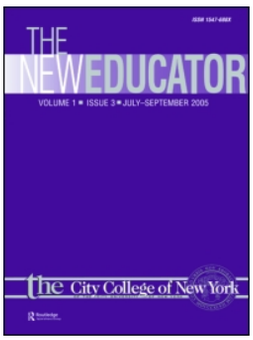

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Teacher Leaders Building Foundations for Data-Informed Teacher Learning in One Urban Elementary School

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ABSTRACT

We examine how teacher leaders (TLs), working in a low-income urban elementary school, supported their colleagues to learn how to collect quality formative data and to discuss it in collaborative conversations in order to make their students' learning visible. The TLs faced challenges reflecting consequences resulting from the district's high stakes accountability policies restricting teachers' agency with instructional decision-making and limiting their definitions of data as summative test scores. We document how the TLs worked to reframe teachers' understanding of data to include evidence of student thinking and supported their colleagues to reclaim teaching as professional versus technical work.

Educating teachers about the use of data to inform their instruction is a strategy that policy makers position as a primary lever for improving teachers' practice and attaining more equitable outcomes for children (Honig & Coburn, 2008). This is especially the case with the implementation of the Common Core State Standards (CCSS) initiative changing the focus of instruction and assessment of student achievement across the United States. At the foundation of the CCSS reform effort is a belief that strengthening teachers' understanding and use of assessment data will provide them a window into their students' thinking and learning. This, it is assumed, will allow teachers to be more effective in differentiating their instruction and supporting diverse learners (Darling-Hammond, 2014; Heitin, 2014).

School reform policies and school administrators are increasingly positioning teacher leaders with the responsibility to facilitate evidence-informed conversations with their colleagues that focus on students' learning and lead to effective instructional adjustments. However, teacher leaders need support in learning the new skills and knowledge requisite for successfully facilitating data discussions. For example, learning how to support their colleagues to analyze student evidence and then to translate what they learn into responsive instructional decision making for their classrooms.

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Our research is designed to closely examine a group of three teacher leaders (TL) at one urban elementary school over the course of an academic year to document the range of experiences they encounter as they work together to support their colleagues in learning how to participate in data conversations. We closely examine how these teachers engage in teacher leadership as they strive to support their teaching colleagues in learning how to identify, to collect, and to analyze formative data in a learning community at their school site.

Literature review

Teacher leadership

Teacher leadership has been defined variously (Muijs & Harris, 2007) and there is little consensus in the professional literature about how teacher leadership is conceptualized (Mangin & Stoelinga, 2008; York-Barr & Duke, 2004). Despite this ambiguity, scholars have noted significant conceptual shifts in how teacher leadership has been theorized over the past four decades. Earliest conceptions of teacher leadership "reinforced hierarchical leadership structure, drawing teachers into formal roles of authority (e.g., department heads) where they had opportunities to either empower or oppress the teachers they were meant to serve…[with directives to] compel teachers within their departments to be cooperative team-players" doing primarily administrative and supervisory work (Bradley-Levine, 2011, p. 247). Over time, teachers' professional knowledge gained increasing recognition shifting the focus of teacher leadership towards leading staff development and designing curricula (Hatch, White, & Faigenbaum, 2005). However, in these early models of teacher leadership, power and decision making continued to reside with school administrators and teacher leaders had little substantive influence in instructional reform efforts including the organization and facilitation of professional learning communities at their school sites (Bradley-Levine, 2011; Hatch et al., 2005).

More recently, teacher leaders have been positioned in colleague support roles with the most salient example being mentor teacher positions. This shift in conceptualizing teacher leadership has not only changed how TLs are viewed by their colleagues but also how power is distributed across schools. Current thinking about teacher leadership is based in the theory of distributed leadership (Grant, 2006; Spillane, 2006). From a distributed perspective, leadership is no longer limited to the designation of formal roles and authority or controlled by school administrators; instead, leadership is conceptualized as influence (Katzenmeyer & Moller, 2009). It is understood to be a fluid and dynamic practice that is context dependent where power and decision making in schools is more equitably shared among teachers and administrators (York-Barr & Duke, 2004). Distributed leadership is "not something 'done' by an individual 'to others', rather it is an emergent

property of a group or network of individuals in which group members pool their expertise" (Bennett, Havey, Wise, & Woods, 2003, p. 3). For this new form of teacher leadership to be enacted, principals need to relinquish control and allow for distributed authority within the school, teachers need to be willing to embrace an agentic role (Grant, 2006), and this understanding and acceptance of leadership needs to be "deeply embedded in the culture of the school" (Muijs & Harris, 2007, p. 129). In this conception, TLs are able to remain in their classroom positions while being recognized for their leadership; as classroom teachers, they serve as "advocates, innovators, and stewards of their profession (Hanuscin, Cheng, Rebello, Sinha, & Muslu, 2014, p. 209; Lieberman & Miller, 2004).

