The Affordances of Using a Teacher Leadership Network to Support Leadership Development

Creating Collaborative Thinking Spaces to Strengthen Teachers' Skills in Facilitating Productive Evidence-Informed Conversations

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School reform policies and school administrators are increasingly positioning teacher leaders (TLs) with the responsibility to facilitate professional learning for their colleagues. Although ample evidence exists to suggest the need for facilitators to be highly skilled for teachers' learning to be optimized, there is a dearth of research describing how TLs act as effective instructional leaders with their colleagues in professional learning communities (Nuermerski, 2012). Furthermore, no empirical studies have described effective models for supporting the leadership development

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of the TLs who are charged with learning to take on the role of instructional leader at their school sites.

Our research intends to address this gap in the literature by documenting a teacher leader network (TLN) that is part of the Mills Teacher Scholars (MTS), a professional development program that supports teachers to develop as TLs. In this study, we describe one TLN meeting at which 21 teachers convened to learn how to develop as teacher instructional leaders responsible for facilitating substantive data conversations with their colleagues. We analyze the affordances this learning community provides for TLs, with a goal of making visible how the TLs were supported in strengthening the skills and dispositions required to be effective facilitators of evidence-informed conversations that would move their colleagues' thinking and learning forward.

Literature Review

Current conceptions of teacher leadership no longer associate it as belonging only to a small subset of teachers who hold formal positions of authority within schools as mentor teachers, instructional coaches, or professional development facilitators. Instead, contemporary theorizing positions teacher leadership as a process of influencing others *to improve their educational practice* and exemplifying a *learning stance* as part of a more inclusive construct where teachers in all positions within schools are believed to have the capacity to develop and strengthen their leadership capacities (Katzenmeyer & Moller, 2009; Margolis & Doring, 2012). A commonly cited definition reflecting this current emphasis is offered by Katzenmeyer and Moller (2009), who explained, "Teacher leaders lead within and beyond the classroom; identify with and contribute to a community of teacher learners and leaders; influence others toward improved educational practice; and accept responsibility for achieving the outcomes of their leadership" (p. 6). York-Barr and Duke (2004) theorized teacher leadership similarly as a process by which "teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement" (p. 287). Such understandings decouple teacher leadership from association with formal authority and hierarchies that reinforce divisions between classroom teaching and administration (Darling-Hammond, Bullmaster, & Cobb, 1995).

Scholars have proposed that such conceptions of teacher leadership hold great potential for eventuating school reform (Bradley-Levine, 2011) as teachers are supported to "pose and solve problems" and "assume leadership for change from within rather than looking upward or outward for leadership" (Darling-Hammond et al., 1995, p. 100). Such theorizing positions teachers as holding expertise that is valuable for entire school communities, as "leaders in practice" (Grant, 2006, p. 519) who are best positioned to facilitate school improvement efforts through ongoing,

systematic study and strengthening of their instructional practice. Foundational to the theory of change embedded in such associations between teacher leadership and school improvement is a belief that "leadership is in the learning, not in the perfection" (Margolis & Doring, 2012, p. 878). Therefore a "teacher leader is the best teacher learner—the one who revises and improves their own teaching the most, as well as the one who provides the most appropriate feedback to others so they can learn from missteps" (Margolis & Doring, 2012, p. 878).

Central to such interpretations of teacher leadership are such skills as learning from one's mistakes; making public the process of thinking through complex educational dilemmas, including learning to honestly and thoroughly reveal professional struggle; modeling the importance of "*reflection on teaching* rather than *replication of teaching*" (Margolis & Doring, 2012, p. 878); and recognizing that high-quality teaching requires continuous "fine-tuning" of instructional practices in a quest to remain responsive to the specific needs of "particular students on a particular day in a particular classroom" (p. 861). Leadership, then, is fundamentally about learning and engagement in ongoing inquiry into practice, building a community based on "using data to improve rather than prove" (Charalambous & Silver, as cited in Margolis & Doring, 2012), "drawing from classroom observations to learn rather than evaluate, and rewarding teachers for reflection rather than perfection" (Margolis & Doring, 2012, p. 878). As described, teacher leadership is both an interpersonal and intrapersonal experience where TLs not only strengthen relationships with their colleagues but also engage in a continuous self-monitoring process "attending to how peers perceive them and [taking] steps to manage those perceptions so that they enhance rather than inhibit their relationship-based leadership" (Raffanti, 2008, pp. 65–66).

The success of actualizing this image of teacher leadership is contingent on having both a school culture and the requisite structures that allow it to develop (Muijs & Harris, 2007), including support for collaboration, partnership, and collective decision making (Grant, 2006); strong relationships among staff based on high degrees of trust (Bryk & Schneider, 2002); and "principals [who] are willing to relinquish their power to others and where fixed leader-follower dualisms are abandoned in favour of the possibility of multiple, emergent, task-focused roles" (Grant, 2006, p. 513). Thus the enactment of teacher leadership requires specific leadership dispositions for principals and teachers (Helterbran, 2010), including comfort with distributing or stretching leadership across individuals and pooling expertise (Hargreaves & Fink, 2006), valuing the process of making one's learning visible despite the vulnerability this requires, and refraining from blame (of self and others) as risks are taken and learning trajectories are revealed (Muijs & Harris, 2007).

