Teacher Leadership: A Little Less Conversation, A Little More Action Research

by

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ABSTRACT

Though National Board Certified Teachers (NBCTs) in Arizona have been identified as leaders on a national level, they do not have comparable opportunities to lead within their local contexts or engage in leadership and collaboration activities that align with Interstate Teacher Assessment and Support Consortium (InTASC) Standard 10. The purpose of this sequential, mixed-methods study was to explore how the development of a teacher leadership community of practice for NBCTs might influence their perceptions of themselves as leaders. Social constructionism, action research, and communities of practice guided the innovation and a mixed-methods approach was used for data collection and analysis.

Data illustrated NBCTs' dichotomous feelings about leadership on local and national levels. Findings revealed that NBCTs need continued professional learning opportunities, beyond National Board Certification, to resolve feelings of isolation and fully meet all of the leadership and collaboration indicators for InTASC Standard 10. Participating in a teacher leadership community of practice (a) provided a professional learning opportunity for NBCTs, (b) improved NBCTs' perceptions of teacher leadership and helped them define it as an active process of learning, reflection, and action, and (c) increased NBCTs' readiness to take action as teacher leaders within their local contexts to evoke positive change.

DEDICATION

During my first year of teaching, I hung the words "Go Big or Go Home" on the front wall of room 741 to inspire my students to challenge themselves and reach for excellence every day. Over the years, this in-your-face and obnoxious phrase has also challenged *me* to reach for excellence and *my* full potential as an educator. I dedicate this research on teacher leadership to the plethora of high school students who, yearly, teach me how important it is to walk the talk, to never forget where I came from, and to use my voice to bring good into the world. I also dedicate this to the King, whose spirit encouraged me to use a little more bite, and a little less bark… a little less fight, and a little more spark to move conversations about teacher leadership to action.

ACKNOWLEDGMENTS

- To Cohort 8 (Gr8 Expectations): We did it! I love you all. Special thanks to Dr. Teresa Foulger for helping us lean in and believe in ourselves as innovators. Super-special thanks to Dr. Audrey Amrein-Beardsley for helping me see how quantitative statistics can be hip and fun.

- To the members of my LSC (Jo, Sara, Stephanie, Donna, and Patti): Thank you for your undying support and helping me survive the experience. I will miss our midnight Facebook conversations and seeing your faces every week.

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- Finally, to the NBCTs who participated in this study: Thank you for your courage to lean into discomfort and tell your stories to advance the teaching profession - *you* are the good ideas that come from within.

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Although current national discussions about education reform include the concept of teacher leadership, there is little discussion about the types of professional learning needed to help teachers, not only see themselves as teacher leaders, but engage in opportunities to grow and advance the profession (Interstate Teacher Assessment and Support Consortium, 2011). In 2009, the United States Department of Education launched its *Race to the Top* initiative, which is a competitive grant program designed to engage states and local education agencies in competition for 4.35 billion dollars to stimulate the national economy through education reform. To win the money, states and local education agencies had to demonstrate that they implemented reforms and innovations designed to make significant gains in student achievement, close the achievement gap, improve high school graduation rates, and prepare students for college and careers (U.S. Department of Education, 2009).

As state applications were considered for funding, they had to meet six indicators, each about different topics and worth a varying amount of points. Of the six indicators, the "Great Teachers and Leaders" (U.S. Department of Education, 2009, p. 3) indicator was worth the most points. States interested in funding had to demonstrate that they had accountability measures in place to recruit, develop, reward, and retain effective teachers and principals, especially in high-needs areas (U.S. Department of Education, 2009). To meet this requirement, many states in the nation adopted new professional teaching standards. The state of Arizona adopted the professional teaching standards set forth by the Council of Chief State School Officers (CCSSO), called the Interstate Teacher Assessment and Support Consortium (InTASC) Standards.

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In their new vision for teaching and improving student achievement, the CCSSO established 10 Model Core Teaching Standards, commonly known as the InTASC Model Core Teaching Standards. The majority of these standards provide detailed indicators for model teaching that include:

- fostering student learning,

- demonstration of content,

- assessment methods,

- ethical guidelines,

- and expectations to engage in ongoing professional learning (Interstate Teacher Assessment and Support Consortium, 2011).

The essence of these standards align with best teaching practices and are familiar to most teachers because they are centered on instructional practices, which comprise the majority of teachers' job responsibilities. To help students meet or exceed proficiency levels identified by the No Child Left Behind (NCLB) Act of 2002, and to comply with the high stakes sanctions associated with failure to meet adequate yearly progress, teachers have spent the past 13 years heavily focused on content standards and instructional methods to meet NCLB requirements (No Child Left Behind Act [NCLB], 2002; Nichols & Berliner, 2007). As such, teachers are familiar with most of the concepts reflected in the InTASC Model Core Teaching Standards.

InTASC Standard 10, however, calls for all teachers to "seek appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession" (InTASC,

2011, p. 19). Now, in addition to having knowledge about students, content, and how to teach and assess that content, teachers are expected to lead from within, and beyond, their school systems. InTASC Standard 10 sets forth 11 performance indicators, four essential knowledge indicators, and five critical dispositions that teachers must demonstrate to successfully embody this new standard. Specific concepts include practices teachers may not have been explicitly taught in their pre-service or in-service training, like:

- working collaboratively to build a shared vision,

- engaging in professional learning to advance professional practice,

- using and generating meaningful research on education issues and policies,

- and taking responsibility for contributing to and advancing the teaching profession (Interstate Teacher Assessment and Support Consortium, 2011).

To create effective school systems that train and retain the most highly qualified teachers, and to help teachers meet the professional standards adopted by the state of Arizona, InTASC Model Core Teaching Standard 10 deserves a more explicit focus within Arizona's teaching and learning structures.

It is a commonly held belief that some of the most transformative work in a person's life often happens within a classroom. As such, school systems should strive to invest in "sustained, intentional training and development targeted specifically to leadership development" (Suescun, Romer, & Macdonald, 2012, p. 33) for teachers to help support that transformative work. But what kinds of ongoing professional development might be needed to cultivate teacher leadership? How might teachers in

Arizona's school districts be utilized in leadership roles? And what might it mean to advance the profession as a whole?

Past iterations of research I conducted with teacher leaders in Arizona to answer these questions revealed three key findings:

1. Teachers reported that they did not frequently receive coaching and mentoring to successfully meet all of the leadership and collaboration indicators outlined in InTASC Standard 10.

2. Teachers reported that their understandings of InTASC Model Core Teaching Standard 10 were dichotomous to their lived experiences with leadership and collaboration indicators on teacher evaluation instruments within their local contexts.

3. Though they have been identified as leaders on a national level, NBCTs did not consistently perceive themselves to be leaders within their local contexts.

The purpose of this sequential, mixed-methods study was to explore how the development of a teacher leadership community of practice for NBCTs might influence their perceptions of themselves as leaders. A secondary purpose of this study was to use information learned from NBCTs to explore how they could be more effectively utilized as leaders within their local contexts.

Local Context and Problem of Practice

When this study took place, I worked as a teacher on a high school campus that is part of a large school district in Arizona. For the purpose of anonymity, the school district will be referred to as the Cortez Unified School District (CUSD). This school district

served over 27,000 students and employed almost 3,000 employees. In addition to my role as an educator in CUSD, I also developed support structures and facilitated professional learning opportunities for certified staff that engaged with the National Board Certification process. Specifically, I worked with school district personnel to create two professional development courses for the district's professional development catalogue; one course helps teachers learn about the foundations of the National Board Certification process, and the other course provides ongoing, monthly mentoring and coaching for teachers as they engage in the actual process.

From 2009 to 2015, the number of NBCTs in CUSD grew from 20 to 70 (50 of which remained employed by CUSD). At the time of the study, there were an additional 43 teachers engaged in the process that hoped to certify during the next two school years. In my role providing support to teachers that engaged in the National Board Certification process, I saw that many of them sought professional learning opportunities because they desired to lead from within their contexts. Their willingness and ability to collaborate and create innovative solutions to problems of practice, when given the time and resources to do so, solidified my belief that empowering teachers as leaders is the type of education reform we need to transform the teaching profession.

Purpose and Action Plan

Few would argue that teaching, at its core, is primarily done in isolation from other teachers. Though teachers participate in professional development and meetings that involve other educators, time spent in collaboration with others pales in comparison to the amount of time spent actively teaching students. Collaboration structures within many school communities provide time to learn about what to change within teachers'

immediate contexts, but do not always provide time to reflect on *how* to change, let alone advance the profession. To truly transform the "hearts, minds, and culture of the profession" (Hargreaves & Fullan, 2012, p. 42), a more holistic approach should be used to foster collaboration.

As a researcher, my role in this sequential, mixed-methods study was to foster collaboration amongst teachers through action research that evoked positive local change; I used innovative action research methods that gave teachers time and freedom to focus on self-selected common problems of professional practice, above and beyond the accountability of student achievement (Caro-Bruce, Klehr, Zeichner, & Sierra-Piedrahita, 2009). Fostering collaboration through action research has the potential to be a very transformative process because it can result in increased confidence for participants (Waters-Adams, 1994). Mobilizing teachers through action research can foster the sense of collective inquiry and responsibility needed to deepen teachers' identities beyond the walls of their classrooms and campuses and inspire regenerative action to "transform the psyche and efficacy of the entire profession" (Hargreaves & Fullan, 2012, p. 77).

This sequential, mixed-methods study examined how the development of a teacher leadership community of practice influenced the perceptions of NBCTs as teacher leaders within their local contexts. For my specific plan of action, I invited NBCTs in CUSD to participate in a teacher leadership community of practice, and I called this the Teacher Leadership Collaborative (TLC). From August to December of 2015, members of the TLC met and examined their identities as leaders. The research questions that guided this study were:

1. How do NBCTs perceive or experience teacher leadership?

2. How and to what extent might the development of a leadership community of practice for NBCTs contribute to their perceptions of themselves as leaders?

3. How and to what extent might the indicators listed in InTASC Model Core Teaching Standard 10 align with NBCTs' perceptions of themselves as leaders?

Literature Review

In this section, I will review supporting scholarship to support my sequential, mixed-methods innovation design. This review includes a description of the National Board Certification process and a review of theoretical literature that includes action research, social constructionism, and communities of practice; I will examine studies through the perspectives of these theories connected to leadership development for teachers and related research studies. I propose that the development of a leadership community of practice for teacher leaders can enhance teachers' perceptions of themselves as leaders, can provide an organic space for collaboration, and can increase access to professional learning that will meet the indicators of InTASC Model Core Standard 10.

National Board Certification

In 1987, the National Board for Professional Teaching Standards (NBPTS) established itself as a non-profit organization through which teachers could earn a voluntary, national certification. The impetus for its creation was the 1983 report, *A Nation at Risk*, which outlined the United States' concern about their economic welfare because of the quality of the nation's teachers (United States Commission on Excellence in Educatiom, 1983). In response, the Carnegie Forum on Education and the Economy (1986) released a report called *A Nation Prepared: Teachers for the 21st Century, the*

Report of the Task Force on Teaching as a Profession. This report posited that, to improve the overall system of education and ensure a vibrant democracy, the quality of America's teachers should receive more attention; National Board Certification was proposed as a way to raise the standards for the nation's teachers (Carnegie Forum on Education and the Economy, 1986).

To identify and recognize teachers who positively impacted student learning, the NBPTS created a set of five core propositions that provided a foundation for a "world class teaching force" (National Board for Professional Teaching Standards, 2002, p. 1) for America's schools. These propositions required that teachers (1) are committed to students and their learning, (2) know the subjects they teach and how to teach those subjects to children, (3) are responsible for managing and monitoring student learning, (4) think systematically about their practice and learn from experience, and (5) are members of learning communities (National Board for Professional Teaching Standards, 2002). From these core propositions, 25 different certificate areas were developed, and almost every certificate was also broken into developmental stages that ranged from early childhood to adolescent young adult levels (NBPTS, 2015).

Since its inception, National Board Certification has provided a rigorous and voluntary way for teachers to demonstrate that they are highly qualified, which has been a major tenet of NCLB that calls for teachers to be highly qualified (No Child Left Behind Act [NCLB], 2002). As such, many studies were conducted about the impact on student achievement in classrooms taught by NBCTs. Most studies used standardized tests and/or end of year assessments as a way to measure and compare student achievement for students taught by NBCTs, versus those who were not taught by NBCTs

(NBPTS, 2015). Many of these studies found that students taught by NBCTs increased their levels of reading comprehension, demonstrated more effective writing abilities, and gained the equivalent of approximately 1-2 months of additional instruction during the course of one school year (Cowan & Goldhaber, 2015; The Strategic Data Project, 2012; Vandevoort, Amrein-Beardsley, & Berliner, 2004). Some of these studies argued that the difference in student achievement between NBCTs and non-NBCTs is not statistically significant and/or was too small to consider when making systemic reform decisions (Cantrell, Fullerton, Kane, & Staiger, 2008; Chingos & Peterson, 2011; Goldhaber & Anthony, 2004).

As part of the certification process, teachers pursuing National Board Certification must sit for one, three-hour content examination, and must prepare multiple portfolios of their work that demonstrates their impact on student learning. One of the portfolio components requires that teachers demonstrate their impact on student learning through their actions as leaders, learners, and collaborators within their immediate contexts (NBPTS, 2015). Though studies have been done about how NBCTs have impacted student achievement, there is a gap in literature about how NBCTs might be utilized as leaders after they become certified and/or how they might be working to advance the teaching profession as a whole. My research has the potential to contribute scholarship to this gap.

