
Can you think of other words that remind you of exchange? … We might use words like trade or swap, too.

At the grocery store, I exchange money for food. I give the person at the store money, and she gives me food. We exchange…If I borrow your pencil, do we exchange?

These cues became part of the definition and questioning for the vocabulary word ‘exchange’ used in the revised CAPT lessons when teachers implemented them. Thus, the teachers’ process of sharing expertise and learning from one another about how to define exchange in a way that both kindergarten and fourth-grade students would understand had an impact on their practices in the lesson, through their influence on lesson revisions.

The teachers’ process of co-construction affected not only lesson content, it also had an impact on student learning. In researcher-developed post-testing measures after implementation of CAPT, we found 12% growth in expressive vocabulary knowledge for both kindergarten and fourth-grade buddies on CAPT focal words.

Teachers’ interactions around how to teach the word ‘citizen’ also demonstrated the dynamic interaction of their expert knowledge situated in dialog with their learning, which we illustrate below.

‘Being a devil’s advocate’: Teaching ‘citizen.’

Later in the same TSG meeting, teachers worked in small groups to discuss how to teach the word ‘citizen’ to students in a lesson on rights and responsibilities. This excerpt is an example of teachers externalizing their thinking as they disagree, or consider different perspectives of the content they teach. In the excerpt below, Victoria, a special educator who plugged into both fourth-grade and kindergarten lessons, cautioned that if not approached with care, the word ‘citizen’ could bring up sensitive topics for students who were undocumented immigrants. Kelly, Tania, and Geoff all responded to Victoria’s comment, co-constructing a rationale for why they felt that the definition of citizen in the draft of the lesson materials was more inclusive than the word citizen can sometimes be.

EXCERPT 2

RESEARCHER: So that’s basically what this activity [on rights and responsibilities] is gonna look like. Um, was there anything confusing about it, could we improve it in any way, was, how was – yeah? [notes Victoria’s raised hand and calls on her].

VICTORIA: I’m thinking that citizen, [discussion about] being a citizen may be confusing for those who are not citizens.

KELLY: Well, we were talking about that [in our small group], because the book [the buddies will read] doesn’t talk about country, it just talks about being a part of a group. You’re a part of a group at home, in school, and in your community. So it doesn’t talk about, we said, documented, undocumented, it doesn’t mention that at all. It doesn’t talk about a citizen of the United States, it’s just you’re part of the group, so we’re citizens here, citizens of Kennedy, you’re a citizen of [the neighborhood Kennedy serves] --

TANIA: Right, that’s why I think it’s a good definition in here because it is talking about that, being a citizen --
KELLY: --because you live here--
GEOFF: Right.
TANIA: --of your school--
GEOFF: Right.
TANIA: --being a citizen of your town, your community, so it's not--
GEOFF: It [the lesson] breaks it [the meaning of citizen] down, where they're actually going to find some sort of relationship to it... the older kids that have been here for a while [know about Kennedy's] Good Citizenship award. So having that concept of what a citizen does, you know, that active, 'What does that mean?'
TANIA: Right. Where they'll understand ‘Oh, okay, I go to Kennedy [Elementary School, so I am a citizen of the Kennedy community]’ --
VICTORIA: Well, being a devil’s advocate, what if the child goes home and says ‘Am I a citizen?’ and the parents say no?

In Excerpt 2 above, Victoria pushed her colleagues to consider students’ background knowledge and associations with the word citizen, so that they would carefully contemplate the use of the word ‘citizen’ in this lesson. Teachers’ frequent interjections as they responded to Victoria indicated their desire to share their thoughts regarding how they thought students would react to the use of ‘citizen’ in the lesson. As in the example with ‘exchange,’ teachers situated their analysis of CAPT curriculum by positioning themselves as experts about their students and their school context. Unlike the example of ‘exchange’ above, in this interaction the teachers did not position themselves based upon their expertise as grade-level specialists or language specialists, but instead based upon their knowledge of their students’ demographics, and how students’ experiences would affect the connections they would make between their background knowledge and the text. Victoria’s challenge (‘being a devil’s advocate, what if the child goes home and says “Am I a citizen?”’) required the teachers to externalize their thinking. Through this process of making their thought processes evident to their colleagues (‘the book doesn’t talk about’, teachers had the opportunity to shine light on their assumptions and to think carefully about the various connotations of words and the politically charged nature of language. Unlike the teachers’ discussion about ‘exchange’ in which Laura, Kelly, and Amanda worked toward a converging definition of the word, this example shows how Victoria’s continued challenge to her colleagues created a space for Kelly, Geoff, and Tania to reflect first on the term before collectively generating a shared understanding about how to teach ‘citizen’ to the students. Once again, teachers’ expertise was at work as they articulated what students would relate to and understand (e.g. ‘they’re actually going to find some sort of relationship to it’), and although Victoria was not persuaded to set aside her concern about the use of ‘citizen’ in the lesson, her challenge gave the other teachers a central point around which to share their knowledge and build upon one another’s ideas.