Although there are increasing calls for developing teacher leadership and encouraging teachers to "find their voices [and] take up their potential as leaders and change agents to produce a liberating culture in their schools" (Grant, 2006, p. 513), we need to develop more clarity in understanding how this important

work can be intentionally guided and developed within our schools. If teacher leadership is fundamentally about influence and we want to empower teachers to be primary catalysts in their own leadership development, we need to understand how teachers—not just those with a designated special role as a school site coach, mentor, or instructional leadership team member—can learn to facilitate leadership development among their own colleagues.

Toward this end, this study was designed to illuminate the "hows" of supporting teacher leadership development when leadership is commensurate with learning, influence, and "finding one's voice." We document how TLs working in urban schools learn to acquire important skills and pedagogical strategies they can use to support the leadership development of their colleagues, allowing the district's school reform policies to remain closely tethered to classroom practice (Margolis & Doring, 2012).

Conceptual Framework

Our conceptual framework is informed by two key concepts: the notion of affordances and scaffolding. Both concepts greatly informed our data analysis and allowed us to identify key intentional experiences that supported the learning and development of critical leadership skills.

Affordances

The term *affordance* was first coined by Gibson (1977) to refer to the functional properties that determine the possible utility of an object or environment for a particular agent. For example, an animal's environment *affords* it a number of things: shelter, water, other animals, places to hide, and so on. According to Greeno (1994), "an affordance relates attributes of something in the environment to an interactive activity by an agent who has some ability" (p. 338). Affordances have different value to the animal and may afford "good or ill" (Gibson, 1977, p. 68). Gibson explained, "The affordances of an environment are what it offers animals, what it provides or furnishes, for good or ill. . . . Different layouts afford different kinds of behavior and different encounters, some beneficial and some harmful" (p. 68). The value of affordances is dependent on how they are perceived and taken up by the agent; therefore an affordance always reflects the dynamic specificities of the relationship between an environment and an animal or individual.

Central to Gibson's theory of affordances is the notion of reciprocity. This idea implies that "the affordance is a property of whatever the person interacts with, but to be in the category of properties we call affordances, it has to be a property that interacts with a property of an agent in such a way that an activity can be supported" (Greeno, 1994, p. 340). In other words, an affordance refers to elements in the environment that contribute to particular interactions by the agent in that environment. Gibson (1977) argued that affordances are neither "subjective" nor

"objective" properties but rather "facts of the environment" (p. 70) that do not rely on the animal (actor) for its existence. Therefore an affordance "is not like a value which is usually supposed to depend on the observer nor is it like a meaning which is almost always supposed to depend on the observer" (p. 69) but rather anything that contributes to the interactions that occur in that particular environment.

For the purposes of this study, we use the notion of affordance to help theorize the distinct facets of the TLN practices that contribute to the interactions that influence TL development. Gibson's notion of affordance helps to identify and name the opportunities teachers have available in their learning environments that support and hinder their development of leadership skills while simultaneously acknowledging the complexity of their work. In other words, the notion of affordances allows us to identify the characteristics of the TLs' environments that they need to perceive and take up to develop as leaders. Although our study is limited to examining affordances within one environment supporting teacher leadership development—the network meetings—each school site where the teachers work is an environment with its own unique and complex set of affordances that support and hinder teachers' professional development.

Scaffolding

Jerome Bruner (1983) defined *scaffolding* as a "process of 'setting up' the situation to make the child's entry easy and successful and then gradually pulling back and handing the role to the child as he becomes skillful enough to manage it" (p. 60). This notion of scaffolding was developed in the context of his investigations of infants and their play with their mothers, specifically peekaboo games. His analysis of these games points to both the structure and the process of the games and the role mothers play in teaching the "rules" of the game as well as their role in other aspects of the game that are non-rule bound (e.g., mother's vocalization). It is the non–rule bound aspect of the game that "seems to be an instance, rather, of the mother providing a scaffold for the child" (Bruner & Sherwood, 1975, p. 280). Critical to Bruner's (1983) conceptualization of scaffolding are the aspects of the "game" that become ritualized over time that allow for a gradual shift in agency between a mother and her child. This shift in agency ultimately results in the "learner" being able to initiate the rituals (i.e., game) on her own. Additionally, Bruner's ideas about scaffolding highlight two critical elements of this kind of learning context. One is the structure of learning that is ritualized "that is more or less constant (though flexible)," and the other is "an interactional process that is jointly constructed from moment to moment" (Walqui, 2006, p. 164).

For the purposes of this article, Bruner's idea of scaffolding guided our examination of the learning context in the TLN meetings. Specifically, we aimed to identify whether and how scaffolding is used a pedagogical structure to support teachers' learning in the TLN meetings.

Research Question

The main research question guiding this study is grounded in a belief that TLs influence others to improve their educational practice, exemplify a learning and relational stance, and engage in continuous reflective and inquiry-driven practice. With that in mind, we ask, "What are the affordances particular to the TLN that enable the leadership development of teachers?"

Method

Research Design and Context

Our study uses case study methodology (Yin, 2014) to examine how teachers participating in the MTS TLN meetings (described later) are guided to develop the skills, knowledge, and dispositions required to enact teacher leadership at their school sites and specifically to facilitate inquiry-based collaborative conversations among their colleagues. Our unit of analysis is defined as an individual MTS TLN meeting.