Theoretical Framework

This section will discuss the theoretical lenses that shaped this sequential, mixed-methods study. The next section will explain how these theoretical perspectives mix with ontological and epistemological philosophical assumptions, and following sections will

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explain how the interpretive framework guided quantitative and qualitative methodologies.

Social Constructionism. A theoretical lens for this study is social constructionism, which Gergen (1985) asserts views discourse about the world as an "artifact of communal interchange" (Gergen, 1985, p. 266). Here, the process of knowledge construction resides within the social interactions of people, who negotiate how the world is understood through active relationships (Gergen, 1999). Gergen (1973) argues that knowledge creation moves beyond the individual person and occurs within the daily interactions of people that are situated within political economic, and institutional factors that are all contributing factors for integrated ways of understanding (Gergen, 1973). Because the world is constantly changing, the structure for knowledge creation becomes a repeated process of socially negotiating meaning over time. As Burr (2015) summarizes, "Knowledge is therefore seen not as something that a person has or doesn't have, but as something that people create and enact together" (Burr, 2015, p.12).

For this study, social constructionism provided a way to describe participants' perspectives, experiences, values, beliefs, and meaning-making process for the phenomenon of teacher leadership (Gergen, 1973). This framework highlighted the way that NBCTs created social realities through individual and collective actions, how they constructed their views and actions, and how the meaning-making process happened as a product of a collective process (Charmaz, 2014; Gergen, 1985). Examining teacher leadership through a social constructionist approach helped teachers see the value of learning about themselves as leaders through an interactional process that was not confined to any fixed or singular approach (Burr, 2015).

Action Research. Action research that is conducted *by* teachers, *fo*r teachers was an appropriate theoretical perspective to use in this study because it provided a natural framework for the innovation to identify an area of focus, collect data, analyze and interpret data, and develop an action plan (Mills, 2013). The fundamental purposes and values of action research theory fostered a process of enlightenment and a shared interest in liberating participants from "the dictates of tradition, habit, and bureaucracy" (Mills, 2013, p. 6). As active participants, NBCTs engaged in a participatory, democratic process that strengthened their knowledge base, developed their leadership skills, and started a tradition of speaking and accounting for the teaching profession (Mcniff, 2010; Mills, 2013).

The cyclical nature of the relationship between inquiry and action challenged, rather than confirmed, what is known about teacher leadership and helped participants constantly rethink best practices to "create schools that are more educationally sound, caring, and just places for our children and youth" (Anderson & Herr, 2009, p. 164). Furthermore, action research provided a scholarly method to foster inquiry driven leadership and a way to reflect on a set of connections between the past, present, and future (Olson & Clark, 2009; Riel, 2010). The collaborative nature of action research empowered teachers to challenge their perceptions of leadership and create action plans that made the previously invisible factors that controlled them visible, which can elevate the profession through the creation of new knowledge (Friedman & Rogers, 2009).

Communities of Practice. A final theoretical lens for this study was communities of practice. Etienne Wenger (1999) defined communities of practice as "the basic building blocks of a social learning system" (Wenger, 1999a, p. 4). Communities of

practice are ones that blend collectively developed understanding, shared accountability and engagement, and shared experiences and resources through a flexible interplay of competence and experience through mutual engagement (Wenger, 1999a). "Because the place of knowledge is within a community of practice, questions of learning must be addressed within the development cycles of that community" (Lave & Wenger, 1991, p. 100). Using communities of practice as a lens for my study provided a way for NBCTs to negotiate meaning about teacher leadership through direct participation in a communal group that was not formally defined or mandated. Wenger (1999) also stated that knowledge is not something that can be managed from the outside. Through the invitational approach of my innovation through action research, NBCTs could become stewards of their own knowledge creation within CUSD (Wenger, 1999b).

Prior to incorporating action research methods with teachers, I built relationships with them and found ways to become an active participant in the research itself. This active participation helped teachers embrace collaboration to solve problems as something done with them rather than *to* them (Bradbury-Huang, 2010). With a comprehensive list of complex, individual responsibilities, teachers were less likely to participate in collaboration if they felt it was contrived or forced. As a researcher-practitioner in this study, I stayed mindful of these external pressures, combined with the possibility that teachers may not readily see themselves as leaders within their profession. Using communities of practice to guide collective knowledge creation helped NBCTs identify their passions and concerns, and deepened their knowledge and expertise through ongoing interactions with one another (Wenger, McDermott, & Snyder, 2002).

Related Teacher Leadership Research

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With teacher quality and development at the heart of many large-scale education reform efforts, finding ways to build teachers' capacity becomes important to sustainable reform. The high stakes nature and public consequences of reform efforts like NCLB, however, make building capacity difficult (Nichols & Berliner, 2007). With so much effort on the output of student achievement, there is not enough investment in building human capacity because it places people in a "high-alert dependency mode, jumping from one solution to another in a desperate attempt to comply" (Fullan, 2005, p. 11) to avoid punishments. Because teachers do not have direct control over many external factors that influence student achievement, they often internalize the failure of students and leave the teaching profession at high rates (Ingersoll & Strong, 2011; Tirozzi, Carbonaro, & Winters, 2014).

Though external factors may feel out of a teacher's control, one factor that has been found to increase teacher motivation is an adjustment of top-down leadership structures. Angelle and Schmid (2007) found that flipping this social structure helped teachers see teacher leadership as something more than just a title given by a principal; it helped teachers more directly promote greater job satisfaction and a healthy work environment. Traditionally, principals have been at the top of the leadership triangle and teachers have been at the bottom (Angelle & Schmid, 2007). Re-examining this power dynamic to see how teacher leadership can be cultivated through smaller and more grassroots contexts should be considered because this kind of change has the power to spread upwards and flourish in more meaningful ways (Day, Sammons, & Stobart, 2007; Grogan, Donaldson, & Simmons, 2007).

With an overwhelming list of responsibilities, administrators might find relief by embracing a transformational leadership style for themselves and those they lead. According to James Burns (1978), leadership is the reciprocity between leaders and followers through two types of basic leadership: transactional and transformational. Transactional leaders take initiative in making contact with their subordinates for the purpose of exchanging something that is valued; in education, traditional types of leadership are transactional in that there is some kind of exchange of one thing for another between principals and teachers. In contrast, transformational leaders engage in mutual relationships with followers that convert them into leaders themselves, satisfy their higher needs, and engage the full person of the follower (Burns, 1978; Stewart, 2006).

Burns (1978) further suggests that transformational leadership "begins on people's terms, [is] driven by their wants and needs, and must culminate in expanding opportunities for happiness" (p. 230). Cultivating transformative relationships between administrators and teachers can shift the existing focus on external factors and performances characterized by transactional leadership to a more direct focus on increasing levels of motivation for the collective good and making social change. If the purpose of leadership becomes more about raising ethical levels of both the leader and the led, it has the power to have a transforming effect on both leaders and followers (Burns, 1978).

In many contexts, the principal acts as an instructional leader whose primary focus is on curriculum, instruction, and overall environment of a school campus. In some contexts, a more prominent focus is placed on principals as leaders of transformational

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change, but may rely too heavily on the characteristics of the principal as the leader rather than on the development of collective leadership (Evers & Lakomski, 1996). School leadership should not be synonymous with the principal as other sources of leadership within school systems deserve attention (Heck & Hallinger, 1999). If more of the bureaucratic structures of schools were redesigned, teachers might be encouraged to reflect on innovative ways to respond to situations and would be less likely to "blindly adhere to rules and regulations" (Tschannen-Moran, 2009, p. 231). A more overt focus on leadership development for teachers is needed to bridge this leadership gap and advance the teaching profession.

York-Barr and Duke (2004) posit, "The concept of teacher leadership suggests that teachers rightly and importantly hold a central position in the ways schools operate and in the core functions of teaching and learning," (p. 255) but there is little theoretical research to support teacher leadership due to its diverse nature. Teacher leadership is often defined as a process rather than a positional construct, and is difficult to define due to the "array of behaviors and characteristics rather than formalized positional duties" (Pounder, 2006, p. 534). As a result, much of the literature on leadership development for teachers is connected to instructional leadership.

One study that explored the construction of teacher leadership processes was conducted by Spillane, Hallett, and Diamond (2003). Through the Distributed Leadership Project, researchers conducted a four-year longitudinal study of elementary school leadership in which 84 teachers at eight Chicago public schools were studied. They used a process of social constructionsim to examine how instructional leadership was constructed in urban elementary schools. Their focus on instructional leadership provided

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a "check against the claim that leaders are perceived as having certain qualities by virtue of their position, rather than their actual behaviors" (Spillane, Hallett, & Diamond, 2003, p. 4). Through interviews and classroom observations, researchers found that teachers identified four types of capital that contributed to how teachers constructed the identities of leaders in their contexts: (1) human capital; knowledge and skills of others, (2) cultural capital; possession of ways of being and doing through social action, (3) social capital; social networks or connections, and (4) economic capital; who controls money and resources. The patterns identified in the findings of this study illustrated the situated nature of leadership through social interactions (Spillane et al., 2003).

Other studies on leadership development for teachers have examined how professional development structures in teacher preparation programs and professional development schools contributed to the development of teacher leaders. Darling-Hammond, Bullmaster, and Cobb (1995) examined case study data from seven professional development schools, which were partnerships between schools and universities that supported the learning of new and experienced teachers while restructuring schools (Darling-Hammond, Bullmaster, & Cobb, 1995). They found that creating new structures in which novice and veteran teachers learn alongside one another blurred the lines of the learner and the leader, which was a more progressive approach to teacher leadership than traditional auxiliary and appointed models. The "generative iterations" of this new kind of teacher leadership "locate control of the learning with the learners themselves, thereby involving them in leading rather than implementing both personal and institutional transformation" (Darling-Hammond et al., 1995, p.91).

According to York-Barr and Duke (2004), the body of literature on teacher leadership from 1980 to the present shows a progression of waves that move from formally appointed roles, through instructional expertise, to a view of organizational culture through collaboration (York-Barr & Duke, 2004). In current teaching and learning contexts, teacher leaders work collaboratively to solve authentic problems of practice both within and outside of their classrooms. As such, some teachers have embraced action research, like the National Board Certification process, to engage in a form of reciprocal inquiry and action to transform professional practices (Anderson & Herr, 2009). In general, however, much of the action research literature in education focuses on teachers conducting research within their own contexts to improve instructional practice. There is a gap in supporting scholarship using action research to define and cultivate teacher leadership.

The Present Study: The Teacher Leadership Collaborative

Together, the theoretical lenses and related research framed my sequential, mixed-methods innovation design. To enhance the accuracy of this study, and to better understand the lived experiences of participants through multiple lenses, I used a sequential, mixed-methods design to create a Teacher Leadership Collaborative (TLC). Though they were recognized as teacher leaders by the NBPTS when they earned their National Board Certification, the NBCTs in CUSD had limited interactions with each other prior to the start of this study. My innovation of the TLC provided a socially constructionist way for interactions to happen, and the activities for action and reflection outlined in the next section brought concrete experiences to the abstract idea of teacher leadership (Gergen, 1999). Additionally, the lens of communities of practice created

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active ways to allow NBCTs to be stewards of knowledge, without over management, to take the focus off external accountability and place it on a collective running of a new knowledge-community (Wenger, 1999a). My study proposed that the development of an innovative leadership community of practice, co-created with NBCTs, would give them a collaborative place in which they could reflect on and demonstrate their teacher leadership skills and potential. The TLC provided a flexible space and framework for the social construction of new knowledge that was not imposed, but collectively generated.

From an ontological perspective, the nature of reality and knowledge resided with participants in the study, and the use of action research honored NBCTs as experts within their local contexts and provided a cyclical and democratic frame for reflection of the multiple realities of themselves as teacher leaders (Creswell, 2012). From an epistemological perspective, my innovation created a space within participants' contexts to explore their subjective experiences, and to reduce the distance between the researcher and the knowers of the phenomenon being studied (Creswell, 2012). Though post-positivism and social constructionism are considered as incompatible in their ontological, epistemological, and methodological orientations, I chose to use them together in this study to provide a form of triangulation. Creating research conditions that fostered informal, authentic communities of practice required that my innovation built a foundation of trust, provided flexibility, empowered teacher leaders, and occurred in a place where teachers could inquire together on how to improve practice in areas that were important to them (Hord, 1997). The present study used collaboration through action research to create a community of practice for NBCTs that can grow beyond the end of the study and help move the profession from the current focus on best practices to what

Hargreaves and Fullan (2012) define as *next* practices (Hargreaves & Fullan, 2012). It is my hope that the innovative approaches used in this study become effective teacher leadership practices of the future because they began with the teachers themselves and honored their expertise as reflective practitioners.

Research Design

Previous sections of this dissertation established the problem, context, role of the researcher, and outlined a framework for innovation through a review of theory and supporting scholarship. This section describes the research design that was used to answer the proposed research questions. To gain a more objective view of participants' knowledge and dispositions, I used a sequential mixed-methods data collection process. The use of quantitative methods provided a broader context to study the problem, and the qualitative research methods provided a rich and relevant exploration of meaning-making. Onwuegbuzie and Johnson (2006) describe rationales for mixing or combining quantitative and qualitative methods as: participant enrichment, instrument fidelity, creating new instruments, and significance enhancement (Onwuegbuzie & Johnson, 2006). Rather than use a positivist interpretive framework that focused on strict cause and effect, I grounded the quantitative part of this study in postpositivism to allow for multiple levels of data analysis through a series of logically connected steps of inquiry (Creswell, 2012).