TLs increasingly act as facilitators of school site and/or district professional learning communities where they are responsible for supporting their colleagues to strengthen and improve their professional practice (Hatch et al., 2005; Stoelinga & Mangin, 2010; York-Barr & Duke, 2004). This suggests that a major responsibility of TLs is to create a "culture of trust that allows collaboration to grow" (Little, 2000; Muijs & Harris, 2007, p. 113).

Research question

The research question guiding this study is the following: What skills and knowledge do TLs guide their teaching colleagues to learn in order to support them to effectively participate in evidence-informed conversations about their students' learning?

Method

Research design and context

Design

Our study uses case study methodology (Yin, 2014) to examine experienced TLs' *facilitation* of evidence-informed conversations. This article does not examine TLs' development of leadership and facilitation skills, a critical topic that we discuss in another article (Nicholson, Richert, Capitelli, Bauer & Bonetti, 2016). Our unit of analysis is defined as the teacher leadership monthly conversations about student learning. Our case is bounded and embedded within a single elementary-school site located within a high-needs urban school district during the 2013–2014 academic year.

District context

The school district where the study took place is a very large urban school district in California situated in one of the most ethnically diverse cities in the world. Shortly after No Child Left Behind (NCLB) was signed into law, many schools in the district were identified for restructuring under NCLB

including the school in this study. They were required to use a pacing guide and scripted curricula and principals often sanctioned teachers if they were found to deviate in any way from the prescribed order, pacing or script associated with the curricula. During the year of our data collection, the district was shifting towards a new strategic plan aligned with the CCSS.

Teacher leaders

Although the case-study design includes three embedded units, representing the three TLs at the school who facilitate the monthly data conversations with their colleagues, the most experienced TL, Anjanae, is featured more than the others. We wanted to observe the practices of an experienced TL to better understand some of the many aspects of the work she does to support her colleagues' learning. Anjanae is a female teaching fifth grade with 11 years of teaching experience of which three of those she has been a TL. Ciarra is a female teaching fourth grade in her tenth year of teaching and her second as a TL. Jackie is a female teaching second grade with 5 years of experience and was in her first year as a TL. The facilitated data conversations took place once a month after school in Anjanae's classroom for two hours. All three TLs were part of the Mills Teacher Scholars (MTS) program described in the next section.

MTS professional development project

MTS is a school/university partnership designed to support teacher learning about student learning. The project frames a socioprofessional process that incorporates specific tools and routines to support and scaffold TLs to develop the skills, knowledge, and dispositions they need to facilitate effective evidence-informed conversations. First, TLs help their colleagues define an area of their practice they want to strengthen in order to improve students' learning. This becomes the focus of a yearlong inquiry. With student learning in mind, the TLs then help their colleagues clarify the learning goal he or she has for the students and then describe specific indicators of success that provide evidence that the students have achieved that learning goal. TLs then help teachers select data sources they can systematically and routinely collect that support them to identify and analyze the specific student thinking and learning outcomes identified in their inquiries. Once a month, TLs facilitate data conversations with teaching colleagues at their site where they guide them to share and collectively analyze their inquiry data (Mills Teacher Scholars, 2016).

Data collection

Several forms of data were collected and analyzed for this study from August 2013–June 2014: (a) *Monthly TL facilitated conversations*, (b)

One hour semi-structured interviews with TLs in spring 2014 (e.g., their learning trajectories and challenges they faced, outside supports and pressures that influenced their leadership), and (c) *One hour semi-structured interviews of teachers participating in the data conversations in spring 2014* (e.g., ongoing inquiry investigations and experiences in data conversations). All conversations and interviews were audiotaped and transcribed.

Data analysis

The transcript data were coded inductively for emergent themes. Using constant comparative methods (Strauss & Corbin, 1990), an iterative process, allowed for generating, revising, and regenerating categories and codes in order to reduce and cluster the data (Miles & Huberman, 1994). Analytic memos were constructed to aid in the data-analysis process.

Different data sources allowed for data triangulation (Merriam, 1998). Member checks (Miles & Huberman, 1994) were completed by sharing interview transcripts and memos with the TLs and teacher participants and incorporating their feedback into the revised findings. Thick description drawing on evidence reflected in direct quotes and information from field notes allows readers to determine whether and to what degree the study's findings are relevant to their own contexts.