As with the teachers’ interchanges about ‘exchange’ above, their co-constructed examination of how to teach the word ‘citizen’ affected the research team’s revision of the lesson, which included the following definitions and prompts for ‘citizen:’
A citizen is part of a group. You can be a citizen at home, at school, and in your community. A citizen is a responsible member of a community.

Would a good citizen leave a mess and not clean it up? You can be a good citizen by being responsible and helping your friends at school and your family at home.

How can you get the good citizen award at [Kennedy]?

These prompts were written for the CAPT lesson materials as an outgrowth of the careful deliberation by the teachers about how to define citizen in a non-threatening way. The third prompt came directly from the example Geoff offered of the Good Citizenship Award at Kennedy, and was used as a way to activate students’ background knowledge of a different definition of citizen than the one that sometimes functioned as a source of anxiety in their community. Therefore, lesson materials were revised using teachers’ feedback and conversations as both experts and learners in TSGs as a foundation, which directly affected teachers’ practices with students as they implemented CAPT lessons.

We argue that these teacher contributions had implications for student learning. Due to space limitations in this paper, we include only a cursory discussion of this learning (see also Martin-Beltrán, Daniel, Peercy, & Silverman, 2013; Martin-Beltrán, Tigert, Peercy, Silverman, Guthrie, 2014 for close analysis of student learning during buddy interactions). In the buddy interactions, we observed students modeling teacher practices and offering multiple opportunities to use and make sense of new vocabulary. We found that students used practices that have been identified in prior research to support literacy learning and vocabulary development such as: verbally explaining a word’s meaning (Carroll & Drum, 1983; Konopak, 1988; Leung & Pikulski, 1990); identifying essential meanings and definitive attributes of a word (Miller, 1999); referring to examples of how the word is used (Leung & Pikulski, 1990; Miller, 1999); and generating analogies and synonyms (Leung & Pikulski, 1990).

Thus, learning of both teachers and their students, through their participation in the design and use of the CAPT curriculum, is evidenced by the data we share here. Next, we turn our attention to how the teachers explicitly co-constructed their understanding of their students’ learning, and explore how this presented another opportunity for them to both share expertise and learn from one another.

Teachers as learners and experts about student learning

Much as discussions about CAPT curriculum design opened a space for dynamic co-construction and movement between learning and sharing of expertise, teacher discussions about their implementation of CAPT lessons – and the student learning that resulted from the lessons – generated a similar opportunity. For instance, in a TSG meeting during implementation of CAPT lessons, teachers noted that the demands of peer interaction in CAPT lessons could change patterns of student engagement that often prevailed in the classroom. In Excerpt 3 below, Kelly and Tania (the fourth-grade ESOL teacher and the kindergarten ESOL teacher, respectively), with some interjections from Geoff (fourth-grade teacher), drew on their knowledge as language specialists and built on one another’s observations of student interactions regarding how buddy lessons contributed to students’ learning of vocabulary.
EXCERPT 3

KELLY: I found that combining the vocabulary instruction with the peer interaction [in CAPT buddy lessons] really forced the older students to use that new vocabulary.

GEOFF: [agreeing] Mmmhhmm.

KELLY: And they, really they wouldn’t before, even with think/pair/share [activities] with their peers, but I think with their little buddies they really did have to have a better understanding of that vocabulary.

RESEARCHER: That’s a good insight. We hope to understand that more.

TANIA: Along the same lines, I mentioned that with the peer instruction, especially for the lower level ESOL--I don’t want to say forced them, but it encouraged them; well it kind of forced them, they had to answer--

KELLY: [agreeing] Mmmhhmm. Yes, yes, that’s right.

TANIA: --and a lot of times they don’t want to answer--

KELLY: [agreeing] Mmmhhmm.

TANIA: -- because they’re scared or don’t think that they can. With the buddies they didn’t really have a choice.