Mills Teacher Scholars professional development project. MTS is a school-university partnership designed to support teacher learning about student learning, aimed ultimately toward improving student learning outcomes. The project frames a socioprofessional process to scaffold teachers to learn to facilitate evidence-informed conversations. First, teachers are supported to define an area of their practice they want to strengthen to improve students' learning. This becomes the focus of a yearlong inquiry. Example topics include mathematical thinking expressed through academic discourse, facilitating English language learners' confidence with verbal participation in class, and students' collaborative group work in literature circles. Next, teachers clarify learning goals and determine specific indicators of success that would provide evidence of whether students have (or have not) achieved their specified learning goals. Teachers then identify real-time data sources they can systematically collect that support them in analyzing the specific student thinking and learning outcomes identified in their inquiries that they want to understand in greater depth. Once a month, teachers participate in TL-facilitated data conversations with other teachers at their site, through which they share and collectively analyze their inquiry data.[1]

Mills Teacher Scholars teacher leader network. The TLN meetings are designed to bring together teachers working in many schools and districts in the East Bay of northern California, United States, all participating in the MTS program, to build their capacity as TLs so they can successfully lead and sustain inquiry-based professional learning communities at their school sites. The TLN meetings are designed to be quarterly, half-day sessions at Mills College, where MTS staff provide support to the TLs in building their adult learning, leadership, and inquiry skills and strengthening their skills and confidence in facilitating the MTS inquiry

process with their colleagues. The TLs who participate in the TLN meetings and facilitate the learning communities at their school sites also participate in the MTS inquiry process described previously, as they are all full-time classroom teachers. Thus they must learn to balance facilitating discussion among their colleagues and engaging in the conversations as teacher participants themselves.

Three MTS TLN meetings were convened over the course of the study during fall of the 2014–2015 school year. TLN meetings took place on Saturdays from 8:30–1:30 at Mills College in Oakland, California. In this article, we report on data collected at the first TLN meeting of the year in August 2014.

Participants

Participants in the TLN meetings included 21 teachers working in 7 different schools across 5 urban Bay Area school districts. The TLs were teaching in a range of grades and school district positions: kindergarten ($n = 1$), 1st grade (n = 2), 2nd grade ($n = 2$), 2nd grade bilingual ($n = 1$), 3rd grade ($n = 3$), 4th grade ($n = 3$), 5th grade ($n = 3$), elementary librarian ($n = 1$), elementary music ($n = 1$), elementary teacher on special assignment ($n = 1$), 9th- to 12th-grade visual art ($n = 1$), high school orchestra director/elementary music teacher ($n = 1$), and high school physics/algebra ($n = 1$). The majority of the teachers worked in elementary schools, although three worked in high schools. The TLs had a range of teaching experience: 1–5 years ($n = 6$), 6–10 years ($n = 8$), 11–15 years ($n = 2$), and 16–20 years ($n = 2$); three declined to state. All TL participants were hybrid teacher leaders (Margolis & Doring, 2012); that is, all were teaching full time in addition to acting in their roles as instructional leaders facilitating the learning communities at their school sites.

Two MTS staff members, Jaclyn[2] and Chiara, facilitated the TLN meetings. Jaclyn was hired as an MTS staff member to support the facilitation of the TLN meetings; however, she was also a fifth-grade elementary school teacher working as an MTS TL facilitating data conversations at her elementary school site. Chiara, a former high school teacher, was a full-time MTS staff member who supported the MTS TLs and coordinated the TLN meetings for MTS. Two other MTS staff members, Betty and Margarita, were at the TLN meeting analyzed for this study. They added a few comments in some of the large-group debrief discussions, and they participated in the fishbowl activity described later; however, their roles were primarily as observers throughout the day.

Data Collection

The main data collected and analyzed for this study were the conversations that took place at one TLN meeting. Because of space constraints and our interest in looking in depth at the various structures included in MTS TLN meetings intended to support TL development, we chose to focus on the analysis of only one meeting, the first TLN meeting of the year. This meeting was 5 hours in duration and

included whole-group, school site small-group, and pair-share partner discussions that were audiotaped and transcribed (many, but not all, were also videotaped). We transcribed 15 audiotaped discussions for this meeting and analyzed all of the files, except the small-group and partner discussions, for this article. The files analyzed for this article are listed in italics after the specific discussions or activities recorded: (a) introduction—a brief overview of the TLN network meetings for the year and goals for the TLN network (15 minutes; *Jaclyn's presentation to the large group*); (b) a "what do you look for in student data?" exercise (90 minutes), which included a brainstorm of pitfalls (*one large-group discussion*), observation of video data (*one large-group discussion* and two partner discussions), fishbowl (*one large-group discussion* and two partner discussions), and group debrief (*one large-group discussion*); (c) TL role and responsibilities (1 hour; one large-group discussion); (d) planning the first meeting at your school site (90-minute working lunch; *brief presentation by Jaclyn and Chiara* and three small-group discussions—with three teachers each—among teachers working at the same school site); and (e) closing reflections (15 minutes; *one large-group discussion*).

Two researchers, the first and third authors of this manuscript, collected all of the data for this study. As researchers, they observed the entire meeting, completed field notes, and moved audio recorders around the room to capture small- and large-group conversations throughout the day. They did not participate in any of the facilitated small-group or partner discussions. Field notes captured a running record of agenda items and nonverbal information to aid in data analysis (gestures, tone of voice, noises in the room, movement of teachers, observed level of engagement, etc.).

Data Analysis

As this was the first time the research team had analyzed data from the TLN meetings, we chose to analyze all of the data as a group. Five research team members met over the course of several weeks to discuss the themes and categories we saw in the data. Our analytic process included both inductive and deductive approaches (Miles & Huberman, 1994) to examining the data; however, we primarily emphasized an a priori deductive coding method. Specifically, we read through the transcripts together and identified and discussed evidence we determined to represent the following concepts: (a) *opportunities* provided within the TLN meetings that were available to teachers and that intended to support them in becoming TLs, (b) teachers' *responses* to these encounters (i.e., how we observed them taking up and reacting to these experiences), and (c) *reciprocal relations* (elements of the environment that influenced and/or supported teachers' opportunities to learn). We conceptualized an affordance as a macrocode or parent code that included each of these three topics or subcodes.