Findings

In this section, we highlight what we discovered to be the prerequisite groundwork the TLs needed to engage in *before* they could facilitate their colleagues' engagement in effective data conversations because of the sociohistorical context of the district in which this study took place. Specifically, substantial time and effort was spent by TLs to guide their colleagues in learning to shift from the mindsets and practices that were vestiges of the NCLB era (e.g., teachers having little decision-making power about their instruction, data being conceptualized as summative test scores, and assessment information offering teachers little information about students' thinking and understanding) towards the new conceptions demanded in the age of CCSS. This included supporting teachers to view themselves as the experts of their practice with increased responsibility to study and improve it continuously through the systematic use of inquiry. The work also involved recalibrating their colleagues' understanding of and relationship with data, especially how to collect and utilize "real time" formative data. Further, the TLs in this study worked to set norms that communicated the value of leadership as a distributed and relational practice, a reversal from an era where teachers were rewarded for their compliance and conformity to the directives of district administrators. Each of these findings is described below.

Setting the tone

From the very first meeting in the school year, the three TLs used discourse and modeled behavior that emphasized everyone's positioning as both teachers and learners where leadership and learning was distributed across the group. They communicated expectations that everyone would take responsibility to participate by sharing data, listening intently to their colleagues, and providing supportive but critical feedback to one another. Anjanae distinguishes the MTS work environment from other spaces where she and her colleagues regularly interacted together. She explains that because they are all charged with "pushing each other's thinking forward," everyone needs to stay focused and the TLs need to engage in what she calls "a different kind of listening" during MTS meetings:

> We know we want to understand how students are interacting with a certain concept, and we know we are here to try to push each other's thinking. So I think that teachers are coming in with the mindset that, I am not just here to talk to you, or to go into all of the gripes and difficulties of our day. I am here to help you move your thinking forward on this particular topic. And I think that is sort of different from any other opportunities we have to be together and talk about learning in school.…I am not sure we even listen to each other in the same way in other arenas. I am listening so closely to what you are saying about your data because I know I have to ask you something to help you push your thinking forward. It is like *a different kind of listening*. (Participant interview with Anjanae, April 14, 2014; emphasis added)

Striving to create a safe environment where teachers would feel supported to take risks and open up their practice for public analysis, the three TLs communicated early in the year to the teachers that wherever they were on the continuum of learning, that is, constructing inquiry questions and becoming active participants in data discussions, was acceptable. Building trust in this way was essential for creating a learning context where the teachers perceived it would be safe to reveal their vulnerabilities and to report honestly about their strengths, doubts, and the challenges they were facing in learning to use data to inform their instruction. At the beginning of the second MTS meeting, Anjanae frames the purpose of the work they would be doing over the course of the year together emphasizing that learning is not a straightforward linear progression. She explains, "We just want to validate where everybody is in the process. Sometimes, everyone is all over the map and there are moments where you are a little bit lost on [your] direction, but that's all part of the process. So, no matter where you are as a group, we'll just try to take one step forward each time you come until we get to where we want to go."

An important strategy used by the TLs to set a tone of equity and shared power with the teacher participants was making their own practice public by

sharing personal narratives about their own learning trajectories as teachers. Sharing such anecdotes of practice (including the practice of inquiry) positioned TLs as learners themselves; learners with vulnerabilities, fears, and doubts who made progress over time just as they would guide their teaching colleagues to do in the MTS meetings. For example, in the beginning of the second meeting, Jackie explained how the MTS process, and specifically the need to articulate learning goals for her students that would be systematically assessed over time as barometers of their progress, initially made her quite nervous. Through her story, she revealed her own vulnerability as she learned to participate in the MTS process. She also explained how much she learned from collecting the student data and how important it was to her subsequent teaching that she do so even though it made her feel uncertain and vulnerable at first:

> I have had a difficult relationship with the learning goal over the different years that I have been doing this.…I never wanted to set a learning goal for my kids in the past because…then if the students didn't meet the learning goal, then that's kind of reflected poorly on my teaching.… I don't have such a neurotic relationship with the learning goal anymore [laughing]…[now I understand that teachers] can track student progress against that learning goal…it can also make you shift your teaching because you realize your students aren't making it [the goal] because of something you're not doing or doing too much of…and then sometimes your students actually meet that learning goal and it takes you in a new direction.…It's really a way of getting clarity. (MTS Meeting: Field notes, November 14, 2013)

An important component of communicating that all participants would be both learners and teachers in the MTS meetings, TLs reinforced the practice of positioning knowledge construction as a socially constituted process. Instead of thinking individually about their teaching, TLs encouraged their colleagues to learn to utilize the group to help them think about specificities of their practice. Discourse reflecting this stance was integrated throughout all of the meetings and consistently expressed by the three TLs. Such discourse is reflected in Anjanae's announcement at the beginning of the second meeting where she reinforces the importance of the group for helping individual teachers' learning and growth: "Be thinking about how to utilize the power of your group and what question you want to pose to the group so we can really help you move to the next step."