RESEARCHER: [laughing] Because there’s only one other person in the conversation. It takes two to have a conversation.

TANIA: Right.

GEOFF: Right.

TANIA: They had to answer, so even though some of them were a little reluctant...they still had to actually give an answer which was really good for them because some of them are really used to just sitting back --

KELLY: Yes, yes.

TANIA: -- and observing and not having to participate, so when they’re with another kid one-on-one it was really good for them to be able to, to have to answer.

Tania and Kelly both positioned themselves as having expert knowledge about some ELL students’ reluctance to engage verbally in English at school, and Kelly noted that other non-CAPT paired activities did not always successfully elicit participation from these reluctant students. Both ESOL teachers recognized they had learned something about peer interaction, when they noticed that the interactions in CAPT between older and younger students ‘forced’ students to participate and take risks the teachers had not observed in other activities. Through their exchange, these language experts externalized their learning to the other six teachers in the TSG, as well as the research team, about the role of peer interaction in promoting vocabulary development.

Adding to this co-constructed understanding of big and little buddy learning of vocabulary, the teachers externalized a new framing of several students as they observed video footage of buddies interacting together in buddy-led lessons that they had recently facilitated. In Excerpt 4 below, we share one such example in which Geoff positioned himself as a learner about the potential of students like Michael, one of his low-performing fourth graders.

EXCERPT 4

Geoff talks about the successful interaction and participation of a buddy pair, Michael (4th, low reading proficiency) and Christian (K, high ability):

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Downloaded by [University Of Maryland] at 07:39 25 August 2015
GEOFF: [enthusiastically] Christian and Michael was a fabulous pair--
AMANDA (Christian’s K teacher): Oooohhhh [excited, pleased tone].
GEOFF: It was so great. Because Michael [Geoff’s 4th grade student] is lower, academically, but he really, really took that [big buddy] job seriously. I mean, he could not wait to do [CAPT] every day with the buddy. And Michael would read it with him. And Christian is very, very high, he is sharp. He is just on it. So he was going with him, and they were going back and forth and dialoguing. And then the other day, the last day we did the buddy lesson, I said to Christian ‘Christian, you are just like a TV star, you are getting videotaped all the time.’ [for buddy interaction video data.] And he looks at me and he says ‘Yeah, that’s because my partner Michael and I are just cooler than everybody else’ [laughs]. But I mean, the dialog that they had was great, and Christian was able to go right with him, and it was fun…”

In this excerpt, we see a shift in how Geoff perceived Michael as a contributor to class activities. Geoff was struck that Christian, a high-performing kindergarten buddy, constructed Michael, a low-performing fourth-grade buddy as able and ‘cool,’ and that Michael was able to engage well with Christian. In sharing his excitement about his learning regarding the successful interactions of Michael and his little buddy Christian, Geoff also brought to the fore a learning opportunity for his colleagues (evident in Amanda’s ‘Oooohhhh’) and the research team about the potential for strong learning opportunities in cross-age student pairings, even when buddy pairs are led by students who are considered low-performing.

In Excerpt 5 below, Geoff and Kelly (who plugged in with Geoff’s students during buddy lessons) demonstrated another example of teacher learning emerging from having their previous expert assumptions about student ability overturned. In this excerpt they co-constructed a new understanding of the fourth graders in Geoff’s class as highly capable and invested in working with their little buddies.

EXCERPT 5

GEOFF: I think that regardless of reading level, that my homeroom, for example, understood what they were reading and were able to talk about it. And when they were working with their reading buddies, I think they demonstrated that frequently, which I was very pleased about.
KELLY: And I was a little apprehensive about some of the students reading independently, but I think the text level was appropriate--
GEOFF: Yeah.
KELLY: --for just about everybody…
GEOFF: And they enjoyed, and that I think was one of the great things about the program was that they really enjoyed having a kindergarten buddy that they could kind of be mature around and really be sort of a leader in that regard. And many of them, some of whom are kind of silly, and antsy, they were really spot on, and like [claps for emphasis] ‘Hey, I’m in the zone now, I’ve gotta do this, this is a big deal’. So that was very cool, very exciting.
KELLY: And I think then it did push them to use the vocabulary--
Thus, teachers suspended their expertise by sharing that what they usually knew to be true about students through both formal (such as students’ ‘reading level’) and informal (‘some of whom are kind of silly, and antsy’) measures was challenged by their observations of students’ participation in the CAPT program.