Because the context of education reform often warrants researchers to maintain tenets of scientific rigor due to evidence-based accountability mandates and initiatives, I also placed a more prominent emphasis on qualitative measures, rooted in a social constructionist interpretive framework, to explore more poetic and autoethnographic

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representations of meaning (Saldana, 2013). As such, the research questions and data collection methods used were broad and general to allow participants to construct meaning through interactions with each other, and I positioned myself as an insider to better interpret the collective knowledge creation (Creswell, 2012). To enhance the accuracy of this study I used a sequential, mixed-methods design to answer these research questions:

1. How do NBCTs perceive or experience teacher leadership? (Qualitative)

2. How and to what extent might the development of a leadership community of practice for NBCTs contribute to their perceptions of themselves as leaders? (Qualitative)

3. How and to what extent might the indicators listed in InTASC Model Core Teaching Standard 10 align with NBCTs' perceptions of themselves as leaders? (Quantitative and Qualitative)

TLC Timeline and Design

From August to December of 2015, the TLC fostered learning and reflection for participants over three phases in collaborative, face-to-face, and online spaces. In August, participants engaged in an online pre-survey, and I engaged with a smaller subset of the sample population through engagement in subsequent focus groups. The focus groups took place once per month, from 4:00-6:00pm in September, November, and December of 2015. These meetings were held in a centrally located professional learning space at the CUSD district office. The online interactions took place in an online Google document space in which participants responded to journal prompts, and a post-survey was administered in December of 2015. A description of the study timeline is featured in

Appendix A and is visually represented in Figure 1 below. A more detailed description of each phase of the study design is provided in the next section.
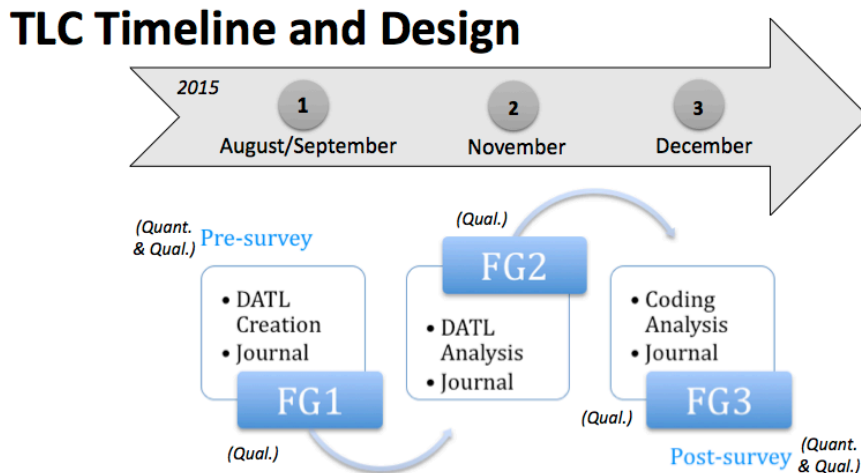
Figure 1. TLC Timeline and Design. This figure illustrates the timeline, sequential design, and data collection tools used in the study. Focus groups are designated by the letters "FG".

Phases of Design

  Phase One. In August of 2015, I invited 41 participants to be involved in the study via email. Twenty-two participants volunteered to take the online survey and informed consent was obtained. See Appendix B to view informed consent email language. In September of 2015, the first face-to-face focus group took place; during this time, participants engaged in a group activity that resulted in the creation of the DATL visual artifact that was used during future phases of the study. I gained written consent, facilitated this group activity, and collected DATL artifacts to house for future analysis. Participants began collective, reflective journal entries in Google docs during this phase that continued in each subsequent phase. To maintain anonymity, I informed all

participants that their real names would not be used and asked them to create their own pseudonyms. Participant identifiers can be viewed in Table 2, and the protocols for the first focus group can be viewed in Appendix F.

Phase Two. In November of 2015, participants met for another face-to-face focus group to engage in a group discussion about the DATL artifacts from Phase One. During this time, they analyzed DATL artifacts created by other participants and identified collective patterns, similarities, differences, and anything else they noticed. I used the same Reflecting Conversation Map framework that I used in the online journal responses to guide the group analysis of the DATL artifacts. Using this same frame to guide the focus group provided continuity for participants in their cognitive shift as they moved from summarizing and identifying, to making predictions about causes and how it might influence new learning. After the activity, participants created a reflective entry in their online journals. During this phase, I also transcribed the focus group meeting conducted during Phase One. The protocol that was used to guide group analysis for the second focus group can be viewed in Appendix H.

Phase Three. In December of 2015, I conducted a final focus group to engage in a group analysis of patterns previously identified from the visual artifacts and codes I created during my analysis of the transcribed data. I shared transcription data, along with any preliminary data analysis findings, with participants. I used the same Reflecting Conversation Map framework to guide the group analysis during the focus group coding discussion. After the focus group, participants created a reflective entry in their online journal. Participants also took an electronic post survey. The protocol that was used to guide group analysis for the third focus group can be viewed in Appendix I.

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Participants

The population for this study involved a non-probability sample of 41 educators

who were identified as NBCTs employed by CUSD in August of 2015. Of the 41

participants invited to be part of the study, 22 responded to the electronic survey and 7 of

those 22 chose to be part of the focus groups. Because the NBPTS makes names and

certificate areas for all NBCTs in the United States available for public viewing via a

directory on their website, I chose to keep the survey anonymous. In addition, I adjusted

the pre- and post-survey settings so that no self-identifying questions were required.

Table 1 displays the demographic information that all pre-survey respondents disclosed.

Table 1

Pre- Survey Participant Demographics

N = 22	
Participant Demographics	% of Sample
Bachelor's degree	5%
Master's degree	90%
Doctorate	5%

Participants who participated in the TLC were comprised of two males and five

females, all seven reported having Master's degrees, none reported having degrees

beyond Master's level, and all reported varying degrees of teaching experience; one

participant had 1-5 years of teaching experience, two had 11-15 years of experience,

three had 16-20 years of experience, and one had more than 20 years of experience. Table

2 displays demographic information for TLC participants based on their responses to the

post-survey; the identifiers listed in Table 2 refer to participants throughout this dissertation.

Table 2

TLC Participant Demographics

N = 7			
Participant identifier	Gender	Years of experience	Degree type
ArtYoda	Female	16-20	Master's
Flamingo	Female	20+	Master's
Kwai Gon Gin	Female	1-5	Master's
Cad	Female	16-20	Master's
JaPe	Male	11-15	Master's
Johnny	Male	16-20	Master's
TeacherForce	Female	11-15	Master's

Because all participants from this district were identified as having expertise in teacher leadership practices as NBCTs, the sampling for this study was considered purposive in nature (Collins, Onwuegbuzie, & Jiao, 2007; Fossey, Harvey, Mcdermott, & Davidson, 2002). The 41 participants were invited to be participants in the study via email; survey respondents provided written consent electronically and focus group participants provided written consent during the first face-to-face meeting. See Appendix B to view consent language. Prior to starting this study, I submitted all proposed procedures and tools to the Institutional Review Board for approval and the approval document can be viewed in Appendix M.

Data Collection Tools

I used a sequential process to collect quantitative and qualitative data and compared data during each phase of the study as a triangulation method. This method allowed for complementarity, strengthened the overall findings, and provided a more complete picture of the knowledge-construction being studied (Plano Clark & Creswell, 2009). This study involved the use of electronic surveys, the creation of visual artifacts, group discussions, and collective online journaling methods to answer the proposed research questions. Specifically, the DATL artifacts created during Focus Group 1 provided supporting text for Focus Group 2. Additionally, coded data from the open-ended Pre-survey questions and transcribed data from Focus Groups 1 and 2 provided supporting text for Focus Group 3. All of this data, combined with Post-survey results and coded Leadership Journal data, informed the final findings for the study. See Appendix C to view an inventory of data collection tools used.

Electronic survey: Quantitative and qualitative tool. The 22 teachers who volunteered to be part of this study completed an online, electronic survey during the first phase of the innovation timeline. The 7 who participated in the TLC also took this same survey during the third phase of the study. Overall, this survey included 37 questions, responses were collected using Survey Monkey, and the raw data was downloaded into an Excel spreadsheet. The content of the survey asked teachers about their beliefs and levels of preparedness to assume various roles such as: (a) engaging in instructional teams; (b) collaborating with other school professionals; and (c) professional learning through contribution of knowledge and skill to others, and (d) working collaboratively to advance professional practice. Importantly, the first two examples indicated typical

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opportunities that teachers frequently have access to, whereas the latter reflected the leadership responsibilities seen in InTASC Standard 10 that may be new to teachers. The use of this tool was innovative because the full language for InTASC Standard 10 was not reflected in CUSD's teacher evaluation instrument at the time of this study. As such, teachers may not have been aware of or accessed the full language for the state of Arizona's expectations for leadership and collaboration knowledge, critical dispositions, and performances prior to the start of this study. I used the survey as part of the innovation to allow teachers time to reflect on the depth and breadth of InTASC Standard 10. Performance indicators for InTASC Standard 10 and questions for the electronic survey are available in Appendices D and E.

The first 9 survey questions were a mix of closed-ended and open-ended questions that asked about participants' demographics. Participants were given the option to provide demographical information that represented their gender, NBPTS certification area, years of teaching experience, leadership roles they held, any additional certifications they had obtained, and contextual demographics for their school/system. This demographic information had the potential to help me make more explicit connections to the local, lived experiences of participants. I also informed participants that they could choose not to answer any of the survey items.

The next set of questions included 25 closed-ended, four-item Likert scale questions that aligned with the 11 indicators connected to InTASC Standard 10. These questions aligned with InTASC Standard 10 in that they asked participants to reflect on their level of preparedness to engage with teacher leadership practices through the tenets of collaboration, network-building, research, and advocacy. The response options for

these questions utilized two kinds of 4-point Likert scales because they asked participants to reflect on two different concepts: belief of importance and level of preparedness. Items that asked about belief of importance used a scale of one to four with 1 = "Not Important" and 4 = "Very Important." Items that asked about level of preparedness used this scale: 1 = "Not Prepared" and 4 = "Highly Prepared." Responses to the close-ended questions provided information to help answer my third research question: How and to what extent might the indicators listed in InTASC Model Core Teaching Standard 10 align with NBCTs' perceptions of themselves as leaders?

The last two questions of the initial survey were open-ended; one allowed respondents to provide any additional comments about leadership and collaboration within their contexts, and one asked them to provide their name and contact information if they were interested in further contact. For the post survey, the final question was revised to ask focus group participants how the social interactions experienced during focus group sessions influenced their perceptions of teacher leadership. In addition to the research question identified above, these open-ended responses also provided information to help answer the second research question: How do National Board Certified Teachers perceive or experience teacher leadership?

Draw a Teacher Leader Artifact: Qualitative tool. During the second phase of the innovation timeline, I met with participants in a centrally located, face-to-face meeting space to engage in a group activity to better understand their perceptions of what a teacher leader was. The specific technique I used was a visual artifact creation tool that was derived from the Draw-A-Scientist Test (DAST). This tool was developed by David Wayne Chambers in 1983 and had traditionally been used to help understand how

students perceived scientists and the act of doing science outside of a classroom setting (Barman, 1999). Over the years, others have adapted the DAST to better understand how different groups of students and pre-service teachers made meaning about science education (Milford & Tippett, 2013; Thomas, Pedersen, & Finson, 2001). I modified and used this method for my study because I thought that adapting the DAST provided a deeper understanding about how NBCTs perceived the idea of what a teacher leader was and what it meant to lead in, and outside of, their local settings within the teaching profession. For this study, I called the tool the Draw a Teacher Leader (DATL) tool; this tool was not used as a primary data point for the study, but provided supporting text that stimulated discussion during focus groups and fostered connection between participants.

Because leadership and collaboration were such abstract concepts, I wanted to provide participants with a way to express and reflect on their understandings using an equally abstract method, but one that yielded a concrete visual representation. The use of this method allowed for more detailed and selective attention to the elements, nuances, and complexities of the visual imagery used by participants (Saldana, 2013). Using the DATL tool provided more information to help answer the second research question: How do National Board Certified Teachers perceive or experience teacher leadership? The protocol that was used to facilitate the DATL creation can be viewed in Appendix F.

Online journal: Qualitative tool. During each of the three phases of this study, participants kept a collective leadership journal to reflect on what they were learning about themselves throughout the study. The use of this tool was innovative in that it extended participants' access to one another to engage in continued learning and reflection after the focus group sessions. The participants and I had access to this

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document and I used data collected there to engage in data analysis to answer the

identified research questions of this study. Together, participants created one journal

entry, per phase, in an online and password-protected Google document. Directions for

how to access the Google document were sent to participants via email during the first

focus group session. Directions invited participants to choose whether or not to include

their name, and were told they could use any color or style of font they chose. Directions

can be viewed in Appendix G.

For each of the three entries, participants used a different color font to indicate a

new entry beneath each question and no participant chose to include their name as part of

their response to any of the entries. In each entry, participants responded to five reflective

questions that were posted in the Google document. To provide consistency, I used the

same structure for all journal entries, and the questions were created based on the

indicators listed in the Reflecting Conversation Map that was used as part of Costa and

Garmston's (1994) cognitive coaching process. This map provided a framework for

reflective dialogue through these indicators:

- summarizing impressions,

- analyzing causal factors,

- constructing new learning,

- commitment to application,

- and reflecting on the coaching experience (Costa & Garmston, 1994).