Focusing on students' learning

TLs continually emphasized the purpose of their collective work as learning to make students' thinking and learning central to their teaching practice and using this knowledge to inform effective adjustments to their instruction. This was seen in their first convening when Anjanae framed the purpose of the meeting, "Today, we are going to try to surface, what are the key student

ideas we want to make visible? And, [what] data source is going to make that student learning visible to you?" To Anjanae, helping teachers to identify learning goals for their individual students was one of the most important tasks that she and her fellow TLs would need to scaffold among their colleagues. She explains, "I think knowing the learning goal is key. If I'm going to help you analyze your data, I need to know your learning goal" (MTS Meeting: Field notes, October 10, 2013).

The following exchange highlights how TL Anjanae works with her colleagues to help them surface the student-thinking and learning goals they wanted to examine. Here we see Antonette, who teaches visual arts at the school, explaining during the first meeting of the year in September, that she has created the rubric for her students with a goal of having them use it for self-evaluations in her art class. The conversation opens with Antonette passing out copies of her rubric to her colleagues so they can help her analyze it. She explains:

> The focus of my inquiry is what happens when I create a kid-friendly rubric and use it to help students self-evaluate. What happens? Because of time issues, I just don't have the structures in my classroom to sit with every group and listen to every child.…I have 5th graders…what I'm noticing is that the rubric is kind of complicated.

Anjanae then orients the group to their task of clarifying the type of student thinking they believe the rubric is identifying. Anjanae and the teachers take turns thinking out loud about what they see in the rubric and how Antonette could revise it to more effectively articulate her goal for using it.

Anjanae: We are going to look at the data you brought and what student thinking we think it makes visible…There are language markers, "What does it mean to be *skilled*?" and "What does it mean to *talk about art ideas*? I think you are asking kids to make a claim about their space in the art class but you are also asking them to understand the language markers. You might need something else just to make sure that the kids understand the vocabulary. [emphasis added]

Louise: I remember being in college and getting the rubric before we did the assignment. I'm wondering if students could get the rubric before so they understand the expectations of the assignment. Do students understand "Very, Almost, Always"?

Anjanae: I'm also wondering if you are interested in their ability to grade or their ability to provide evidence for that grade? "This is the reason why I gave myself a 3."… My second wondering is whether you have thought about a way where you can see how students can state a goal for themselves to increase the meaning of this.

> **Jay**: I think to have students work with a rubric is really important.…I wonder if you include lines underneath each one [number on the rubric] if that would force them to have to create evidence for their claim. The other thought I had…rubrics always start with someone's idea about the definition of success for that activity. I wonder if you can add a space for the students to define success and you can build a bridge between their ideas and your own so you can be creative about bridging them to what success can look like.

Listening to her colleagues allows Antonette to identify, with more specificity, what skills and thinking she wants to assess with her rubric. She reflects, "Just looking at this, doesn't give a lot of data. In my head, I'm saying that the main things that are addressed there are…craftsmanship, being able to talk about art…I feel like it was getting really big and confusing. I really like the idea you suggested [adding the lines underneath]" (MTS Meeting: Field notes, October 10, 2013). Anjanae continues in this process of helping Antonette articulate the students' skills being assessed through her rubric and a method for scaffolding her students to make their thinking visible. She suggests, "It could say, 'When I talked to a partner, I used an art word' and the students could then circle [examples of] evidence. You would be like scaffolding the ways that they could give evidence to you." Jay continues, "It's a variation on what I said about the line beneath. You are providing the ideas for them to circle/cross off. By fifth grade, they could do some writing [listing these ideas themselves] which would make it more difficult for them."

The following month, Antonette's description of her rubric provides evidence that she listened carefully to her colleagues' feedback in the previous meeting. During the opening Whip Around, she explains to the group:

> I started out with a rubric that I made and I realized that that wasn't working. The wording was very like bulky. Just like a lot of words and it was coming from my head so…I was approaching it in a way that wasn't accessible for the students.…I had just glossed over the whole part about starting with what the students already know and going from there. And so basically, another thing that I have changed is really breaking it down…like really scaffolding it, I just feel like I have to do that in order to be more clear for myself what I am asking of the students, I need to model for them what I am expecting…I was just noticing a lot of confusion on their part…it's like really thinking about what you want from your students.

Anjanae then invites the teachers' input once again, another step in the MTS facilitation process. She states, "So what we are going to do right now is have a discussion where we reflect back what we heard, anything we are wondering, what we see as connections to a learning goal, a data source or

anything that we would like Antonette to say more about." The teachers offered their reflections as Antonette listens:

Jackie: So I think it is about self-evaluation of the process of how students are working, not the content of art necessarily.