After identifying evidence of these a priori codes in the transcripts, we worked together to select excerpts that we determined to be salient examples of affordances

represented in the TLN meeting. There were no significant disagreements in our analysis process as we discussed the transcripts until we had 100% agreement in our interpretations of the data. However, instead of needing to negotiate differences of opinion, we did have instances where one member of the research team would greatly expand our perspectives by sharing insight not previously considered. A cogent example was in a discussion exploring how the opportunities provided in the TLN meeting could potentially lead to harmful consequences for the participating teachers. One of the researchers wondered if some of the teachers were likely to face a lack of support from their principals when they tried to implement the plans they had brainstormed with their colleagues in the TLN meeting back at their school sites. This proved to be a prescient prediction that did occur over the course of the year in one of the sites, leaving the TLs feeling frustrated, angry, and disempowered.

In conjunction with the coding process, analytic memos (Saldaña, 2013) were constructed after each of our group discussions to capture our thinking and developing understanding of the relationship between the data and the construct of affordances in supporting TL development.

Validity and Reliability

Internal validity and reliability were strengthened through several methods. First, different data sources (e.g., audio recordings, field notes, and artifacts in the form of TLN meeting agendas with detailed presenter notes) allowed for data triangulation (Merriam, 2009). Member checks (Miles & Huberman, 1994) were completed by sharing our analysis of the data with MTS staff and Jaclyn and Chiara, the TLs facilitating the monthly meetings. Thick description drawing on evidence reflected in direct quotations and information from field notes increases external validity by allowing readers to determine whether and to what degree the study's findings are relevant to their own contexts. Finally, a comprehensive audit trail was kept, detailing decisions made throughout the data collection and analysis process.

Findings

We present two main affordances we identified in the first TLN meeting: (a) the framing of goals and norms for the TLN meeting environment and (b) the scaffolds provided to teachers intended to support them in learning the skills needed to facilitate data conversations with their colleagues (e.g., learning to "notice" when examining student data, brainstorming challenges they were likely to face, and learning from experienced colleagues who model the data analysis process). Each affordance is described separately in the following sections.

Overview: Framing Goals for the Teacher Leader Network Meetings

The meeting began with the two facilitators, Jaclyn and Chiara, framing the

goals and purposes of the TLN meetings, which included strengthening teachers' macro understanding of their role as TLs in school reform efforts, improving specific data analysis skills, thinking about how they could adapt what they learned in the TLN meeting to the unique needs of their individual school sites, and spending time building their relationships with one another as a foundation for the work they would accomplish together in the network meetings that year:

> JACLYN: We have four basic goals for today, the first one is to zoom out and get an overview of what the MTS work is, what we have identified as the ways that our work supports students and teachers, and then . . . we will be zooming in on the bulk of our work, which is data analysis. . . . We really want to spend our leadership network time this year honing those skills of data analysis and looking at student work and thinking about what students are doing so that teachers can move forward with their inquiries. We want to think together about site goals . . . what support teachers at your site need, what support you need to be a teacher scholar leader. We want to look together at an overview of the year, and to see where we are going, before we jump into the school year. . . . Finally, we want to start to get to know each other and really use the power of the network to strengthen our inquiry and our individual sites and make some connections.

Chiara explained that she and Jaclyn would be very intentional in making visible for the teachers many of the components that they would have to consider when they returned to their school sites to facilitate their colleagues' thinking and learning in conversations about students' work. She named this intentional reflection on their process and decision making as facilitators as "jumping in and out of the meeting." She reinforced the importance of careful planning and intentionality in their work with teachers, beginning at their very first meeting, when they ask teachers to introduce themselves, explaining that it is important to be "intentional about what you are doing and know the purposes in a transparent way." She named familiar technical issues facilitators navigate, including how to create equity in participants' contributions to the conversations:

> CHIARA: What we are going to try to do today is jump in and out of this meeting, so that you can think about when you are planning a meeting, what are the parts that you are going to want to include and why. It's nice at the beginning to find out who is in the room, and to go around and hear people's names and their school and their grade level and maybe a sentence about an inquiry they did last year. Now the risk of this as a leader is that somebody might talk on and on, so you have to think about that. If you have them write down a sentence and read it, do you just, you know, hope for the best? Then if somebody goes off topic then what do you do?

Jaclyn then outlined the foundational work TLs need to learn to engage in, the very skills they would see modeled for them and be guided to practice in the TLN meetings. She emphasized the responsibility TLs have to create a safe "thinking space" for their teaching colleagues where they will learn to support and challenge

their colleagues by gaining skills in the use of effective questioning and by developing a discourse for naming what can be observed regarding students' thinking and learning by analyzing students' work. The goal for TLs is always to "move their colleagues' thinking forward," that is, to help them develop deeper understandings of their students as learners through careful examination of their students' work and to have their assumptions and perspectives expanded by the collective input of a larger group. Drawing on the theory of parallel process (Stroud, 2010), where the TLs observe and participate in a process it is hoped that they will then repeat at their own school sites, Jaclyn created a thinking space for the TLs at the TLN meeting, explaining that they would work together to construct knowledge about a range of strategies they could use when facilitating data analysis conversations with their colleagues:

> JACLYN: In the MTS work, there are two main parts to our work. One is to create safe, collaborative spaces where teachers can open thinking spaces for each other, learn how to ask questions and how to comment and move our colleagues' thinking forward. Where people have time and space to think, and where colleagues challenge and support each other's thinking. The other is to develop skills and practices and understandings around collecting and making sense of student learning data. What is it? How do we talk about it? How do we move people's thinking forward about it? We want to use this network to think together about what are the skills required for this data analysis when looking at different types of data.