I crafted questions that asked participants to reflect on (a) how they felt after each

focus group, (b) what hunches they had about what caused those feelings, (c) what

learning they wanted to take away from each experience, (d) how they might apply their

new learning, and (e) how the reflection process worked for them. I used this specific framework because it was created under the assumption that teaching is a professional act, and that coaching can support teachers to become more resourceful and autonomous (Costa & Garmston, 1994). Specifically, the use of this framework helped participants mediate thinking to enhance their construction of meaning about their experiences with teacher leadership; the pattern of the reflective prompts had the potential to help participants transfer their insights into other settings and events (Costa & Garmston, 1994).

Cognitive coaching practices are frequently used in Arizona's school systems by instructional coaches to help coach and mentor teachers connected to instructional practices. I chose to use cognitive coaching's Reflecting Conversation Map as a framework for my reflective journal questions because I believed it had the same potential to mediate teachers' thinking about themselves as leaders within their profession. In this way, I served as a leadership coach throughout the study. Specific questions that guided the reflections in the online journals can be seen in Appendix G. My relationship with participants in this manner established a level of trust that allowed me to obtain more detailed data about how participants experienced and perceived teacher leadership.

Focus Groups: Qualitative tools. From the 22 electronic survey respondents, seven volunteered to participate in focus groups. I chose to use group interactions to reflect on teacher leadership practices because identifying one's self as a leader can be a vulnerable and abstract endeavor; using fun and interactive methods allowed for more personable and concrete encounters, and the sequential nature of the three sessions

provided time for participants to reflect on their experiences before regrouping to continue the meaning-making process. I videotaped each focus group and transcribed the data using the Nvivo software program, I watched each focus group recording after the conclusion of each session, and I made notes in a researcher journal that I housed in Evernote. For the first focus group, all 7 participants were present and I used the focus group as a way for participants to engage with each other through the use of the DATL artifact creation. For the second focus group, 6 participants were present and I used the focus group as a way for participants to reassemble and engage with one another while reflecting on their collective perceptions of the DATL artifacts. For the third focus group, 6 participants were present and I used the focus group to foster interaction between participants while they reflected on codes and themes that emerged from the DATL artifacts and transcribed data from the first focus group, second focus group, and open-ended survey responses.

As an active stakeholder involved in the design and assessment of inquiry and change associated with teacher leadership practices in this study, I had a prior relationship with all study participants (Bradbury-Huang, 2010). Because of this, I knew that many of them had not met each other and I provided time during the first focus group for them to interact with one another over dinner prior to beginning the first focus group protocol. The focus group questions included general introductions at the beginning to help participants get to know each other. The remainder of the focus group questions were asked in an open-ended format to tease out qualitative information that was difficult to capture with close-ended questions (Plano Clark & Creswell, 2009).

The open-ended questions for the first focus group asked participants to talk about their drawings and allowed time for other participants to ask questions or make comments if they desired to do so. I asked additional probing questions to elicit additional information from the participants to elaborate on or clarify their ideas (Plano Clark & Creswell, 2009). See Appendix H to view the questions that were used to facilitate discussion for the first focus group. The open-ended questions for the second and third focus groups asked participants to reflect on things they noticed about the DATL artifacts when viewed collectively. Because these questions required a more analytic focus on participants' responses, I used the same Reflecting Conversation Map framework that I used in the online journal responses. Using this same frame to guide the focus groups provided continuity for participants in their cognitive shift as they moved from summarizing and identifying, to making predictions about causes and how it might influence new learning. The research questions that guided all focus groups are:

- How do National Board Certified Teachers perceive or experience teacher leadership?
- How and to what extent might the development of a leadership community of practice for NBCTs contribute to their perceptions of themselves as leaders?

See Appendices H and I to view the questions that were used for the second and third focus groups.

Data Analysis

The rapport I built with research participants, in combination with the homogenous sample of individuals who had experienced the common process of National Board Certification, allowed for a thematic approach to data analysis (Creswell, 2012). I

used a two-phase exploratory design of initial and focused coding methods to analyze data from all data collection tools. This kind of analysis provided a flexible and open way to learn about the multiple realities of participants' understanding of teacher leadership (Charmaz, 2014; Saldana, 2013).

Quantitative Data Analysis

I chose to use a quantitative approach to measure the extent to which teachers' perceptions of themselves as leaders might align with the indicators listed in InTASC Model Core Teaching Standard 10. This focus aligned with my second research question: How and to what extent might the indicators listed in InTASC Model Core Teaching Standard 10 align with NBCTs' perceptions of themselves as leaders? I administered the survey twice: once at the beginning of the study and once at the end. Descriptive statistics were used to analyze the quantitative data obtained from the closed-ended survey responses in this study. I exported the raw data from participants' closed-ended survey questions into an Excel spreadsheet. Then, I imported the data into Statistical Package of Social Sciences (SPSS, version 23), statistical software and calculated the standard deviation and the mean scores of the 25, closed-ended, Likert items on the survey.

I used a Cronbach's alpha for each subscale to determine the internal consistency of the items (Cronbach, 1951). To assess the reliability of the survey constructs, Cronbach's alphas were calculated using SPSS 23. These four constructs were used to better understand respondents' perceptions of teacher leadership: teacher leadership beliefs, teacher leadership through collaboration, teacher leadership through network building, and teacher leadership through research and advocacy. The Cronbach's alpha for all survey items had a value of 0.90. The analysis for the seven items about teacher

leadership beliefs (Construct 1) had an alpha value of 0.70, the six items for the teacher

leadership through collaboration construct (Construct 2) had an alpha value of 0.86, the

analysis for the six items about teacher leadership through network building (Construct 3)

had an alpha value of 0.90, and the analysis for the six items about teacher leadership

through research and advocacy (Construct 4) had an alpha value of 0.76.

Qualitative Data Analysis

I collected qualitative data from two open-ended survey items, semi-structured

focus group transcripts, and online leadership journal entries. I imported and organized

all of this data in the NVivo software program and created a new internal source for each

of the tools. Though I used NVivo to collectively house and code the information, I

analyzed each piece of the data separately. This process provided a way to compare the

results from the analysis of all datasets, assisted with interpretations about whether they

support or contradict one another, and provided a method of triangulation (Plano Clark &

Creswell, 2009). The following sections provide specific details about how each data set

was analyzed during two cycles of coding.

First cycle coding. For my initial coding cycle, I used an exploratory coding

method to allow for an emergent process of investigation to analyze the data (Saldana,

2013). After the first focus group, I transcribed the data and imported it into Nvivo.

During the second focus group, I provided each participant with a written transcript of

their verbal description of the DATL they created. This provided a form of member

checking that justified the viewpoints of participants as insiders (Onwuegbuzie &

Johnson, 2006). Participants reviewed these transcripts for accuracy, and then engaged in

discussion about how their individual DATL explanations connected to a collective

viewing of all DATL drawings. The DATL artifacts were not used as primary data, but were used as materials that supported the dialogue captured and transcribed from the first focus group.

After transcribing the first and second focus groups, I imported the data into Nvivo; in this program, I used an open coding method to assign initial codes as I examined possible similarities, differences, and other nuances (Saldana, 2013). I created codes using the NVivo node feature and created a new node in NVivo to represent each code. I gave each new node a shortened name and used these nodes to code the transcribed data from the second focus group and the open-ended questions from the pre-survey. During this first round of open, thematic coding, I noticed several repeated words and phrases. Due to the length of transcribed data from each focus group, numerous preliminary nodes were noted and documented per page of transcribed data. A sampling of dominant initial codes for the first coding cycle can be viewed in Appendix J.

Second cycle coding. After coding all data from the first and second focus groups and open-ended survey items, I used a thematic approach to review and categorize initial codes based on repeated words and phrases that participants made about teacher leadership. I used a thematic approach to analyze first-cycle codes to provide simpler examples of analysis that could be used with participants during the third focus group, and to provide a way to further document processes, tensions, causes, and conclusions that could be used for future analysis (Saldana, 2013). After themeing the data, 24 codes emerged that I presented to participants during the third focus group. A list of thematic codes and definitions can be viewed in Appendix J.

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To prepare for the third focus group, I created a reference document for participants that listed all 24 thematic codes and this list can be viewed in Appendix K. I also printed and cut up seven sets of all transcript data from focus groups one and two. The transcript data contained all quotes made by participants and did not include timestamps or names to maintain a safe environment for sharing information. I also wrote the codes on seven sets of 24 notecards to use during the third focus group. Because I planned to give participants choice as to how to engage with one another and analyze the data during the final focus group, I prepared enough sets of codes and transcripts for each participant to engage in individual analysis if they chose to do so.

During the third focus group, participants engaged in a kinesthetic, collective coding activity in which they aligned the 24 codes to the cut up transcript strips from the first two focus groups. They used the list of codes as a point of reference as they engaged in the coding process. At the start of the coding activity, I gave instructions that allowed participants to exclude any codes or transcript quotes that they felt did not connect with their analysis, encouraged them to add additional codes if they desired, and told them to use any format they desired to analyze the data. I asked the group to decide whether we engaged in whole group, small group, or individual analysis of the data. I allowed participants to choose their own method of coding because preliminary analysis notes in my researcher journal from the first two focus groups revealed that participants had experienced some kind of disconnection, conformity, and restraint in previous professional learning contexts connected to collaboration. To best embody the tenets of action research, and to provide a collaborative learning experience in which participants'

voices and choice were honored, I used a flexible structure and incorporated participants into the decision-making process (Anderson & Herr, 2009).

The group decided to complete the activity using a whole-group approach and chose to use a large table space to make a visual diagram. During the activity, each participant selected a random stack of transcript quotes and took turns reading the quotes aloud. After reading the quotes aloud, the group reached verbal consensus about which codes to align with each transcript quote. As participants placed the codes and transcript strips on the table, they grouped the data into clusters based on similarities and differences that emerged during discussion about each piece of data. At the conclusion of the activity, the group decided to use all codes except for "autonomy." During the third focus group, one participant noted that it was "interesting that we keep using the choice card instead of the autonomy card. Do we not feel autonomous?" No further discussion ensued and the group pushed the autonomy card to the side of the table.

In addition to omitting one provisional code during the third focus group, participants re-wrote seven existing codes on sticky notes and stuck them onto or near code cards as they negotiated spatial placement. The group placed these sticky notes onto the card clusters to reinforce feelings about some of the codes that didn't make a direct spatial alignment to transcript quotes. The first sticky note created was labeled "district office" and was stuck onto the "disconnection" card. Two additional sticky notes, labeled "trust" and "isolation" were placed between the "communication" and "change" cards. These four codes were written on sticky notes and placed between the "communication," "district office," and "change" cards: disconnection, isolation, collaboration, and time.

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I used the 23 initial open codes generated during the focus groups to code the remaining qualitative data in Nvivo. Qualitative data from the open-ended survey items, focus groups, and the online leadership journal were entered into the Nvivo qualitative data analysis software program and were analyzed using the constant comparative method (Corbin & Strauss, 2014). During this process, I used a focused coding method to compare codes to one another and nested them into a node-hierarchy in Nvivo based on categorical similarities I noticed. This process allowed me to compare previously coded data with newly coded data from the post-survey, third focus group, and online leadership journal and resulted in the creation of three larger parent codes: disconnection, perceptions of teacher leadership, and collaboration (Saldana, 2013).

During the coding of the third focus group and the online leadership journal, five new codes were created that represented information that did not align with previous thematic codes. These new codes were: flexibility, thinking, validation, vulnerability, and taking action. I nested these new codes under a parent node called "innovation" because they all spoke to participants' feelings about their experiences in the TLC. Appendix J displays a list of all codes and definitions.

Results and Findings

This section presents data collected to explore how an action research-based teacher leadership collaborative might influence the leadership perceptions of NBCTs in the Cortez Unified School District. The first section presents quantitative analysis results and the second section presents results for the qualitative data that is supported by themes, assertions, and quotes from participants. All of the data sources provided information for analysis to answer the research questions: 1) How do NBCTs perceive or

experience teacher leadership? 2) How and to what extent might the development of a leadership community of practice for NBCTs contribute to their perceptions of themselves as leaders? 3) How and to what extent might the indicators listed in InTASC Model Core Teaching Standard 10 align with NBCTs' perceptions of themselves as leaders?

Quantitative Results

Teacher leadership survey. The purpose of this survey was to measure possible changes in participants' beliefs about teacher leadership and levels of preparedness to engage in teacher leadership actions as defined by InTASC Model Core Teaching Standard 10. The pre-survey was administered during August 2015, prior to implementation of the innovation, and the post-survey was administered in December 2015 on the last day of the innovation. The survey measured four constructs: (1) teacher leadership through perceptions of teacher leadership, (2) teacher leadership through collaboration, (3) teacher leadership through network building, and (4) teacher leadership through research and advocacy.

To examine and compare survey statistics, scores on survey items were converted into numerical forms and entered into the SPSS software program for analysis. I calculated the mean responses to determine the average levels of beliefs and preparedness for each corresponding construct of statements. I also calculated the standard deviation to determine the variability and consistency of participants' responses. Because 22 participants responded to the pre-survey, versus the 7 that responded after receiving the innovation, the standard deviation for the pre-survey is smaller and shows less variability. An exception was noted in the standard deviation for the teacher leadership through

collaboration construct where the standard deviation increased because there was more

variability in response from participants who received the innovation. The results of the

descriptive statistics calculations are displayed in Table 3 below.