Anjanae: I noticed that from listening to Antonette speak about her process and knowing where she started last month with a rubric that she generated herself, what I noticed is that it seems like she has come up with a plan for helping students to be able to self-assess and really started teasing out some of the things that the kids have to be able to do in order to do this. Like they have to understand the language of the rubric to even put themselves in the category around it and they have to have some sort of ownership over it and it sounds like she is scaffolding that process before they actually do some self-assessment. So I actually heard her tease out these are the things you need to do before students can actually assess themselves on a given rubric.

Rosa: I heard Antonette talking about how she needs to tease out what she really wants to know about students in the first place before you can even create that rubric for your students, you really have to be very clear about what your expectations are for them first of all, without that clarity you can't be very clear with the students about what your expectations are for them…and you realized how important it was to start with what the students already know.

Anjanae then works to help Antonette connect her rubric with an explicit learning goal. She reflects:

> I was wondering, in terms of a connection with a learning goal, what popped up for me is two things, analysis, the skills it takes to analyze anything, even if it's a self-analysis of how you are in an art class, and also critique because it seems like students are being asked to figure out where they are and then evaluate that or critique that by giving it a rating.

After more group exchange regarding analysis and critique, Anjanae states:

> I think it might be interesting…if you just sat down and wrote out every single skill you are asking them to use when they do this [rubric]. I think you have a lot of skills packed into this activity and you could eventually choose any of them to develop indicators [for measuring the learning goal].

Antonette agrees that this would be a useful exercise. Before they move on to examining another teacher's data, Antonette shares one final reflection, "Maybe I just start with, what they did well and how do they know that?"

Reframing data-based professional learning

The teachers' prior experiences with data were primarily with summative data (e.g., almost exclusively test scores) that provided them no information about their students' thinking or the processes of their students' learning. Therefore, an important foundational step was for TLs to help their colleagues to broaden their very conceptualizations of what constitutes "data." Ciarra explains how one of the important challenges the TLs faced early in the year was their colleagues arriving empty handed to the MTS meetings. Many did not understand what formative data were because of their narrow conception of data defined as test scores. Ciarra explains that as a result, several teachers did not initially bring any data to the MTS data discussions:

> I think at the beginning, a lot of people struggle with, they think they don't even have any data, so they come to the meeting [and say], "oh, I have nothing," instead of thinking, "What have I already done? How can I turn that into some data?" So [TLs] do a lot with trying to assist people at the beginning, so that they feel like, "I do have something that I can look at, when I come in here."…[That is] just how people think about data, from school, that they sometimes feel like, I don't have data, because I don't have a test to give this kid.

Because teachers' prior conceptions of data were associated with testing, they often felt burdened by the thought of needing to collect data as they believed this would involve adding new tests or other traditional assessments requiring them to do something above and beyond their everyday teaching. The TLs had to work hard to shift their mental models to see data as information they were already gathering on a daily basis in their classrooms. Anjanae remarks:

> It is trying to help teachers shift, from, you don't need to design this activity that is a data source, you are learning about your own ongoing day-to-day practice, the assignment you gave is your data source, you don't have to come up with this grand thing…one of the main things that I have been trying to figure out how to get teachers to understand, is you want to understand your practice, not like some other thing that you are going to add in…because it is not likely that you will continue to do that…to really learn about something that you do practice, so that it can impact future students, I think, if I could really get that across, I think that would change the way teachers work.

Anjanae explained how the sociopolitical context of data use in her urban school district over the last two decades under NCLB divorced teachers from contextualized understanding of data. Test scores provided teachers with little to no opportunity to examine real-time student learning data to understand their students' thinking in depth or to use it to inform responsive adjustments to their instruction to meet individual students' needs. This, she

explained, was why her colleagues found it so challenging to use data instructionally:

> Data is [*sic*] accelerated reader quiz numbers, benchmarks, CSTs [California Standardized Testing], SRIs [School Reform Initiatives], lexiles and these random things. That's data, and a lot of times you don't even know how to interpret it. We see it at the end of the year, and at the beginning…schools are being compared, and then they want you to figure out how you are going to move a student a whole lexile, which is l00 points, but [teachers] don't even know what the test is testing.… We don't have codes to actually sit down and take the test, but what you get is a number at the end, and then you get a number as it correlates to a certain reading level, or DRA [Developmental Reading Assessment] level, or gray level, which you get on a chart. But you don't know what the test tested, unless you shadow behind the student and kind of read along as they were doing it…And they [the tests] are differentiated, which means, if [a student] missed two, it will bump [them] down a level which means they get a whole other set of questions from this huge bank of questions. [And] we don't know what those questions are.