Reinforcing the fact that teaching is uncertain work (McDonald, 1992), developing as TLs is more akin to learning how to guide thoughtful intellectual discussions despite many unknowns. Jaclyn set the stage learning to work with uncertainty by taking a strengths-based approach and reminding the TLs to focus on what they *can* do versus the limitations of the information and/or resources they have available. She explained, "We know when we sit down and look at someone's data, there is no way we can know everything about every student we are looking at, or everything that the teacher did ahead of time. . . . Given all of the unknowns, we want to really work together at surfacing what we want to think about."

Before moving into specific data analysis exercises, Jaclyn and Chiara introduced an outline for a typical learning community meeting where teachers are guided to examine student data, a format that is similarly followed in the TLN meeting so that they are learning how to structure their own site meetings while also experiencing this firsthand. They reinforced that the overarching goal of every meeting is to "create a thinking space where everyone can be supported to move their thinking forward." Jaclyn explained that in each meeting, they have (a) *welcome and goals* for the day; (b) an opening *whip-around* question (e.g., "what forms of data are you collecting to address your inquiry question?") to build community and involve everyone; (c) *input* focusing on a particular aspect of inquiry work to give teachers a new perspective, a new way to think about data collection and analysis (e.g., sharing examples of learning goals or indicators of success);

(d) *thinking alone time* when teachers are given time to look alone at their data, to think about what their students are doing and their desired learning goals, and to try to figure out how to move students forward; (e) *thinking together time* when teachers are looking at their colleague's data and are trying to help them surface and notice things and then help them plan the critical next steps in their inquiries; and (f) a formal *closing* when the group comes together as a community to think together about someone's inquiry, discuss discoveries and progress as a group, or share final reflections or takeaways from the meeting.

Scaffolding Teacher Leaders' Examination of Student Data

The teachers were guided through several experiences to help them surface many of the complexities they would navigate as facilitators of learning communities at their own school sites. These experiences were then used as collective texts that the group was then guided to reflect on, dissect, and use in thinking about how they could adapt what they were learning about facilitation in the work with teachers back at their own schools. We report on three of these activities: discussing categories and skills on which to focus in the analysis of student data, brainstorming likely pitfalls and challenges, and observing and reflecting on a data analysis fishbowl exercise.

What do you notice when looking at student data? TLs were given quiet time and were asked to complete a quick-write, through which they were asked to address three prompts: (a) What are the types of things you notice when you are observing examples of students' work? (b) When you are using video data, what categories of information do you look for? (c) What are some of the pitfalls and challenges that happen when teachers look at student work together? After 15 minutes of quiet writing, teachers first shared their ideas with a partner, and then everyone was invited to share collectively with the large group. Jaclyn named the purpose of this exercise—making explicit the learning stance and value for socially constructed knowledge embedded in the process. She stated, "We are trying to use this room to construct our learning so that we can help you facilitate the groups [at your sites]. . . . We want to hear some of the things that you came up with in your group and Chiara is going to take notes for us so we can pull it all together in the end and share with you." Then she invited group input: "What are the kinds of things that you notice when you are looking at student work?" Many teachers offered their ideas:

> PATRICIA: You look at the social, their behavior . . . and their attention, their focus, and then you look at content. How well did they attend to the task? Are they able to work through it? And then I also added, what were their challenges?

As seen in the next excerpt of their conversation, Joseph spoke next, qualifying Patricia's input by suggesting that the type of data a person has available limits or

makes available the types of information the person can gather about students' thinking and learning. One of his colleagues, Constance, then contested Joseph's input:

> JOSEPH: I would say you can do that if it's a video, if you are looking at somebody's essay or somebody's math assessment . . . you can't get any of those sorts of things. . . . If you have video, it's just like many more facets that you can look at, as opposed to if you just have a written piece of paper that you are analyzing, so what you can see in the data is dependent on what form the data is in.

> PATRICIA: I also said for the student work that you can determine the mastery of the objective, but then you can also see areas that you need to scaffold [to guide a] small group the next day.

> CONSTANCE: I would like to respectfully disagree with my colleague. . . . I think with some student work, you might be able to tell if they have come across something that is difficult, they will stop, whether it's math or writing and you get very little. . . . I do agree that it is easier to tell with video or with observation, but sometimes you can't tell [what is happening] with actual students [in a video].

Maja built on Joseph's assertion, offering her perspective that video does provide information that examples of students' actual work cannot surface. In her case, video allowed her to see how her students were engaging in close reading techniques during math tests, a process she could not see only by looking at written exams:

> MAJA: I think it really depends on what we are looking at, I have had two very different inquiries, one was on group work and then last year, it was on the close reading techniques being taught in math class in order to help students tackle a very complex math test and that would help them improve in their success of it. . . . I think I would agree that video offers that deeper level of what students are thinking, or how did they construct this answer together in a discussion, which sometimes can be missing from the actual hard copy work [where] I can see their completion of the objective. Whereas the video offers *how* did they approach it.