Table 3

Pre- and Post- Descriptive Statistics for the Teacher Leadership Surveys

Pre-inv N = 22 Post-inv N = 7 Constructs	Pre-inv Score		Post-inv Score	
	M	SD	M	SD
Perceptions of teacher leadership	3.26	0.64	3.30	0.52
Teacher leadership through collaboration	3.17	0.63	3.11	0.56
Teacher leadership through network-building	2.32	0.70	2.38	1.29
Teacher leadership through research/advocacy	2.61	0.59	3.10	0.64

The data for the perceptions of teacher leadership construct shows that the means

for participants in both groups (pre and post) are between a 3 (important) and a 4 (very

important). This reflects a belief that participants felt it was important to collaborate, lead

adult-learning activities, use technology to build local and global networks, generate and

use research, and engage in advocacy to be teacher leaders. After participating in the

TLC, there is a slight increase in the mean for these beliefs for the group of participants

who received the innovation.

Similar increases were seen in means between the two groups for the teacher

leadership through network-building construct and C4, but they reflect level of

preparedness to engage in teacher leadership actions through network building and

research and advocacy. For the teacher leadership through network-building construct,

the mean for both groups are between a 2 and 3, which reflect they felt "somewhat

prepared" more so than "prepared" to engage in teacher leadership actions connected to using technology to create local and global networks. The group who received the innovation showed a slight increase in their level of preparedness. This same group showed a marked increase in their level of preparedness to engage in teacher leadership through research and advocacy; means for C4 were closer to a 2 during the pre-survey and increased to above a 3 in the post-survey, which may indicate that they felt more "prepared" than "somewhat prepared" after receiving the innovation.

An interesting variance in the mean between the two groups of participants is that the means slightly decreased for the teacher leadership through collaboration construct for the group of participants who received the innovation. Though means for both groups (pre and post) are in the 3-range, which indicates that both groups felt "prepared" to engage in teacher leadership through collaboration, the mean slightly decreased for the group that received the innovation. To better understand the decrease for level of preparedness reflected in the mean for the teacher leadership through collaboration construct, I calculated the mean responses for each question in the construct to determine the average level of preparedness for each statement. I also calculated the standard deviation to determine the variability and consistency of participants' responses. Table 4 displays the mean and standard deviation for participants' responses to post-survey items in the teacher leadership through collaboration construct for teacher leadership through collaboration.

Table 4

Post-Survey Response Descriptive Statistics (Teacher Leadership through Collaboration Construct)

N = 7

Question	Mean	Standard Deviation
Q17. I am *not prepared, somewhat prepared, prepared, highly prepare applicable* to lead instructional teams through giving feedback on exar learner work and analyzing data about students' learning.	3.29	0.76
Q18. I am *not prepared, somewhat prepared, prepared, highly prepared, not applicable* to collaborate with other school professionals to plan and jointly facilitate learning on how to meet diverse needs of learners.	3.43	0.54
Q19. I am *not prepared, somewhat prepared, prepared, highly prepared, not applicable* to lead school-wide efforts to build a shared vision and supportive culture, identify common goals, and monitor and evaluate progress toward those goals.	2.71	0.76
Q20. I am *not prepared, somewhat prepared, prepared, highly prepared, not applicable* to work collaboratively with learners and their families to establish mutual expectations and ongoing communication to support learner development and achievement.	3.00	0.82
Q21. I am *not prepared, somewhat prepared, prepared, highly prepared, not applicable* to work with school colleagues to build ongoing connections with community resources to enhance student learning and well being.	3.00	0.82
Q22. I am *not prepared, somewhat prepared, prepared, highly prepared, not applicable* to engage in professional learning that contributes to the knowledge and skill of others through collaboration to advance professional practice.	3.29	0.76

Questions 17 and 18 involve collaboration with colleagues centered on facilitating and analyzing student learning and the means for both are above 3, which indicate participants felt "prepared" to engage in teacher leadership through collaboration in these areas. Similarly, Questions 20 and 21 reflect means of 3 that support participants' preparedness to collaborate with learners, family, and the community. Question 19 reflects the lowest mean (M = 2.71) in the teacher leadership through collaboration construct, which may indicate that participants felt less prepared to act as teacher leaders

that lead school-wide efforts to build a shared vision and supportive culture, identify

common goals, and monitor and evaluate progress toward those goals.

Qualitative Findings
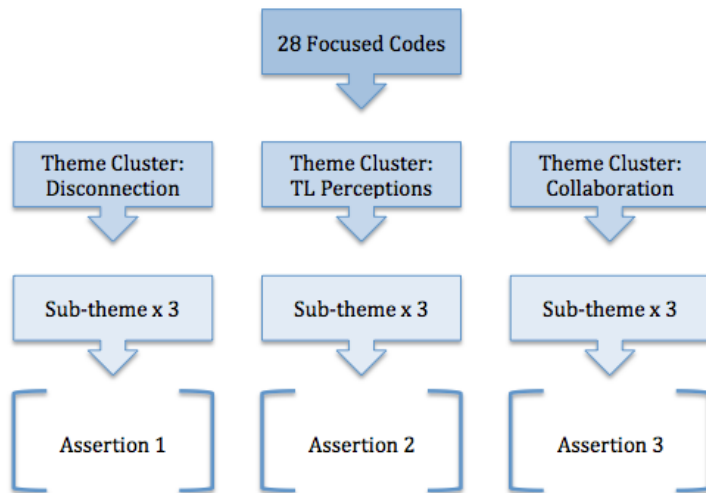
Figure 2. Coding Progression. This figure shows the progression from focused coding to

assertions for qualitative data. The letters "TL" represents the term "teacher leadership".

       I coded data collected from all qualitative tools and generated thematic codes and

assertions. This section will discuss findings for each assertion and corresponding data

collection tool. To bring meaning to the abstract ideas presented by the codes, I used all

focused codes to create three overarching codes and nine sub-themes to unify

participants' experiences into meaningful and holistic units (DeSantis & Ugarriza, 2000).

I combined the three overarching codes with the nine sub-themes to generate three

assertions to synthesize the qualitative data and demonstrate how the data documented

the impact of the TLC. Figure 2 illustrates the progression from focused coding to the

creation of assertions. The next section provides support for these assertions with quotes

from the original data. Table 5 displays the themes and assertions for all qualitative data.

Table 5.

Qualitative Data Themes, Sub-themes, and Assertions

Theme Clusters	Sub-themes	Assertions
Feelings of disconnection	NBCTs acknowledged that they were leaders amongst colleagues and in external contexts, but felt restrained or invisible at campus and district-levels.	NBCTs experienced disconnection between what they knew to be best practices for leadership and collaboration and what they experienced in their contexts.
	NBCTs reported that what they valued as effective learning and collaboration was not consistently happening in campus or district-level collaboration structures.	
	NBCTs expressed feelings of isolation from campus and district-level administrative staff and the decision-making process in their contexts.	
Perceptions of teacher leadership	NBCTs attributed obtaining National Board Certification to increasing their confidence to lead.	Participating in the TLC helped NBCTs define teacher leadership.
	Prior to participating in the TLC, NBCTs expressed a lack of awareness of and/or negative views of teacher leadership opportunities within their campus/district contexts.	
	After participating in the TLC, NBCTS articulated multiple definitions of teacher leadership within their contexts.	
Collaboration	During the TLC, NBCTs elected to use a flexible and consensus-based approach to create new meaning for what teacher leadership looks and sounds like.	Collaboration through the TLC provided a safe, flexible, and reflective learning environment for NBCTs that increased their readiness to take action as teacher leaders in their contexts.
	Even when it caused feelings of vulnerability, NBCTs valued the opportunity for collective reflection and critical thinking.	
	After participating in the TLC, NBCTs identified actions they could take as teacher leaders to make positive local change.	

Assertion 1: NBCTs experienced disconnection between what they knew to be best practices for leadership and collaboration and what they experienced in their contexts. Before and after being exposed to the TLC**,** NBCTs expressed disconnection when they responded to survey items, during focus group discussions, and when they reflected on the TLC experience.

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Open-ended survey items. During the initial survey, the larger group of 22

NBCTs expressed feelings of restraint and isolation connected to leadership and

collaboration structures within their contexts. These comments illustrated NBCTs'

frustration due to a lack of time and restraint within current collaboration structures: "As

a facilitator of a large school, I don't have time to participate in any other leadership

positions," "I think good leaders have a chance to breathe once in a while, and I feel

smothered and suffocated even within my role as a member of a PLC. It's not the ideal

condition for cultivating teacher leaders," and

> I have been highly *trained* [emphasis added] to do many things as a result of my
> NBCT training; I'm just not necessarily prepared to take on many of the roles that
> are options on this quiz. With 170 students and a litany of things that I'm
> supposed to do in a school day, I don't have much energy left over to take on
> anything else; I can barely get through all my grading once I get home.

Similarly, NBCTs felt restrained as leaders and isolated from leadership staff and

structures. During the pre-survey, one respondent stated, "At my campus, teacher

leadership is prevalent; however, administrators do not utilize the expertise of teacher

leaders." Two additional respondents stated:

> Teacher leaders are rarely asked to include input on wide-scale decision-making
> that is in the best interest of students, academic or otherwise. As a teacher leader,
> I feel my expertise is sometimes valued and appreciated by colleagues and some
> administrators, but not all.

> I honestly cannot emphasize to you enough how the present admin on my campus
> has made nearly all teachers, NBCTs or not, feel useless - this is clear through
> evaluations and private meetings. Therefore, to celebrate our leadership skills and
> help our campus flourish seems nearly impossible…There is no support or
> encouragement and it is discouraging after a while.

Data from the post survey shows that the 7 NBCTs who engaged in the TLC

experienced continued disconnection when they were asked if there were additional

comments they would like to make about teacher leadership within their contexts. For example, one participant stated, "I feel like those in charge have either seen an approach like this abused in the past, or are nervous about what they feel might happen, so we continue down the path of constrained leadership." Another participant stated, "I feel the department is really turning around and becoming stronger with each other and our students to help advocate for them, but at the same time to set boundaries to protect ourselves." The words "abused" and "constrained," in addition to the need to set boundaries for protection, demonstrates disconnection even in the midst of perceived progress. Also from the post-survey, the idea of "constrained leadership" is reinforced in this statement:

> It seems like the only outlets for 'teacher leadership' are providing professional development, which is fine, but is essentially acting as a tool for administration, or being an outspoken advocate for education associations. We are either working within constraints or fighting to be free of them.

DATL artifacts. Disconnection between what NBCTs identify as best leadership and collaboration practices and what is happening in their contexts was reified in the visual artifacts created during the first focus group. For example, Figure 3 shows Kwai Gon Gin's representation of a teacher leader doing teacher leadership as a picture of "the way I feel it is" juxtaposed next to an image of "the way I wish it were." In her context, the isolated image of herself as a teacher leader coming down the mountain to the people at the bottom of the mountain shows a dichotomous representation of leadership and collaboration when compared to the collaborative image on the right. During the first focus group, Kwai Gon Gin reinforced her dichotomous feelings through group dialogue, where she expressed frustration about how the "big authority people" on the top of the

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mountain, who represent district administration, charged her, the teacher leader on the mountain, to "go do everything that's impossible." She also stated that she felt as if she would "pitch off the side of the precarious pointy part of the mountain at any moment."

Figure 3. Kwai Gon Gin's DATL artifact from focus group 1.

JaPe's DATL artifact in Figure 4 illustrated a similar disconnection in his depiction of teacher leadership; his drawing shows teacher leadership as happening in a collaborative environment where ideas are shared amongst colleagues and is juxtaposed with an invisible person in the lower, left corner that is pointing a finger. During the first JaPe explained, "I have a hat and glasses and a couple of gloves and a chair because *nobody* [emphasis added] is ever saying, 'wow that looks good go ahead and try it,' it seems like these other people that come in are saying 'No - we need to do it like *this* [emphasis added].'"

Figure 4. JaPe's DATL artifact from focus group 1.

Focus groups. As participants shared their rationale for their DATL artifacts during the first focus group, their discussion further supported a theme of disconnection. For example, when explaining her drawing, Cad stated, "I accidentally drew that [flag] backwards. But sometimes as a teacher leader, I feel backwards." In response to Cad, Flamingo stated,

> I just really feel like on our campus leadership is such a big issue. We're trying to make everybody a leader first. . . . I mean it's a good concept but I don't know, maybe we have too many leaders, I don't know. Or not the right ones.

ArtYoda responded by noting that, even though Flamingo's campus administrative team seemed to verbally support teacher leadership practices, she stated that the "traditional ideas of someone out in front and people following – that doesn't work for me." During the second focus group, the theme of disconnection became more prominent as participants reflected on their collective DATL artifacts. Cad stated, "*We* [emphasis added] know what's going on day in and day out, and the people at the district level who are not in the classroom don't know." In response to this, JaPe stated, "So I can spin my

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wheels and be a teacher leader all I want, but when are teachers going to be part of this decision-making?" In response to this exchange of expressed disconnection between Cad, JaPe, and those making leadership decisions in their contexts, Johnny stated:

It's a lack of participation. A lack of being able to work with one another and I think it's a breakdown in communication. There's I think a *lack* [emphasis added] of communication sometimes. We *can* [emphasis added] share those great ideas that we have internally with one another. And maybe if we *had* [emphasis added] a way of communicating we could do that.

During the second focus group, participants also expressed disconnection in current Professional Learning Community (PLC) structures. Cad stated, "It [PLC time] doesn't connect with my definition. It doesn't serve - I feel it is a waste of my time. I feel insulted as a professional based on conversations that we have." Cad also expressed feelings of being on a "dysfunctional PLC" because "people are either not strong teachers or they lack confidence or they don't have leadership skills or they go rogue and do whatever the hell they want… and it's frustrating." In response to Cad, JaPe expressed similar disconnections with this statement:

If we want authentic collaboration we just have to do it outside of PLC time and I feel *that's* [emphasis added] more of a PLC than anything else. It's just that nobody looks at *that* [emphasis added] - they want to know what our smart goal is. It [PLCs] should not be a late start. It's not an hour throughout the day. It's not sending me to something where I come back and fill something out. It's just something that happens.