In Excerpts 3, 4, and 5 above, we see teachers positioned as both experts and learners: they positioned themselves as having expertise about their students’ usual learning and behavior, but also expressed that they learned something new during buddy lessons about their students’ ability to step up to meet challenges in ways that surprised and impressed them. Through their externalization of their observations, teachers shifted away from their previous knowledge of some students as disruptive, off-task, and low-performing, and they learned from one another as they co-constructed a new narrative about students as engaged, invested, and capable.

Not only did teachers note changes in student engagement and depth of vocabulary learning; they were also struck by the complexity of student interaction and scaffolding in buddy pairs. For instance, in Excerpt 6 below, teachers watched video footage of Elisa (fourth grader) and Carlos (kindergartner) discussing the meaning of the word ‘gather’ as they read a story together. In the video, Elisa provided sophisticated linguistic support for Carlos by changing her questions from open-ended to close-ended when it became clear that he was struggling to respond, as well as using supportive body language such as leaning in closer to him, modeling actions, smiling, patting him on the shoulder, giving him ‘high fives,’ and pointing to words in the book (for detailed analysis of buddy interactions in the CAPT program, see Martin-Beltrán, Daniel, Peercy, & Silverman, 2013).

EXCERPT 6

After the video clip ends, Tania asks whether Elisa generated all the questions she asked Carlos.

TANIA: [With surprise] Were those all her [own] questions?
RESEARCHER: Right, those were all original. [Elisa created them herself, while reading to Carlos.]

AMANDA (Carlos’s K teacher):

Victoria: Well, she wasn’t letting him get away with --

GEFF (Elisa’s 4th grade teacher):

-- No, no, she’s very persistent.
AMANDA: ’Cause he [usually] will not answer.
TANIA (ESOL teacher for K):

Well she was doing exactly like what I was talking about [to support little buddies who are not talkative], he’s one of the types of kids who’s very non-verbal--

SEVERAL TEACHERS: [agreeing with Tania] Right.
TANIA: -- I mean, this kid has come so far. He didn’t speak a word in the beginning of the year and now he talks, talks, talks.
SEVERAL TEACHERS: Right, right, right.
TANIA: Well the way she was, you know, having him repeat [after her] was exactly what I was talking about [the scaffolding needed], you know, for some of those kids.
LAURA: Are you planning to show the students the videos of some of these clips?
RESEARCHER: Oh, that’s a great idea.-
GEOFF: Absolutely, I think that’d be very beneficial…Anyway, I like how patient she was, though, and the camaraderie was there because he didn’t seem intimidated. She was very involved and she really wanted him to be active and so she was persistent about him and he was kind of like ‘Okay!’ He wasn’t kind of off doing his own thing, he was kind of still into it.

Excerpt 6 illustrates that teachers both shared and further developed their knowledge about students and student learning through their discussions about student participation in the CAPT program. We see evidence of teachers co-constructing their understanding about the kinds of support that students were able to provide one another, and the capability of struggling students to rise to the occasion when they were offered scaffolding. Prior to watching the video of Elisa and Carlos interacting, it appears that teachers had not thought it possible for a big buddy to provide the kind of sophisticated scaffolding that students like Carlos needed (‘Were those all her [own] questions?’), nor possible that someone like Carlos would be responsive (‘he [usually] will not answer’).

However, after watching the video of their own students, the teachers appeared to have broadened their expectations of what was possible in interactions between student pairs (‘the way she was . . . having him repeat [after her] was exactly what I was talking about’), and they externalized their learning to others in the TSG meeting by sharing their reactions. Tania positioned herself as both learner and expert as she absorbed Elisa’s masterful interaction with Carlos with surprise, but also spoke with authority about Carlos, his learning needs, and how Elisa had managed their interaction in a way that met Carlos’s needs. Amanda also reacted with surprise, given Carlos’s usual lack of interaction in her class (‘he [usually] will not answer’). Geoff made transparent his own expert knowledge as Elisa’s teacher (“No, no, she’s very persistent”). He simultaneously made his learning from observing the video clip evident, as well as creating an opportunity for his colleagues to learn from his observation, when he highlighted Elisa’s patience, and Carlos’s opportunity to learn from the space that Elisa created through her willingness to be patient with him.