The teachers shared more ideas among themselves. Sheri distinguished between two distinct types of learning goals Maja was interested to see in her students. Claude introduced the importance of looking at students' language and students' self-efficacy (or lack thereof) and the role of classroom supports in these outcomes. Closing off the group sharing, Jaclyn remarked on the importance of naming the skills students display or those desired as learning outcomes in particular classroom activities:

> SHERI: One was just a process goal and the other was a content goal, but they were both goals that you could evaluate. The one being how they interacted in the group and the other being whether they completed the assignment.

> CLAUDE: I wanted to add that I like to look at the language that they are using, whether it is written or oral . . . you can see if they are accessing something that they did in the classroom or a rich background that they have or if their language is not sufficiently sophisticated . . . so I think the actual language used is very necessary. . . . I also look at what is helping the child and what is not helping . . .

what tools they have . . . what have I done in the classroom to make it accessible, what is helping them be successful, and what is getting in their way.

JACLYN: I think I want to add that one thing that I am trying to do when I am looking at students' work is name the things that I see, or name the skills that students are demonstrating. And if there are some skills that I think are relevant to the task that I don't see, I am trying to name those too.

As evidenced, the teachers discovered the wide range of skills, behaviors, and learning outcomes they *could* analyze in the formative data they collect in classrooms. Jaclyn and Chiara returned to these discoveries throughout the meeting to reinforce the importance of working with teachers to help them articulate inquiry questions, to focus their collection and analysis of data, and to encourage them to name very specific learning goals—both process and content—they want to see students accomplishing in their classrooms.

Brainstorming pitfalls. The next experience TLs were guided through was a group brainstorm of the challenges they would face in facilitating teachers to work with student data. This discussion was not meant to overwhelm or paralyze these novice TLs but instead to allow the group to surface common complexities of this work so the TLs would feel less frustrated when they found these challenges emerging for them at their school sites but also because, with awareness, they could potentially prevent them from occurring. Jaclyn set the tone by explaining that such challenges are inherent to the work and continuously navigated by even very experienced TLs such as herself. She spoke out loud about some of the important ideas TLs need to keep in mind when facilitating data conversations:

JACLYN: What do I do with this piece of work? Where do I start? How do I enter in so that the teacher can benefit from this conversation? . . . Given that I don't know the child, given that I don't know what lesson came before, we have very limited meeting time and I don't want to spend the whole time asking a teacher, well, what did you do? And how did this lesson start? And where is this student, tell me about their family, give me all the background that I need. Because by the time the teacher does all this talking, his or her time is up and we haven't even looked at the data. So we want to really help to get past the pitfall of all of the things that we wonder about a child or about a piece of work and really try to jump into the analysis, with the understanding that we don't know all of these things [avoid getting] bogged down in something that is not the data. Like the fact that this child needs an IEP . . . they haven't received services . . . we haven't actually looked at the data, we haven't surfaced what this child knows . . . [you will need to] move forward in these kinds of conversations with all of those things in mind.

Following Jaclyn, several teachers offered challenges they imagined they might face or have encountered as facilitators already. Emmy shared that the conversations can shift from being about the work to just "sharing anecdotes about students." Building on this, Moira lamented, "I was going to add, teachers tend

to start commiserating about the general challenges of teaching [*laughter erupts around the room*]." Jennifer spoke about the difficulty of shifting teachers into an inquiry stance and stopping them from "stepping in to try to resolve the problem." Several others worried that teachers too often notice what students are "not doing," making the strengths-based focus on commenting on children's work a particular challenge. Many other concerns were put forward, including "not knowing what the students are thinking," teachers "not feeling safe enough to look at their data honestly," learning not to be too critical of oneself as a teacher, and the need to develop a "positively critical" professional language to use in challenging and expanding teachers' thinking without leaving them angry and defensive. On this last point, Claude remarked, "I like the way she said, I would like to respectfully disagree," to which Joseph concurred, "Because people are so polite and respect-ful . . . whoever talks first, everybody will just glom onto that, and that will be the subject of the conversation, and then you run out of time and not everybody got to express their own independent thinking."

Using a fishbowl to model and reflect on the analysis of video data. With a panoply of challenges considered, the TLs were then invited to watch a short video clip taken at a local elementary school showing sixth- and seventh-grade students engaging in academic conversations with partners about a book they had been as-signed to read. Following the video, Jaclyn and two MTS staff members, Betty and Margarita, sat in the center of the room fishbowl style and modeled a conversation for the TLs to show them an example of how teachers could analyze video data, working together to identify various skills and learning objectives displayed among the students. Following are excerpts of the mock conversation:

> JACLYN: The first thing that I noticed is that the conversation flowed really freely. . . . They seemed to have a good grasp of what they were talking about . . . without teacher facilitation, only one student didn't really say anything, but the other three were having a deep conversation. And I also noticed that there was eye contact to the kid who wasn't saying anything. . . . I think the group was aware that he hadn't really contributed, because there was looking at him while they were talking.

> BETTY: They also seemed to be building on each other's comments, responding to each other.

> MARGARITA: They had both had really extended talk times. . . . I heard them reference the text, I felt like there was textual evidence often, but not always, and I thought it was interesting that no one ever said, "What makes you say that?"

> JACLYN: I noticed that too. . . . I heard a lot of summary, a lot of recall, a lot of assumptions, the one kid was like, "I am predicting," but I never saw anybody open a book. So I was wondering, how often do they actually open the book to find something that goes along with their recall of evidence?

> BETTY: They seemed really connected with the characters. One of the boys said, "Knowing Eric's attitude" or "If you would ask Eric . . ."

JACLYN: So they kind of, were able to engage with the text in a personal way.