Gabriella, who was a second year MTS teacher at the time of our study, explained how the use of audio data opened a whole new world of understanding not only about her students' learning but also about her ability to access it. Gabriella's comment below demonstrates this shift in thinking about data:

> I started MTS last year, and I feel like I really didn't know what I was doing at all.…I feel as though being a teacher you are just kind of going through the movements, you are going through your day to day, you are putting out a million fires, and maybe you have something terrible happen one day, or something amazing happen, but you can never, I think we aren't really given that time to go back and reflect on what was going on in the classroom when things were going really, really well, or when they weren't going really well. So, for me, those pieces of audio tape have really been that, like, like a time capsule. …Going back to it when I have my sanity…away from the classroom and just in my own analytical mind…I feel as though I have been able to really notice what is going on in a way that I would never had done, had I not started taking that audio.…I am a third grade bilingual teacher.…[A]t the beginning, I was really wanting my kids to be able to have academic conversations in Spanish, and have academic conversations in English.… I wanted them to be using these particular sentence frames, and these particular words. What I realized when I started to take audio of my kids…I noticed that that is not how kids think.…What I think I am doing with academic discussion in my own life, I am accessing all kinds of language…I am using my English, I am using my Spanish, I am using all of my frameworks to be able to get to a higher level of thinking, and it was through this audio that I noticed that I was really trying to have these restrictions on my kids, and it was when I really loosened up those restrictions, like, gave them enough scaffold so that they can start to access thinking in particular ways, but then allowing them the freedom and creativity to do it in the way that they were going to do it, and that makes sense for them, that's when I really felt the conversation started taking off in a different way. So, again, I could not have, I

> couldn't have seen that, or heard that, unless I had, you know, actively been listening to this audio.

Another challenge associated with the sociopolitical context of schooling confronting the TLs was that teachers were not accustomed to asking students to repeat classroom experiences that allowed them to track progress on the same thinking process or skill over time. Collecting data in a routine way allows teachers to monitor students' progress. However, given the teachers' prior experiences with "data" that were collected once or twice a year, this MTS-repeated/routine data-collection process was new to the teachers and difficult for the TLs to explain. Ciarra describes that teachers are pressured to "move on" with few opportunities to spiral back and revisit a particular lesson over time. Anjanae agrees explaining that this becomes problematic when teachers bring new types of data each month to the MTS meetings making it difficult for them to discern patterns in their students' thinking and learning. She states:

> You see teachers bring so many different things…it's hard to really pick up a pattern…so trying to get people to really look at one thing, over time. Even if you bring in other data sources to help you understand what is happening…bring in an interview about it, or have a video, or have some sort of piece of student work, where they have tried the same thing multiple times so you can see how your instruction is impacting student outcomes…you wouldn't think that would be so difficult, but it is difficult…for teachers to let kids practice the same thing a whole bunch of times.

Anjanae explained that once teachers had determined a routine data source that they could collect repeatedly overtime, they made significant discoveries that helped them reflect upon and critique some of their prior teaching practices. They would also begin to see value in providing opportunities for their students to practice the same skill several times that also allowed them contexts to systematically track students' progress:

> I think for a lot of teachers…is that they come to the realization, "oh, what I assigned is not really what I want," or "what I have students doing, is not really showing me what they know about blank," or "the question that I asked, it's not even structured to get the kind of response that I am looking for," and I think a lot of teachers learn, that the lesson that they have designed or the assignment that they have designed, doesn't even necessarily get at the point that they think it is getting at. So, they learn how to rewrite a question, or how to change their graphic organizer so it gets the student actually doing what they wanted them to do. We are still really trying to get teachers to hone in on a source of data that actually connects to their big idea, and then to come back to that data source multiple times [and] do the lesson again, because I think we tend to think of [the curriculum], like these little projects…students are not really getting multiple opportunities to practice something, so it is hard for a teacher to track change over time.

A related reframing TLs needed to do was supporting their colleagues to move beyond assumptions, personal feelings, biases, and judgments about students that could bias their interpretations of data. TLs spoke about the need to remind their colleagues to examine data with as much impartiality as possible in order to learn what the data were telling them about their students' thinking and understanding. Anjanae explained the work involved in this process:

> I think a lot of [our work] is helping the teachers to unpack their assumptions… trying to help a teacher decide "What does this data show you, like, what does it *really* show?" Not what are you assuming…a lot of times teachers have a lot of anecdotal notes or gut reactions to a lesson, and I think one of the things that I [as a TL] am always trying to do is to set [assumptions] aside…Because I think all of that is a lot of times [we as teachers are] clouded by, well, we think "This is a smart student," we think "This is a struggling student" and that adds a haze as to what [teachers] think is happening during a lesson. Then [teachers] look at actual [student] work, and you have to say, "Well, what is in front of me? What does this say that this student is able to do? Or, what does this work show, aside from my assumptions, about what they are able to do?" (Participant Interview with Anjanae, April 14, 2014; emphasis added)