Teachers’ shifting understandings
Several of the teachers noted that their interactions in TSGs had meaningful impact on their practices and their conceptualization of curriculum content and student learning. For instance, in an interview conducted shortly after the conclusion of the CAPT program, Amanda (K teacher) stated that her participation in the program had changed her approach to teaching new vocabulary. She said her previous practice had been to ‘go over new words a couple of times and that’s it,’ but that she had become aware of the inadequacy of this practice by experiencing how well her students learned new vocabulary from CAPT lessons, in which new words were revisited several times in many different contexts. Amanda’s realization emerged in part
from her experiences as a learner in TSGs which were ‘hands-on.’ She noted that she preferred this approach over other, more typical professional development in which she said presenters ‘give information’ while teachers are passive.

Geoff (4th teacher) stated that collaboration across grade levels – both for students and for teachers – helped him realize the benefits of co-constructing knowledge. He explained, ‘it was good to get everybody’s feedback...because we don’t [usually] get to...see what people are doing in other grade levels.’ Geoff further stated that he had learned about the potential of his students from their participation in CAPT.

The main thing was how well they would interact and display certain levels of maturity working with the younger kids, because we don’t really get the chance to do that, so being able to do that was great, and see the confidence level they have as readers outside of their comfort zone, because in here, they’re among friends...You saw a couple of kids specifically who may not be the best readers, really took pride in their work and what they were doing with their buddies, so that was very positive.

Tania (K ESOL teacher) also highlighted how student interaction in CAPT had changed the way she thought about how they could learn.

I was definitely surprised at their responsiveness to the other students, especially the [students with lower proficiency in English]...I was really kinda shocked that they did so well with the other kids...I would listen to their responses...not that they’re not capable, but normally they need a lot of scaffolding and support.

Importantly, the learning that the teachers identified as significant for them individually had also been key topics of discussion in the TSG meetings.

Thus, the space for teacher learning that emerged in the TSG meetings through opportunities to examine, critique, and modify curriculum, as well as opportunities to see student interaction and learning in a new light, brings us back full circle to the assertion early in this paper about meaningful student learning being rooted in continued, rich, opportunities for teacher learning (Feiman-Nemser, 2001). Further, it is significant that the opportunities for teacher learning we have illustrated here involved the dynamic movement of teachers in and out of positions as both learners and experts as they co-constructed an understanding of student interactions and learning.

Discussion

Previous constructions of expertise have led to an understanding that as learning occurs, the potential for developing expertise builds. Corroborating this perspective is research that demonstrates that expert ability requires thousands of hours of practice, whether in sports, music, computer programming, or teaching (e.g. Berliner, 2001). Yet, the teacher development literature does not tend to consider the reverse as readily: that expertise leads to learning. However, we argue that there is evidence in the data examined here that teachers’ externalization of their expert knowledge led teachers to reflect on their expertise, which resulted in enhanced learning among the group. By externalizing their expertise regarding curriculum and their students, teacher learning simultaneously occurred around how to scaffold vocabulary for students, the polysemous and politically charged nature of language, the importance of peer interaction in promoting vocabulary development, the potential of students who were usually labeled ‘low-performing’ to contribute meaningfully to peer interaction, and students’ ability to scaffold and learn from one another in complex ways.
Through the data analyzed here, we see that expertise and learning are two sides of the same coin, and occur together in the same discursive space. As Dadds (1997) asserts, learning and ‘knowing’ go hand in hand, when teachers talk about their practices and student learning:

Learning is a social experience, so professional growth is usually fostered through exchange, critique, exploration and formulation of new ideas...With the help of sympathetic others, the open-minded teacher-learner can scaffold his or her way to new states of knowing, feeling and acting in the interests of pupils. Talk is often the medium through which this multiple growth takes place, but the talk has to be relevant to the task.

In this study, we not only theorize that professional development must see teacher expertise in service of teacher learning but also that specifying the complexity of teaching to a manageable task, such as evaluating literacy lessons and later reflecting on the implementation of the lessons, can enrich teachers’ opportunities to build upon one another’s expertise.

In Excerpts 1 and 2, we observed the teachers interacting to ‘build up a shared language’ (Dadds, 1997, p. 36), as they generated a discussion regarding what their learners would and would not understand about the word ‘exchange,’ and how to introduce and define a charged word like ‘citizen.’ In Excerpts 3, 4, 5, and 6, the teachers carefully ‘focus[ed] on pupil learning’ (Dadds, 1997, p. 36) as they noted how students interacted in buddy lessons, and reevaluated their previous assumptions about student learning and student capabilities.