MARGARITA: And she was trying to use the subjective [loud laughter]. When I was watching her, I really wanted to know what this teacher was hoping would happen with this conversation.

After watching this analysis of the video data, the TLs were asked to think about what they noticed about this data conversation: what they noticed about the teachers' conversation, what they observed among the students on the video, and whether any of the pitfalls were witnessed. Chiara reminded everyone that none of them had any background information about the students or about the lesson prior to engaging in this data analysis conversation. She explained, "All we know is that this is a discussion of the book *Tangerine* in sixth and seventh grades. What we want to do as a group is think about what did you see and hear [as you listened to the conversation]?" The teachers had many observations to discuss:

ARIANNA: I noticed they started out with what the children were doing and not what they weren't doing.

LINDA: I heard one person make a point and then another one had learned something that, that the first person had missed and so she described that, but it wasn't like a judge.

PATRICE: I think it was interesting that the participants didn't really know what to look for, but the richness of what they came up with and were able to observe and analyze. I think if I were the teacher of that classroom that would be really valuable to me, just telling me all of these things that they noticed.

BECCA: That's a good point . . . just jump in, take a look, watch, what do you see? What do you notice?

KENDRA: I also think that there was some value in not being able to understand kids very well, as they had to focus on other aspects. There was a lot of noticing about the interactions with the kids because you couldn't quite understand what they were saying.

At this point in the conversation, an MTS staff member, Lesley, commented, "I just have a reflection about how much professional expertise was exhibited here . . . something we really need to say and honor and be aware of . . . there is real professional expertise in the minds of classroom teachers and we ought to notice it." This was followed by the teachers making several more statements:

CAROLINE: I am going to build on that, the participants have raw data and they seem to be making inferences from the raw data, and co-constructing meaning from that.

JOSEPH: All of the three people basically contributed equally, they all had their own view.

MAGGIE: I also noticed that the participants were very controlled in their statements. A lot of "I see," "I noticed," "I heard," "I wondered."

TENAYA: There is nobody who jumped in and said, "If I was the teacher I would" or "Oh, that's happened to me."

RHONDA: I think someone said too, "What is the teacher hoping for?" And I think that is also a helpful thing.

After all of the teachers who wanted to share had chimed in, Jaclyn made a final statement remarking on how helpful it had been for her to utilize the information surfaced in their group brainstorm about what to look for in student data. She stated, "It was helpful for me to have that conversation ahead of time where people were starting to think about categories and features, because as I watched [the video], I was like, let me think about content, let me think about behaviors. . . . Somebody brought up "how do students deal with their challenges?" and so I was kind of looking for what evidence in the video there was of persistence." She also reminded the teachers what the purpose of this exercise was:

JACLYN: We wanted to model that experience . . . so you could see that you can have a conversation about data, and surface things about the data without having all of the [background] knowledge, and it was not evaluative. We weren't trying to evaluate the teacher's lesson or even evaluate the kids. We were just trying to surface what was there for us in the data. . . . It is important to make sure that we are giving rich feedback to teachers . . . [that we] contribute to their learning and move their inquiry forward . . . [to] keep the conversation centered in on the data.

Following this exercise, the teachers watched two more videos and practiced naming what they observed for their colleagues in the large group, listening to and teaching one another, and how to have conversations about data that were supportive but also extended their individual perspectives to consider information they would not have perceived without the feedback of their colleagues.

Discussion

Educating teachers about the use of student data to inform responsive adjustments to their instruction is being increasingly recognized as a promising strategy for achieving more equitable outcomes for children. Given the increasing use of TLs in facilitation roles, we need to understand promising practices for supporting them in learning how to enact these roles effectively. Toward this end, we sought to document the affordances the MTS TLN meetings provided to better understand if and *how* MTS supports TLs in becoming learners who revise and improve their teaching, provide appropriate feedback to others so they can learn, make public the process of their thinking, and model the importance of reflecting on teaching. We documented *how* MTS was providing teachers with affordances to develop as instructional leaders, including the *opportunities* intended to support them in

becoming TLs, teachers' *responses* to these encounters, and the *reciprocal relations* or elements of the environment that influenced and/or supported teachers' opportunities to learn. Specifically, we documented how the TLN meetings (a) offered safe thinking spaces that positioned teachers as intellectual professionals who could socially construct knowledge and learn together, (b) allowed teachers to surface and name the complexities and uncertainties inherent to teaching that would undoubtedly arise as they sought to facilitate learning communities at their school sites, and (c) provided guidance for teachers through a parallel process, that is, modeling for them and supporting them in experiencing firsthand what they would be responsible for enacting and scaffolding with their teaching colleagues.

The TLN meeting was intentionally planned to model for teachers certain valued norms for professional interaction and the dispositions believed to be essential foundations for enacting leadership, including communication that supports colleagues but also challenges and expands their thinking, using an inquiry stance, and deepening teachers' understanding of students' learning. Teachers were guided to have firsthand experiences participating in the discoveries and knowledge construction processes they were encouraged to adapt with their colleagues back at their school sites. This was seen in the "what do you notice when looking at student data?" activity, during which teachers were told that everyone in the room was expected to assume a learning stance and that the teachers would all work together and "use the power of the network" to construct knowledge. Such a message about the value of distributed leadership, where expertise is recognized as stretching across the participants, reinforced the importance of everyone having a valuable contribution to the work at hand. Emphasizing the message to "push one another's thinking forward" invited dissenting opinions to be shared, as seen with the teachers' exchange on the use of video data, where they practiced what it could look like to "respectfully disagree" in professional conversations with their colleagues. The teachers were provided with many spaces to make important discoveries about the same knowledge they were charged with supporting their colleagues to learn. For example, they discovered firsthand that the type of data teachers collect influences what they can learn about their students' thinking and that certain data formats are more conducive to analyzing particular learning goals. They also learned through collaborative dialogue that one source of data can be used to examine many skills and dispositions among students—for example, behavior, attention, content, mastery of an objective, language, self-confidence—however, as one teacher discovered and shared, the linchpin for knowing how to effectively analyze data is starting with identifying student learning goals. Being guided through such important discoveries with facilitators who worked to make visible the intentionality in their thinking and decision-making process ("jumping in and out of the meeting") allowed the teachers to participate in data conversations both as teacher participants and by vicariously imagining themselves as TL facilitators responsible for guiding their colleagues' learning.