Though Cad and JaPe expressed frustration with PLCs, Flamingo and ArtYoda both replied to JaPe with positive statements; ArtYoda stated "our PLC time is awesome," and Flamingo described how her district-level PLC time provided time to "bring in assignments and share how each [teacher] approached it with what they did… and that's pretty cool." Of the seven participants, ArtYoda and Flamingo were the only

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ones that routinely engaged in monthly, district-wide meetings within their content areas.

As a result, they have brought some best practices back to their campus PLC, which "is going a whole lot better," but they indicated that their campus PLCs need continued improvement to match levels of district-PLC effectiveness.

During the third focus group, themes of disconnection were represented in the physical placement of theme cards during the collective coding process. As participants decided where to place cards in alignment to quoted excerpts from transcripts from focus groups 1 and 2, they placed the "district office" card in a cluster with the theme cards for: disconnection, isolation, outsider, and choice. The group decided to place the "choice" card between the "district office" and "disconnection" cards and Johnny stated that he felt "a disconnection between having choice and district practices that limit our choice, which results in conformity." In response, ArtYoda turned the "district office" card upside down, and commented, "It's upside down to represent a sometimes adversarial connection." Flamingo agreed and stated, "I don't feel as if we're always cohesive and we're broken into chunks."

During the third focus group, participants chose another disconnected physical placement of a quote from Johnny during focus group 2:

> It sounds like the reason your PLC at the district level is successful is that you have the flexibility to discuss what you want to discuss. Whereas the conflict others are having is there isn't that kind of flexibility – they're told what to discuss.

For this quote, the group could not decide whether to place it next to the "feeling restrained" card or the "disconnection" card. They decided to shape the quote strip into a loop and taped it to the diagram between the upside down "district office" and "choice"

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cards. ArtYoda stated, "It's a loop because you twist yourself around trying to do what you know is good for kids, and what's good for your team, but we dance around whatever the district office wants." In response, Cad joked about ArtYoda being entertaining, the group laughed, and Flamingo stated, "I think we might have some feelings about the district office." The physical placement of the theme cards, quotes, and comments during the activity further illustrated a disconnection between NBCTs' desired leadership and collaboration practices and what they experienced in their contexts.

Leadership journals. As participants reflected on their experiences as part of the TLC, they expressed continued disconnection between their known best practices and what they experience in their contexts. For example, one participant stated,

> Once we have attained NBCT, we are lauded as leaders and models for our profession, but I have struggled with what that means. What expectations do people have of me, and do I want to be defined by those expectations? What options do I have with regards to 'leadership' roles at my school and the district?

> Another participant stated:

> Our struggle to define it [teacher leadership] really says a lot about our profession and our district. I think I will take away the idea that teacher leadership is in a constant state of flux, and we really feel the need to be 'heard' by admin on our campus and district office.

> Though leadership journal data revealed a continued theme of disconnection, these quotes also showed that NBCTs desire to be leaders within their contexts and connect with leadership staff on campus and district levels.

Assertion 2: Participating in the TLC helped NBCTs define teacher leadership. Prior to participating in the TLC, NBCTs attributed obtaining National Board Certification to increasing their confidence to lead, but they had negative perceptions of teacher leadership within their contexts and lacked an awareness of how they could be

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leaders in those contexts. After participating in the TLC, NBCTs articulated multiple, positive ways that they could lead within their contexts.

Open-ended survey items. During the pre-survey, the larger group of 22 NBCTs expressed increased confidence and reflective practice connected to the National Board Certification process. Comments like, "Reflecting on teaching practices as an NBCT has prepared me to take on more leadership roles," and "My experience as a national board candidate helped me become empowered to the extent that I felt comfortable collaborating and taking on leadership roles" illustrated the value that NBCTs placed on the National Board Certification process connected to their readiness to lead and collaborate.

The dichotomy between NBCTs' perceptions of themselves as teacher leaders through the National Board Certification process, and what they experienced within their contexts, contributed to feelings of disconnection. Comments from the post-survey like, "I would like for my expertise, education, and intelligence as an NBCT to be respected and heard at the same level as someone who has much or less expertise, education, and intelligence (administration, politicians, business people)," and, "I feel like a superhero when I am in the classroom with my students, and I would like to feel a similar empowerment within the realm of my profession," supported NBCTs' experiences of disconnection, and also showed a desire for recognition as teacher leaders.

DATL artifacts. Of the 7 NBCTs that participated in the first focus group, only two created positively connoted self-representations of a teacher leader doing teacher leadership. Figures 5 and 6 show artifacts created by Cad and TeacherForce. Both images showed a smiling teacher leader figure with a confident stance who possessed some kind

of superpower; Cad represented this superpower as flying out of her hands and

TeacherForce depicted herself wearing a cape and has an apple symbol on her chest.

Figure 5. Cad's DATL artifact from focus group 1.

Figure 6. TeacherForce's DATL artifact from focus group 1

   Focus groups. During the second focus group, more participants identified

themselves as teacher leaders as they engaged in the collective meaning-making process

of the TLC. At the beginning of the focus group, participants spread out the DATL

pictures on a large table and engaged in discussion about things they noticed in the collective group of artifacts. The group placed Cad and TeacherForce's drawings towards the top of the configuration and ArtYoda noted, "I see a really strong central figure in those, and that seems like something." In response, Cad said, "it's like, 'wow, we're at the top, we're doing a good thing.'" JaPe compared the two self-representations of teacher leadership with the remaining drawings and replied to Cad: "I wanted to include these here, but they don't quite feel like they should." Figures 3 and 7 show the pictures that JaPe referenced. During this discussion, the group used spatial means to re-arrange the drawings and placed artifacts from Flamingo and Johnny below those that Cad and TeacherForce created.
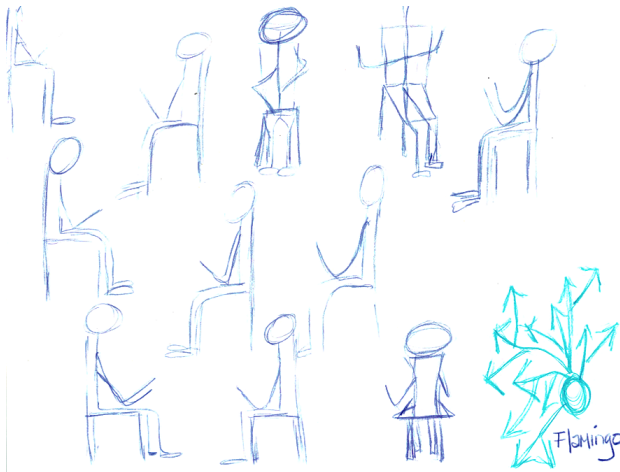
Figure 7. Flamingo's DATL artifact from focus group 1
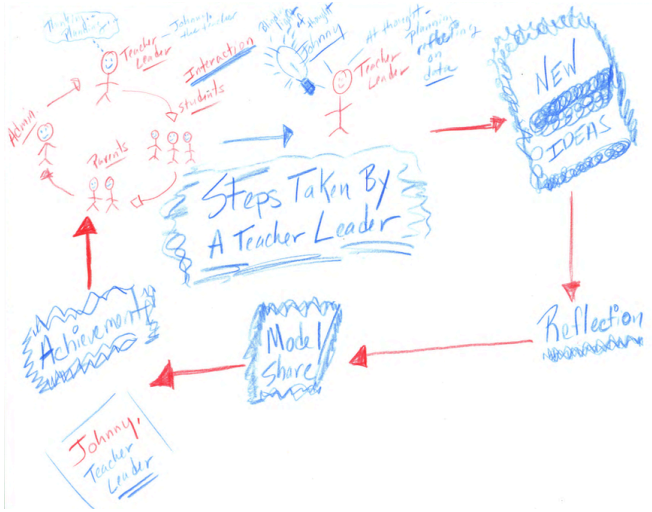
Figure 8. Johnny's DATL artifact from focus group 1

Through collaborative discourse during the second focus group, participants renegotiated their initial configuration of the pictures to be less divided and created a broader definition of how the artifacts represented them as teacher leaders. For example, Cad stated, "I think they're really dynamic. Each for their own individual reasons . . . there's a lot being said on these pages that are bold and have this power to them." Johnny replied, "It looks like there's a theme of things that change as the reflection of moving forward caused by the teacher . . . I see the progression of ideas as a display of change." ArtYoda, who chose to represent her interpretation of a teacher doing teaching leadership as a burst of color (Figure 9), responded to Cad and Johnny with her comment: "Mine was like the passion that fuels this sort of movement that makes me gather people in as part of a collective burn . . . there is inclusivity and collaboration in the lines and direction of all of our drawings."

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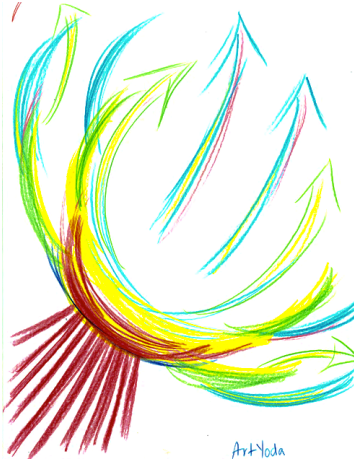
Figure 9. ArtYoda's DATL artifact from focus group 1

Whereas at the beginning of the second focus group, participants made clear distinctions between what teacher leadership was and was not, their collective discourse caused a shift in thinking about their perceptions of teacher leadership. For example, after she heard two participants comment about power and directionality, Flamingo stated, "I was just going to say, can't a leader be not necessarily top-down but like bringing people together like in a PLC or, you know, on a smaller scale? Does it have to be, you know, a grand thing?" Johnny reinforced this shifting perception of teacher leadership with his response to Flamingo:

> I think we all have a different form of leadership and we see it in different ways, depending on the situation that we're in. Some of us see it as an image. Some see it as a process. Some see it as salvation.

Cad replied to Johnny by stating, "I think, as leaders, we're drawn to each other …the best conversations I've had the last two years happened from people I don't teach on the same grade level with much less even the same content area."

During the third focus group, NBCTs' shift in positive perceptions of themselves as teacher leaders was more noticeable. For example, when making a decision about where to place the "reality" code card, the group struggled with where to place it. TeacherForce stated that the group should place it near the "power" card because, "as teacher leaders we influence the future." In response, ArtYoda stated, "Maybe we don't recognize our own power," and Cad replied, "Great point. We often minimalize our own power." Johnny supported this by stating, "Being with NBCTs is the bridge that gives us power to make change" and "to be the voice for change." Though the group decided to place the "reality" card away from the "power" card due to perceived disconnections of reality affiliated with teacher leadership within their contexts, the discussion showed an increase in positive perceptions.

Leadership journals. After participating in the TLC, participants expressed appreciation for how the reflective process of the leadership journal helped them solidify positive and flexible perceptions of teacher leadership. One participant stated, "When we use the term 'teacher leadership,' there can be a variety of definitions. The definitions usually stem from our own personal experience and not from an accepted academic definition." Similarly, another participant stated,

> Talking with the other teachers gave me different perspectives on how teachers view leadership, and what stuck the most was how leadership doesn't have to be from the top down, and it does not mean you have to be loud and vocal.

This flexible perception was also supported in another participant's comment,

> I assumed that when we talk about teacher leadership it is about teachers as leaders in the larger community. I was reminded that as teachers we are leaders in our classrooms - of course! I just took that for granted and it was nice to reflect on that as part of the activity.

Assertion 3: Collaboration through the TLC provided a safe, flexible, and reflective learning environment for NBCTs that increased their readiness to take action as teacher leaders in their contexts. The interactions between participants and opportunity for reflection that the TLC provided shifted participants' thinking from an existing state of disconnection to a desired place of authentic collaboration. The collective reflection and critical thinking helped NBCTs identify actions they could take as leaders in their contexts to make positive, local change.

Open-ended survey items. In response to a post-survey question about how participating in the TLC influenced their perceptions of themselves as teacher leaders, participants expressed positive feelings and made connections between those feelings and working collaboratively. Comments like, "I feel more confident, respected, valued, and encouraged by the like-minded people in the study," and, "It has reinforced how powerful it is to sit with fellow educators and discuss our different experiences around teacher leadership and improving education" support this. NBCTs' readiness to take action was also supported in this comment, "There are others with similar ideas, we just need to find each other and work to make a difference."

DATL artifacts. NBCTs' desire for authentic collaboration connected to teacher leadership was evinced through the elements of their initial DATL artifacts created during the first focus group. All of the DATL artifacts showed that NBCTs identified collaboration as part of what a teacher leader does when doing teacher leadership. Four of the artifacts used words and dialogue bubbles to represent reflective collaboration.

For example, Johnny included a thought bubble for his teacher leader that read, "Thinking, planning," and he included other phrases like "blinding light of thought," and

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"At thought – planning reflecting on data." Similarly, Cad included dialogue representing a conversation inside her school building that read, "So, I agree with you but I see it another way." See Figures 5 and 8 to view DATL artifacts created by Cad and Johnny.

Even when artifacts depicted themes of disconnection, the words used by participants showed the value they placed on reflective collaboration. For example, Kwai Gon Gin included comments like, "Om, peace, sharing," and, "For the good of all we can make a difference" on the right half of her drawing that depicted the way she wishes teacher leadership was. Similarly, JaPe included many dialogue bubbles with comments like, "this is what is working in my classroom," "You know, I never thought of that," and, "Wow, there are great additions, I can't wait to try them" to represent collaborative discourse amongst his teacher leaders doing teacher leadership. See Figures 3 and 4 to view DATL artifacts created by Kwai Gon Gin and JaPe.