TL Jackie described how these realizations happen in the context of collaborative MTS discussions. She explained that it was the context of the teachers looking at the student data together, asking probing questions of one another, that "direct the person who's work it is, to look at it in different ways that they wouldn't otherwise have looked at it. Or see it different." This was a familiar process to Jackie, who reflected on her own practice for the other teachers. She explained, "That's been my experience with it…an example would be, [one] day I was kind of dismayed that my [2nd grade] students weren't saying many types of things I thought they should be saying." Jackie then added that one of her colleagues reminded her that she had changed the format of her science discussions and should consider how this pedagogical change could be impacting her [Jackie's] students' thinking. She then reflects out loud about the value of reflecting on one's practice with a colleague and listening to their questions and feedback. She explains, "So, I wouldn't have necessarily arrived at that [reflecting on my instructional changes], if I hadn't had another colleague point that out to me." Once again, Jackie models how the monthly MTS meetings are intended to be spaces for both teachers and TLs to reflect alone and then with their colleagues about the data they were collecting in their classrooms.

All three TLs discussed challenges they faced in reframing discussions and thinking about data at their school. As teachers in an urban school district long constrained by the accountability mandates of NCLB that limited their analysis of data to summative test scores, the TLs believed that all of the teachers at the school (teachers and TLs) needed to broaden their ideas about

what classroom data might be and to strengthen their skills in understanding how to analyze those formative data to gain clarity about students' thinking and understanding. Anjanae articulates this:

> I [Anjanae] think that this piece about making student learning visible is a really key one. Especially in terms of the shift towards the Common Core. I don't think teachers really know how to do that. Because for so long in education, we were told what data to look at, you know, what to collect, here's the test scores, but that doesn't really make learning visible.…A lot of the conversation that we [TLs] had in the last meeting [with the teachers] was, I was trying to push [the teachers] toward that [by saying], "[Y]es you have a rubric, yes students scored themselves, but what does that show you about what they understand? Does that show you that they know vocabulary? Does it show you that they understand the rubric?" And I think that's really difficult [for teachers], even for me, sometimes it's like, "[W]hat *is* this showing me about what my students understand?" So I think that's a critical piece of our [TLs and teachers] learning.… [My goal is to have] teachers come away with some sort of a way to understand how their students are thinking because they don't really have those skills because for so long they weren't needed. [Emphasis added]

Discussion

Under the Bush administration's NCLB policies, it was assumed that increasing uniformity, compliance, and fidelity in public-school curriculum and instruction would lead to improvements in students' academic achievement. As is now well known, such conditions led to the elimination of "space for conversation, exploration, [and] the personalization of learning" for students and their teachers in many of our nation's schools (Kohl, 2009, para. 9). NCLB significantly reduced teachers' agency and decision-making responsibilities and continuously punished school districts across the nation. Whereas CCSS offers a broader view of teacher agency, it is also placing stress on teachers and schools. The imposed expectations for shifting curriculum and instruction to emphasize critical thinking, the social construction of knowledge, inquiry, problem solving, and deep engagement with formative and summative data to influence responsive adjustments to instruction require significant pedagogical change. This close look at some of what will be needed as teachers and TLs engage collaboratively in making these changes illustrates just how complex the work will be.

The TLs in this study were hybrid teachers (Margolis & Doring, 2012), a model that demands a tremendous amount from teachers and requires a school culture where the principal is willing to share power with teachers who become instructional leaders. Being hybrid teachers involves (a) facilitating the MTS meetings and data discussions, (b) teaching full time in their own classrooms, and (c) studying their own practice using the same methods of inquiry they were teaching their colleagues. The TLs believed it was their

equitable positioning with their colleagues that strengthened their ability to create effective learning communities where they could help them to take the risks associated with realigning their instruction to the CCSS. Ciarra reflected on this saying, "[B]ecause we as TLs are doing our own inquiries, we understand the teachers' experiences and what does and doesn't work in [the MTS] meetings." Anjanae concurred stating that TLs "feel the tensions [of having to make these instructional changes] … and because of that, we are "more sensitive to what teachers need" (Participant interview with Anjanae and Ciarra, April 14, 2014).