When teachers had an opportunity to brainstorm the challenges they were likely to face, the TLN facilitators were reinforcing the inherent complexities of teaching as an uncertain craft and leadership development as a demanding and dynamic process. Jaclyn's admonitions to the teachers that they could not let the challenges they would face (lack of time, background knowledge, data quality) stand in the way of their responsibility to support their colleagues' learning juxtaposed with the pitfall activity modeled to them that their journeys as TLs would not be devoid of missteps and frustrations. However, creating a protected space in which to name and talk about the demands of teaching, where burdens could be cast out to the group as shared responsibilities, is a strategy they can use with teachers to help them feel supported in navigating the hardships of their chosen profession.

Just as Bruner (1983) described scaffolding as a process of setting up a situation to be easy and successful with support and then gradually pulling back and handing off the role as an individual is skillful enough to manage it on his or her own, the TLN offered opportunities for the TLs to be scaffolded in learning how to facilitate productive data conversations. Through ritualized meeting protocols (e.g., welcome, whip around, input, thinking alone, thinking together, and closing) and guided data analysis activities, as seen with the pitfall brainstorming and fishbowl, TLs were provided with scaffolds in the TLN meeting that allowed them to practice and experience success with some of the skills they would be managing on their own back at their school sites. The scaffolds visible in the TLN meeting included opportunities for the TLs to practice using inquiry, strengths-based discourse to discuss students, reflective listening, building on one another's ideas, and the process of "peeling back the onion" and asking questions to deepen their understanding—characteristics of an improving stance in data discussions (Nelson, Slavit, & Deuel, 2012).

These scaffolds were an affordance by creating opportunities for TLs to have their own and their colleagues' professional knowledge highlighted, named, and made visible as central to the process of developing leadership. The fact that the teachers would return to the TLN meetings several times throughout the year meant that they would spiral between having these scaffolds and the experience of close guidance and a shift in agency as supports were withdrawn and they had to assume responsibility for facilitating professional learning communities on their own.

The opportunity for the social construction of knowledge exemplified the reciprocity the TLN meetings afforded. The teachers were guided to learn to think and to communicate in a manner that encouraged them to work collaboratively to articulate, refine, challenge, and extend their ideas. This was the result not of the protocols and activities in isolation but instead of the dynamic interaction between the TLN meeting, the teacher participants, and the interactions that occurred in that particular environment. Creating a thinking space that allowed the teachers to draw on multiple perspectives to make sense of their teaching, their students, and their roles as developing TLs was an important political act. Placing value

on relationship building and diverse perspectives put equity at the center of this model of professional development through recognizing that ethical leadership is commensurate with embodying a learning stance and that teachers' learning is most effectual with ongoing, systematic, collaborative inquiry into their teaching practice.

Limitations of the Study

It must be noted that although the number of transcript pages is significant (representing 5 hours of teacher conversation), an important limitation of this study is that our data represent only one point in time in the work of this learning community. We recognized a tension between reporting on a more comprehensive analysis of data and representing patterns and themes observed among teachers working in these network meetings over a longer period of time, and such an analysis will be reported in a future manuscript. Teachers' conversations in collaborative inquiry groups are dynamically constituted and highly influenced by such variables as the participants in attendance on a particular day, the protocols used for facilitation, and the purposes framing particular conversations and activities; as such, there is a risk in zooming in on one meeting that our gaze will be critiqued as too reductive, masking the complexities reflected in the interactive experiences and learning trajectories among teachers participating in this learning community. Recognizing that such a sharpened focus is a limitation of the current study, we also believe that an authentic documentation of the "hows" in teacher leadership development is well served by a microexamination that allows a voyeuristic opportunity for readers who want to experience firsthand the conversational turn-taking, the serve and return, of teachers working together to co-construct meaning from student data while simultaneously learning how to claim their voices as TLs.

Conclusion

Momentum is growing for schools to embrace distributed leadership models whereby principals and teachers share responsibilities for school improvement. For such empowerment models of TL to flourish in schools, power and authority must be redistributed, trusting relationships among faculty must be nurtured, and a collaborative culture must permeate school communities. Such conditions can only be realized in contexts where democratic principles are valued and teachers are provided with time and safe thinking spaces where they are supported to learn and take risks to improve their practice.

Moving teachers into positions of leadership brings hope to the work of schooling because this allows important decisions about teaching and learning to be made by the professionals actually doing the work of guiding student learning. If we want teachers to assume this new leadership role, however, they must be prepared and

supported in doing so. The TLN described in this article is one model with promise for supporting teachers to develop as effective instructional leaders.

Notes

[1] See http://millsscholars.org/.

[2] All names of individuals, schools, and districts are pseudonyms to protect confidentiality.

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