In addition to using words, Johnny, Kwai Gon Gin, Cad, and JaPe, used images to represent teacher leadership as a reflective and collaborative experience. For example, Johnny included six images that he identified as a "steps taken by a teacher leader." These images were placed in a cyclical diagram that included arrows to indicate a clock-wise movement of change; this change began with an image of a light bulb, moved through planning and reflection, the generation of new ideas, more reflection, modeling and sharing of ideas, achievement, and ended in another circular diagram. The final diagram represented connections to outside stakeholders like administrators, parents, students, and other teacher leaders. See Figure 8 to view Johnny's DATL artifact.

Cad included images of light bulbs to represent thinking and also included images of a video camera, television, social media hash tags, and the planet earth to indicate a

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cycle of sharing best practices from beyond the image of the school to that of outside stakeholders. Kwai Gon Gin included an image of a group of diverse people sitting around a fire and holding hands to represent collaboration. JaPe used images of multiple people sitting together in a classroom sharing ideas through dialogue; during the first focus group a participant commented on his image of the clock: "Notice the little clock, it's after 3:30pm," to indicate that authentic and reflective collaboration often happened after the school day had ended. See Figures 3, 4, and 5 to view DATL artifacts created by Kwai Gon Gin, JaPe, and Cad.

In DATL artifacts where little to no words were used, images were used to represent teacher leadership as a reflective and collaborative experience. TeacherForce included an image of a school, district, and a paper representing "laws" to show the cyclical process of teacher leadership with other stakeholders. During the first focus group, a participant noted that teacher leaders worked collaboratively at the, "school level with the adults at our school and the kids, at the district level, and then with laws and policies." See Figure 6 to view the DATL artifact created by TeacherForce.

Flamingo included images of 11 teacher leaders sitting in chairs facing one another, with a cluster of arrows in the corner to show how teacher leaders worked collectively to be leaders; during the first focus group a participant described her images as, "one person gets something to lead about and then they kind of share with somebody else and someone else gets something to lead about and they share it with somebody else." Similarly, ArtYoda used an abstract image of colored lines to represent her collaborative perception of teacher leadership. During the first focus group, a participant stated, "maybe the red lines were used to represent the fire or passion or energy," that

evolved into an image of colored arrows, that "spread out and gather[ed] in" to show the "amazing part of being in a group of people that work[ed] together." See Figures 7 and 9 to view the DATL artifacts created by Flamingo and ArtYoda.

Focus groups. Focus group data supported how the TLC provided a fun and reflective learning environment for NBCTs. For example, ArtYoda stated during the second focus group, "I think it's this kind of collaboration with other teachers that really feeds us. Fuels us. . . . I really think it's [teacher leadership] that collaboration where you share ideas - sparked with each other." In response, Johnny stated, "I think that one thing that will determine whether or not you're a teacher leader or if you're effective as a teacher leader is if you have a place where you can share with others like this." He also noted that teacher leaders "take on the leadership position as a learner. With what *you* [emphasis added] learn, you can then also share with others." Cad agreed with ArtYoda and Johnny, and then stated, "Yeah, and I think we're drawn to each other. Whether we're aware of that force in the moment or not. We seek each other out. I hadn't thought about that."

The flexible and collective coding process used during the third focus group also caused new learning. Johnny stated, "I was surprised by this activity having some order to it because when you see cut out pieces you don't see the correlation and connection but in the conversation and sharing you can see those connections." Cad replied to Johnny by stating,

> "*This* [emphasis added] is a really cool process. I think it's really remarkable to look at how the conversation has shifted over time from our drawings, to our big focus on PLCs, to being able to kind of put all of this together in our coding categories. It's a very empowering process."

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Flamingo responded with her comment: "Empowering together… if we did this individually we would have been more laid out and no learning with crossover talk about patterns."

Leadership journals. Even when the collaboration and reflection process caused discomfort, participants reported increased learning and reflection as evinced through this comment from one participant, "The picture drawing felt good . . . It really showed how I view my own leadership role. I didn't feel very good about how I see it." This idea is further supported in another participant's comment,

> I loved it! It gave me a chance to think in a completely different way, and it was a challenge. It helped me to think about what I really feel about what teacher leadership is. It was quite revealing and not in the most positive way.

Though participants felt vulnerable during the meaning-making process, they reported that the collective and reflective structure helped reduce feelings of disconnection. For example, one participant stated, "Feeling isolated from other NBCTs somewhat and colleagues in similar teacher leadership positions were ameliorated by spending time with them and hearing about their outlooks, experiences and concerns." Similarly, another participant stated, "We may all be in different places with our teacher leadership, but the candidness of our discussions, our camaraderie as a group, and our respect and admiration for each other created a safe, inclusive environment where I felt valued."

In addition to supporting a safe learning environment, leadership journal data also showed how the TLC increased NBCTs' readiness to take action as teacher leaders in their contexts. A shift from learning to action was seen in this participant's comment:

"Every time I am part of a discussion with caring, compassionate professionals, I come away with ideas to ponder and even possible steps to take to try something different. I come away refreshed and ready to try it [leadership] again." When asked how participants might apply their new learning, another participant stated, "Stay in a leadership position." Words like "try again" and "stay" showed how participation in the TLC decreased feelings of disconnection and increased NBCTs' readiness to take action as leaders.

Other actions that participants stated they planned to take were connected to how they wanted to take their learning from the TLC and create more meaningful experiences for their students. For example, one participant stated, "I want to engage my students with drawing in some way. I'm not sure how, but since it was so revealing for me I want to use it with my students." Other comments like, "I definitely want to think of ways to incorporate more abstract thinking when my students are reading," and, "I like the activity of grouping quotations into topics/ideas/themes. It is an activity that I would like to use in my classroom in response to a text," further supported how the TLC created a learning environment that helped NBCTs identify action steps they could take as leaders in their contexts.

In addition to making connections to how they could apply their new learning to instructional practice, participants also articulated collaborative actions they planned to take as leaders within their contexts. One participant stated, "I would like to find a way to give this precious time and experience to teachers in my department. They simply don't have enough time to really share with each other and talk through their challenges." Other participants stated, "I plan to find ways to bring about the same thought sharing

model in the district within PLC settings," and, "I think I will try to reach out to more NBCTs in on a more regular basis." Collaborating as teacher leaders in the TLC caused new thinking about action steps that could bring about more authentic collaboration in participants' contexts.

Moreover, some participants articulated individual actions they planned to take. Comments like, "I want to find activities on campus and through the CTA that I can become more involved in, become a better advocate for our students," and, "There are things I can do on my campus to make me a stronger leader, but not a bully or a whiner," illustrated this. Finally, some identified actions that were introspective. For example, one participant stated, "I definitely think I need to pay closer attention to people's communication styles and invite them into the conversation before sharing my thoughts." Another noted, "I will be looking at my interactions to see how my view of leadership is manifesting in relationships and whether or not that is successful or the best approach." Participants' comments showed that they will take individual actions as teacher leaders to bring about positive change.

Discussion

This sequential, mixed-methods study explored how an action research-based teacher leadership collaborative (TLC) might influence the leadership perceptions of NBCTs in the Cortez Unified School District. Overall, results showed that participating in the TLC improved participants' perceptions of teacher leadership and helped them move from reflection to action. Though the data did not demonstrate participants' implementation of their stated actions in their contexts, the data did support that NBCTs valued the collaborative and reflective nature of the professional learning experience,

their feelings of restraint and isolation were reduced, and they expressed a readiness to take action within their contexts.

This section discusses results from the quantitative and qualitative data and examines theoretical connections. Practical implications, lessons learned, strengths and limitations, and future aspirations will be discussed in following sections. Discussion in this section will answer the following research questions: 1) How do NBCTs perceive or experience teacher leadership? 2) How and to what extent might the development of a leadership community of practice for NBCTs contribute to their perceptions of themselves as leaders? 3) How and to what extent might the indicators listed in InTASC Model Core Teaching Standard 10 align with NBCTs' perceptions of themselves as leaders?

Research Question 1: Perceptions of Teacher Leadership

How do NBCTs perceive or experience teacher leadership? When asked to draw an image of a teacher leader doing teacher leadership, only two participants created representations of themselves as the teacher leaders acting as teacher leaders. On the surface, it might be hypothesized that the majority of participants did not immediately identify as teacher leaders. During the focus group activities, however, all participants verbally articulated that they perceived themselves as teacher leaders, and defined the act of teacher leadership as a collaborative process. All of the DATL artifacts included words and images that displayed teacher leaders engaging in learning and collaboration with colleagues and other stakeholders, such as students, parents, campus and district administrators, legislators, state organizations, and national entities, like the NBPTS. The

images participants created showed that they individually and collectively defined teacher leadership as a self-selected, collaborative process.

Participants also perceived that teacher leadership was a process of learning. The act of learning alongside others, reflecting on the learning, then sharing the learning, provided a framework for teacher leadership. Participants' idea of teacher leadership as a process was vividly displayed in the artistic choices of images and movement lines included in the DATL artifacts. Most notably, Johnny's drawing (Figure 8) sparked much dialogue between participants about the flow of teacher leadership through insider and outsider circles. His drawing served as a focal point at many times during each focus group; participants actively picked up his drawing and referred to it when defining what they thought teacher leadership was (created by insiders) and what they thought teacher leadership was not (driven by outsiders). Though participants felt collaboration happened with outside stakeholders, the learning and meaning-making for teacher leadership as a process happened amongst other teacher leaders within an internal cycle of learning, reflection, and action. According to participants in this study, a teacher leader is someone who leads by participating in this cycle.

In addition to perceiving teacher leadership as a collaborative process of learning, reflection, and action, participants also defined it as something that is flexible and fluid. This perception was most clearly demonstrated through the discussion about what participants felt their current PLC structures were not. In defining PLCs as inflexible spaces where they felt restrained by the conformity of accountability measures, participants created the antithesis for what they believed teacher leadership to be: flexible

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spaces where teachers felt safe to try new things and share ideas and learning around self-selected topics.

Participants also perceived that this kind of autonomous teacher leadership happens in flexible times, often outside of the workday, and may manifest in multiple ways. Throughout the course of the study, participants articulated a variety of ways that a teacher can be a leader. Some participants defined teacher leadership as the act of teaching students, some saw it as taking more specific actions within their contexts, some defined it as becoming more active with external organizations, and some defined it as an internal endeavor connected to the way they interact with others. Participants' definitions of teacher leadership were fluid because they were dependent on taking a variety of actions. Participating in the TLC gave NBCTs an opportunity to examine their perceptions of teacher leadership and bring the abstract concept of teacher leadership to a more concrete, working definition to guide future practice.

Research Question 2: Impact of the TLC

How and to what extent might the development of a leadership community of practice for NBCTs contribute to their perceptions of themselves as leaders? The act of participating in the TLC mirrored what NBCTs perceived as authentic teacher leadership. The inclusion of only NBCTs in the study gave participants a way to be among like-minded teacher leaders to examine their perceptions of teacher leadership. Prior to participating in the TLC, participants did not have a space within their contexts to connect with other insiders that shared the same knowledge and leadership practices connected to the phenomenon of obtaining National Board Certification. The TLC provided a voluntary occasion to collaborate with other NBCTs from other campuses and

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certificate areas, and the structure of the focus groups provided a flexible and reflective way to engage in learning, reflection, and action around a self-selected topic.

The act of meeting as a group also served as a professional learning opportunity. When participants engaged in the National Board Certification process, they learned about themselves as individual leaders. Participation in the TLC provided a collaborative learning opportunity in which NBCTs co-constructed new knowledge with others and engaged in continued reflection on their practice after obtaining certification. Prior to participating in the TLC, participants also questioned how their leadership as NBCTs fit into their local contexts. After participating in the TLC, NBCTs were able to articulate specific actions they could take as teacher leaders in their local contexts to evoke positive change.

Because participation in the TLC was not mandated, it provided an organic way for NBCTs to engage in the process of teacher leadership. The flexible structures of the focus groups for the DATL creation and analysis allowed participants to have choice about how to represent their perceptions of teacher leadership. Similarly, the open structure of the final focus group coding activity allowed participants to connect their individual perceptions of teacher leadership to that of the collective group. Even when given the freedom to choose to work individually to analyze their coded data, participants chose to work together through discourse and action.

The framework for the focus group questions used tentative and plural language, which kept an open dialogue during focus group sessions and enabled participants to be vulnerable. This same framework was used in the structure of the leadership journal questions and helped NBCTs mediate thinking about themselves as leaders within their

contexts and profession. The flexibility of the TLC mirrored the kinds of flexibility that

NBCTs perceived as integral to teacher leadership. As a result of the flexible TLC design,

participants felt safe to express their opinions and shared insightful learning as illustrated

in this journal reflection from one participant: "This is encouraging, and right now I'm

feeling the need for encouragement, to move forward and find ways to engage with

others in ways that are supportive, open, and gently structured." After participating in

each phase of the TLC, NBCTs expressed how much they enjoyed being part of the

study, articulated ways they planned to take elements of the study to incorporate into

their professional practice, and reported that the TLC eased disconnection they felt within

their contexts.