Similar to Dadds’ (1997) argument that teacher learning is supported through opportunities for interaction about their practices; Masuda (2010) argues that:

Intellectual inquiry can be strengthened when [TSG group] members serve as resources for each other’s learning...Much of this occurs through the dialogue where participants make contributions to group discussions and sometimes press each other to clarify thoughts. (p. 474)

Masuda’s work on TSGs helped us understand and interpret how the teachers’ interactions around the word ‘citizen’ in Excerpt 2 created a discursive space for teachers in which Victoria pressed her colleagues to consider how to teach the word ‘citizen’ to students. She twice pushed them to think carefully about the polysemy of words when she felt that the lesson was not providing enough context or support for students to understand the meaning of ‘citizen’ as distinctive from the potentially more painful or uncomfortable definition they and their families would likely have been exposed to most.

As we have illustrated through the excerpts from the data above, teachers’ opportunities for interaction around curriculum design and student learning emerged as centrally important opportunities for teacher learning in this project, though learning did not come from traditional professional development means. Instead, through the discursive space of the TSGs, teachers’ interactions allowed for meaningful co-construction that brought forth their expertise, both challenging and validating it. One of the teacher participants in the project contrasted her experience working on the CAPT project to her usual professional development experiences, saying ‘This is much more interactive...It’s a lot more give and take.’ This ‘give and take’ through active participation in curriculum design and examination of student learning during curriculum implementation afforded different opportunities for teacher interaction and learning than those of their regular work day, and supported the dynamic nature
of teacher learning. TSG meetings were structured around collaborative discussion about content that teachers would teach, as well as opportunities for teacher feedback, and critique and redesign of lesson content as teachers reflected on lessons after they taught them in their classrooms.

These features of the TSG meetings in this project align with findings about effective professional development and factors that lead to teacher learning. In their examination of effective professional development through the implementation of new curriculum, Penuel, Fishman, Yamaguchi, and Gallagher (2007) have argued that ‘helping teachers to prepare for their classroom practice yields results that are most directly translatable to practice,’ (p. 928) which gives rise to increased likelihood of teacher learning and impact on teachers’ practices (for work about intervention studies as sustained professional development, see also Green, Gonzalez, López-Velasquez, & Howard, 2013). As Webster-Wright (2009) summarizes, ‘a consensus has developed within the educational research community that effective [professional development] is based on a notion of [professional learning] as continuing, active, social, and related to practice’ (p. 703). Our findings, which illustrate the dynamic and intertwined nature of teacher learning and expertise, contribute to the field’s understanding of social, practice-oriented professional development.

While we do not deny the importance of identifying expert performance when exploring teacher learning (e.g. Berliner, 1986, 2004) nor question that teacher development does indeed occur (Webster-Wright, 2009), we make a case for research that acknowledges expertise as a process, and explores how teacher expertise is mediated and interwoven with episodes of teacher learning. Instead of framing teacher expertise as a final destination, the data we share here illustrate dynamic interplay between moments of teacher expertise and teacher learning. We assert that a complex understanding of teacher expertise, grounded in principles of learning occurring through social interaction, has important implications for how the field should move forward in its approach to fostering teachers’ learning throughout their careers.

**Implications and conclusion**

Little (2002) has argued that although there is a substantial amount of research that points to the importance of collegial interaction for teacher learning, little work has examined how teacher interaction actually contributes to learning. Our study responds to this call for further research that examines ‘the specific interactions and dynamics by which professional communities constitute a resource for teacher learning’ (Little, 2003, p. 917). We contribute to this body of research by illustrating how the discursive interactions between the teachers in this study created spaces in which they could extend their learning.

This study has implications for continuing teacher professional development and suggests that teacher involvement in curriculum design offers important affordances for teacher learning (see also Ball & Cohen, 1996; Parke & Coble, 1997; Voogt et al., 2011). However, as Voogt et al. (2011) assert, ‘most studies on teacher collaborative curriculum design...hardly examine the processes in collaborative design that promote teacher learning,’ including those processes related to teachers’ interactions with peers, and teachers’ experimentation with classroom practice (emphasis added, p. 1236). This study sheds light on both of these aspects of collaborative design (teachers’ interactions with peers and teachers’ classroom practices). A
significant implication is the study’s identification of the dialogic relationship between teacher learning and teacher expertise. In our analysis, we found that the TSG meetings created a critical enunciative space for teachers to engage in curriculum design as both learners and experts, in which dynamic opportunities for teacher development occurred. The meetings also created a space for teachers to collectively reflect on students’ learning and interactions during the lessons, and by doing so, the teachers co-constructed a deeper, more nuanced understanding of their students.