The TLs in this study had an approach and a plan to guide their leadership work and the reform they were aiming to bring to their school site. They set the tone for relational learning by listening with intent to their colleagues' thinking and evolving ideas. They helped their fellow teachers to clarify what their learning goals were for students. They communicated messages that teacher participants *and* TLs were all entering uncertain territory and learning together. They were enacting leadership theorized as influence (Katzenmeyer & Moller, 2009; York-Barr & Duke, 2004) and communicating a message that "leadership is in the learning, not in the perfection" of one's practice (Margolis & Doring, 2012, p. 878). Such conceptualizing of leadership was seen in the way the TLs revealed their own thinking processes, used modeling to make public how they learned from their mistakes and "encourage[d] *reflection on teaching* rather than *replication of teaching*" (Margolis & Doring, 2012, p. 878, italics in original). Through their explicit scaffolding they supported their colleagues to make progress in learning several important skills:

- Learning how to attune to students' thinking processes;
- Articulating clear student-learning goals;
- Developing indicators of success that would help them determine if and how students were making progress towards their goals;
- Broadening their conceptions of data;
- Trusting themselves and one another as not only consumers of knowledge, but producers of it as well;
- Further, the cornerstone of TLs work was guiding teachers to learn to see the dynamic swirl of activity inside their classrooms as complex texts that they could learn to study through the use of inquiry and focused data collection.

In doing this work, MTS TLs acted as guides, mentors, collaborators, and colleagues, but they were also disruptors (Meyerson, 2001), using their leadership to open their colleagues' minds to new conceptions about their professional identities and work. For example, they sought to interrupt autobahn instruction where lessons were taught, but never revisited, in an

effort to keep everything racing forward. Through repeated guidance, the TLs supported their colleagues to see the benefits of circling back and repeating activities so they could increase their understanding of students' thinking and learning over time.

Another example was evidenced in the intentional choices TLs made to encourage teachers to embrace their personal agency and to take ownership of their own decision-making capabilities instead of relying upon the TLs to find solutions to their educational dilemmas. The importance of teachers' agency in their professional learning is a core idea of MTS and is associated with a goal of positioning teaching as intellectual and professional (versus technical) work. Anjanae describes this situation:

> The focus [for TLs working with teachers] is really not on, "well, why don't you do this or why don't you try this."… It is really trying to help them come to an understanding. So you do you have to learn to phrase things, or nudge people, so that the *ownership of the idea is theirs*.…You have pushed them to come to this place of clarity, as opposed to just being like, "Oh, the solution to that problem is this."… [Teachers will] have a much greater sense of why they made the change they made, when it came from their own mind. I am thinking about Antoinette right now, she came to the realization that [her] students didn't even understand [her rubric]…and then she re-designed her lesson, so she can say, "Well, now I let kids, you know, come up with the language of the rubric in the classroom together, because I realized that in order for them to evaluate themselves, I had to start with where they are." (Participant interview with Anjanae, April 14, 2014)

TLs used the MTS meetings to expand teachers' responsibilities and to strengthen their professional judgment (Wood, 2007) to, in essence, take expertise back into their own hands. This required learning and growth by both the TLs and their colleagues. The teachers began to recognize their expertise, to work towards developing their professional voice as urban school teachers, and to engage in continuously learning about their students' learning and their own teaching. The TLs worked to support the teachers in this work that required restoring a learning context where all teachers' knowledge was encouraged and valued.

Conclusion

School reform and improvement depends on teacher leadership (Helterbran, 2010), and TLs will play a critical role in the future success or failure of the CCSS implementation (Ledesma, 2012). The TLs discussed in this article provide a valuable window into the sustained and comprehensive work TLs will need to engage in as they strive to create the conditions for catalyzing sustainable reform in our nation's schools.

Our findings highlight a critical component of TLs work that has to date, been undertheorized. *Before* TLs can support their colleagues to

engage in productive data conversations that remain focused on students' understanding, they may benefit from having time and space created for them to work collaboratively to repair the residuum of the high-stakes accountability movement. As highlighted throughout our data, this may include reconceptualizing associations with the word "data"—untoggling its identification with discipline and sanctions and recognizing how it can be used advantageously to support teacher professional growth and learning. Learning to position students' thinking and understanding as central pillars of teaching practice is another foundation underlying productive data conversations. Another important focus for TLs working with in schools transitioning years of using scripted curricula—where teaching was positioned as technical or managerial work (Servage, 2009)—is working with teachers to reconceptualize their professional identities. That is, guiding them to see themselves as intellectual professionals who accept teaching as an uncertain craft (McDonald, 1992) that demands continuous study and adaptation in response to the ongoing assessment of students' complex learning needs. And, that teaching practice can be claimed as *professional* knowledge, a novelty for many teachers as Ciarra explains:

> People look up to me. I just feel more like I have a profession.…I used to see it as the people who look up to me are my students, but no one, I feel, ever looked up to me as a teacher outside of my own classroom. Now, I think people look at me as a professional teacher, like, "Oh, she has experience teaching and this experience actually means something" where I didn't feel that way before. (Participant interview with Ciarra, April 14, 2014)

Most importantly, TLs are tasked with creating safe and productive spaces where they can work collaboratively with their teaching colleagues in an iterative process of listening, talking, reflecting, and discovering about the complex and dynamic process of learning—both their students' learning and their own.

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