In conclusion, we argue that it is important to recognize the simultaneous spaces that teachers occupy as both learners and experts, rather than adhering to constructions of expertise as static. Furthermore, opportunities for teachers to engage with one another around questions of curriculum and student learning – situated in their own practices and settings – provide a meaningful backdrop for teachers to share expertise, examine, and challenge the assumptions embedded in their expert knowledge, and engage in further learning.

A more fluid conception of expertise recognizes the value of opportunities to examine questions about effective practice and student learning throughout one’s career, and it places the responsibility and capacity for teacher growth through professional development within communities of teachers, rather than through a body of knowledge external to teachers. The recognition of the simultaneity of teachers’ learning and expertise means that teachers, regardless of years of experience and skillfulness in the classroom, continually have important learning to do and contributions to make to both their own learning and that of their colleagues. This understanding of teacher learning and expertise affords richer opportunities for teacher growth, as we are often more open to learning when our expertise is first acknowledged, activated, and made relevant.

In contrast, the literature has shown that there is limited success when teacher professional development opportunities are provided from remedial (Darling-Hammond & Sclan, 1996; Sarason, 1993), top-down approaches rather than through mutual engagement (Webster-Wright, 2009). As is evident in this study, teacher interaction around specific details of implementing practice and examining student learning, such as those afforded through curriculum design, provide opportunities for increased teacher learning and therefore also have more promising potential for increasing student learning.

Future approaches to the exploration of teacher learning should not only bear in mind teachers’ dynamic positioning, but should also further explore how site-based, participatory professional development opportunities – which can attend to teachers’ specific contextual demands – affect both teacher practices and student learning. Future research is needed to further explore the teacher learning, changes in teacher practices, and changes in student outcomes that result when teachers are engaged in professional development opportunities that engage teachers in the full cycle of curriculum design and revision, teaching revised lessons, examining student learning, and discussing successes and failures with colleagues.

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Notes
1. This component of TSG meetings included presentations prepared by the research team on topics related to the five core areas of the intervention program: explicit vocabulary instruction, explicit reading comprehension instruction, peer interaction, instructional supports for English language learners, and use of multimedia to support learning.
2. While the work of Stolk and colleagues (2011) explored processes of professional development, their focus was on how the content of professional development should be structured, not on how the interaction of teachers, in the context of curricular redesign, shaped and provided opportunities for teacher learning and development.
3. All names are pseudonyms.
4. One way in which the manifestation of the teachers’ expertise in Excerpts 1 and 2 can be characterized is through the lens of pedagogical content knowledge (PCK; Shulman, 1986, 1987). Shulman (1986) describes PCK as teachers’ ways of ‘representing and formulating [a] subject that make it comprehensible to others’ (p. 9). Shulman (1986) explains that PCK includes knowledge of the conceptions, preconceptions, and misconceptions that learners bring with them as they approach a particular topic. Through the teachers’ conversations regarding what would help their kindergarten and fourth-grade students understand the focal vocabulary words in CAPT lessons, such as synonyms they would comprehend and what kind of modeling would best support their understanding, the teachers drew upon and displayed their collective PCK as part of the array of expertise they brought with them to their conversations about designing and teaching CAPT curriculum. However, the opportunity to externalize their PCK through both collaborative work with colleagues enacting the CAPT curriculum with students, also led to opportunities to question, challenge, and expand their PCK. Thus, the teachers’ expertise, whether viewed through the lens of PCK or other perspectives on teachers’ capabilities, was not fixed, but rather was in dynamic relationship with their continued opportunities for learning.
5. Transcription conventions: Bold – emphasis on words; Square brackets [ ] – contextual comments; Dashes – overlapping speech.
6. Although it is beyond the scope of this paper, it bears acknowledging briefly here that as members of the research team, we also were participants in co-construction with the teachers, as we created and revised lesson materials.
7. In two of the spring TSG sessions during and after implementation of the CAPT program, teachers watched video excerpts of buddy pairs talking about their books and were encouraged to respond to the following prompts: How would you describe the interactions of the buddies? What is most beneficial or interesting about their interactions?

References