Research Question 3: InTASC Connections

How and to what extent might the indicators listed in InTASC Model Core

Teaching Standard 10 align with NBCTs' perceptions of themselves as leaders? The

quantitative data showed increases in NBCTs' degree of beliefs about teacher leadership

and levels of preparedness to engage in teacher leadership actions as defined by InTASC

Model Core Teaching Standard 10. Data from the pre and post surveys showed that

NBCTs believed it was important to collaborate, lead adult-learning activities, use

technology to build local and global networks, generate and use research, and engage in

advocacy to be teacher leaders. After participating in the TLC, the mean for the group

who received the innovation increased from 3.26 to 3.30.

When asked about their levels of preparedness to engage in teacher leadership

through collaboration, network building, and research and advocacy, survey data showed

similar increases in mean responses between the pre and post groups. An exception was

noted in the post survey response for question 19, which reflected the lowest mean of 2.71. As aligned to InTASC Standard 10c, Question 19 asked about NBCTs' level of preparedness to engage in leading school-wide efforts to build a shared vision and supportive culture, identify common goals, and monitor and evaluate progress toward goals. This decrease may be explained when compared to the findings of the qualitative data connected to NBCTs' feelings of isolation and lack of communication with campus and district administration. The disconnection and frustration between NBCTs and campus and district administration revealed in the qualitative data does not align with InTASC indicator 10c. A complete list of the InTASC indicators for Standard 10 can be viewed in Appendix D.

Though NBCTs in both (pre and post) groups believed in the importance of the teacher leadership concepts presented in the survey questions, and though both groups felt "somewhat prepared" to "prepared" to engage in teacher leadership actions connected to the constructs presented in the questions, the qualitative data does not support a holistic alignment to the InTASC indicators. Qualitative data showed that NBCTs perceived teacher leadership as a flexible and collaborative process of learning, action, and reflection; these concepts align to InTASC indicators 10a, 10d, 10e, and 10f. There was, however, only partial alignment for the remaining InTASC indicators: 10b, 10g, 10h, 10i, 10j, and 10k.

For example, qualitative data showed that NBCTs often collaborated with colleagues and other stakeholders, but did not always have opportunities to "jointly facilitate" and "model effective practices" (Interstate Teacher Assessment and Support Consortium, 2011, p.19) within their contexts as described in indicators 10b and 10i.

Similarly, though NBCTs cited the importance of using research to inform their practice, they did not report actively "generating meaningful research on education issues and policies" (Interstate Teacher Assessment and Support Consortium, 2011, p.19) as outlined in indicator 10h.

The most commented on partial alignment between NBCTs' perceptions in qualitative data and the InTASC indictors was connected to the call to use "technological tools and a variety of communication strategies to build local and global networks" (Interstate Teacher Assessment and Support Consortium, 2011, p.19) as described in indicator 10g (Interstate Teacher Assessment and Support Consortium, 2011). Though NBCTs demonstrated their ability to use technology to connect with students and stakeholders as part of their National Board Certification process, they did not actively engage in global network building. One pre-survey respondent stated in the open-ended question, "I simply do not have the additional time (and sometimes resources) to implement and use the technology effectively." During the post survey another respondent noted, "Taking this survey has made it clear that I haven't placed emphasis on learning about building global networks through technology."

Theoretical Connections

NBCTs' perceptions of teacher leadership as a collaborative co-construction of new knowledge illustrated the principles of social constructionism. Research posits that social constructionism provides opportunity for the negotiation of meaning through collaborative discourse (Burr, 2015; Charmaz, 2014; Gergen, 1973, 1985, 1999). The focus group and online leadership journal discourse and activities provided a communal way for participants to examine their perspectives and experiences about the phenomenon

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of teacher leadership. The TLC highlighted the social negotiation of how teacher leadership was understood by NBCTs. As NBCTs learned more about themselves and the methodologies used in this research study, they made immediate connections to how they could apply their new learning in meaningful ways. Their stated intent to use their learning to improve learning for students and colleagues within their contexts highlights the powerful nature of using social constructionism within professional learning structures in education (Olson & Clark, 2009).

NBCTs' perceptions of teacher leadership as a collaborative and cyclical process of learning through action also closely matched the tenets of action research. Research suggests that meaningful action research is denoted by a democratic process of discourse through inquiry and action that challenges, rather than confirms, what is known about the world (Anderson & Herr, 2009; Friedman & Rogers, 2009; Mcniff, 2010; Mills, 2013). Through participation in the TLC, NBCTs challenged their thinking about teacher leadership through critical conversations and reflection. Though NBCTs reported feeling disconnected from administrative staff and decision-making processes within their contexts, their willingness to rethink best practices and examine the "dark corners" in which "power and privilege hide" (Anderson & Herr, 2009, p. 164) embodies the heart of the action research process. Through action research, NBCTs who participated in the TLC left the experience with increased readiness to take action as teacher leaders in their contexts to evoke positive change.

The action that NBCTs engaged in as part of this study also illuminates the precepts of a functional community of practice. Supporting scholarship for communities of practice outline the processes of learning, meaning, and identity as situated through

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collective experience and practice that shapes not just what people do, but who they are (Lave & Wenger, 1991; Wenger et al., 2002; Wenger, 1999b). The TLC provided a flexible space where mutual engagement and questions of learning were addressed within the development cycle of the community of teacher leaders (Lave & Wenger, 1991). Participants commented that they were drawn to the TLC because it was not a required professional learning experience, and they knew they would "learn something alongside like-minded people" (Focus group 1). Because the nature of authentic communities of practice are fluid and involve often unspoken protocols and nuances of practice, it is difficult to know whether the TLC will continue beyond the duration of this study (Wenger et al., 2002). NBCTs' articulation of future action they wish to take within their contexts, however, may plant rich seeds that will carry the spirit of the TLC into multiple sites within CUSD.

Implications and Lessons Learned

This section includes discussion about implications for practice and lessons I have learned as a researcher.

Implications

An immediate implication for school systems in Arizona is to find ways to fully incorporate the tenets of leadership and collaboration as defined by the professional teaching standards that are outlined InTASC Model Core Teaching Standard 10. Because Arizona has adopted the InTASC Model Core Teaching Standards as the foundation of teachers' professional practice, school systems would benefit from conducting a critical review of the professional learning opportunities offered within their contexts to see if they align with all 11 leadership and collaboration indicators listed for InTASC Standard

10. Data collected from NBCTs that were part of the TLC experience in CUSD indicated that teachers may need more opportunities to engage in learning, reflection, and action about leadership and collaboration to successfully meet all of the performance indicators called for in InTASC Standard 10.

Since the original (2011) publication of the "InTASC Model Core Teaching Standards: A Resource for State Dialogue," the CCSSO created an updated version to help school systems better support the implementation of the standards. The updated (2013) publication, "InTASC Model Core Teaching Standards and Learning Progressions for Teachers 1.0: A Resource for Ongoing Teacher Development," provides the same standards, but also offers a breakdown of the standards into sections that offer "graduated levels of sophistication" (Interstate New Teacher Assessment and Support Consortium, 2013, p. 1) for teaching practice. These sections are called "progressions," (Interstate New Teacher Assessment and Support Consortium, 2013, p. 1) and offer specific activities that school systems can adopt to increase the knowledge, critical dispositions, and performances that teachers need to successfully embody the standards in practice. Figure 10 shows a partial view of the second progression for InTASC Standard 10. A full view of both progressions for Standard 10 can be viewed in Appendix L. Though not all indicators may be included in a school system's teacher evaluation instrument, ensuring that all teachers have equitable access to professional learning opportunities aligned to the progressions for InTASC Standard 10 can help school systems move from reactive evaluation and compliance practices to a proactive investment in developing the full potential of teachers.

2. The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning and to advance the profession.		
1	**2**	**3**
	And...	*And...*
The teacher leads in his/her own classroom, assuming responsibility for and directing student learning toward high expectations. (9l)	The teacher works with other school professionals to plan and jointly facilitate ongoing learning to better meet diverse needs of learners. (8p; 10a; 10b; 10n; 10r)	The teacher models effective instructional strategies for colleagues, leads professional learning activities, and serves in other leadership roles. (10i; 10k; 10n; 10r; 10s)
The teacher makes practice transparent by sharing plans and inviting observation and feedback. (10r)	The teacher contributes to the growth of others through mentoring, feedback and/or sharing of practice. (10k; 10r)	The teacher motivates colleagues to consider leadership roles. (10k)
The teacher works to improve practice through action research. (10h)	The teacher collaborates with colleagues to jointly conduct action research and share results with the learning community. (10a; 10k; 10n; 10r)	The teacher works independently and collaboratively to generate research and use it as a way to impact education issues and policies. (10a;10h; 10k; 10n; 10r; 10s)
	The teacher contributes to establishing and maintaining a climate of trust, critical reflection, and inclusivity where diverse perspectives are welcomed in addressing challenges. (8p; 10k; 10n; 10o; 10p)	The teacher advocates for learners, the school, the community, and the profession through leadership roles at the school, district, state, and/or national levels. (10e; 10k; 10p; 10s)

Figure 10. Partial view of Progression 2 for InTASC Standard 10

Another implication for practice is connected to the kinds of ongoing support that teachers need as leaders. In most contexts, teachers have access to instructional coaching to help improve content and pedagogy connected to student achievement. In many contexts, however, teachers do not consistently have access to someone within their contexts that can help develop their knowledge, critical dispositions, and performances as leaders. Though some districts have developed programs to attract and support aspiring administrators, many have not yet created programs to attract and support teachers as leaders. Creating more professional learning opportunities, like National Board Certification, and providing systemic coaching and mentoring opportunities to teachers to develop as leaders can, not only retain talented teachers, but also can increase student achievement. Data from the TLC shows that NBCTs made immediate connections to how they could take elements of the TLC design and implement them directly into their classrooms to improve student learning. Empowering teachers as leaders can increase their efficacy connected to student learning, and can fuel their passion to make change for their students (Katzenmeyer & Moller, 2009).

In addition to increasing teachers' access to leadership development and coaching, school systems should analyze how existing Professional Learning Communities (PLCs) within their contexts are structured. Undoubtedly, the work of analyzing student learning in a cycle of reflection with colleagues is a necessary function of teaching and learning in schools. Data from the TLC showed that teachers may have additional needs as professionals that need attention and support beyond analyzing data connected to student achievement. For many TLC participants, the word "professional" in the title of Professional Learning Communities (PLCs) contributed to the disconnection they felt within their contexts because they felt that the work that happened within their PLCs was more about conformity to standardized testing sanctions or district mandates than it was about engaging in professional dialogue around authentic problems of practice. Anderson and Herr (2009) have noted, "in schools the need to look good often drains action research of its ability to problematize or problem-pose, and instead it is used to problem-solve without an analysis of underlying causes or assumptions behind organizational problems" (Anderson & Herr, 2009, p. 157). School systems would benefit from critically analyzing the assumptions behind their PLC structures to ensure that they are not unintentionally restricting teachers' development as leaders.

Another structural point of review for PLCs would be the timeframe in which they take place. In many contexts, teachers have an opportunity to collaborate with colleagues in PLCs for an hour once per week, and may have extended time once or twice per month during district-designated in-service days. Data from the TLC showed that a lack of time contributed to the disconnection participants felt; many reported what they considered to be authentic collaboration as something that happened after hours, on

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their own time, and in flexibly structured environments. Legislative bodies and school systems would benefit from exploring ways in which seat-time for students are structured to allow for more collaboration and learning time for teachers. If teachers had more time within their typical workweek to engage in leadership and collaboration practices, student achievement could increase.

For example, teachers in countries like Japan, Singapore and South Korea teach only 35% of their work day and the rest of their time is dedicated to collaboration and professional learning connected to student achievement (Lieberman & Pointer Mace, 2010). Similarly, Sahlberg (2011) notes that Finland spends 200-300 less annual hours teaching than the United States, and posits that, "Less teaching can lead to more students learning if the circumstances are right and solutions smart" (Sahlberg, 2011, p. 141). Sahlberg (2011) also states, "rather than continue thinking of future schooling in terms of subjects and time allocations to them, the time is right now to make a bold move and rethink the organization of time in schools" (Sahlberg, 2011, p. 141). As the United States works to analyze education practices on a national level when compared to high performing countries that have restructured their student and teacher learning time, school systems in Arizona could be proactive in analyzing their own learning structures to allow for more leadership development for teachers.

Rethinking PLC structures can also provide an opportunity for school systems with large and/or growing numbers of NBCTs to embed continued professional learning opportunities to help NBCTs work collaboratively to learn, reflect, and take local action to solve authentic problems of practice. Though obtaining National Board Certification helped TLC participants demonstrate their exemplary instructional and leadership skills,

data also showed that NBCTs desired continued opportunities to reflect on how they actively put those skills into practice. The duality of lived experiences that NBCTs encounter as leaders on local and national levels caused them to have dichotomous feelings about their professional practice. NBCTs that participated in the TLC greatly appreciated simply having a space of their own to meet and engage in critical discourse around a topic they were passionate about – which was the act of teacher leadership as a process. As Drath (2001) notes, if a people act as leaders as a result of participating in a relational process, rather than on their own, there is a new and powerful tool that can be used to recognize and cultivate leadership practices (Drath, 2001). Because NBCTs defined teacher leadership as a process, school systems should consider the creation of similar learning experiences through action research to mobilize NBCTs to create innovative solutions that can exponentially impact students and staff in Arizona's schools.

A final implication for practice is connected to the sustainability of professional capital for the teaching profession. In the InTASC resources provided by the CCSSO, they posit that, "a teacher's practice moves along a continuum from being more directive…to more facilitative… to more collaborative" (Interstate New Teacher Assessment and Support Consortium, 2013, p.13). As teachers move across this continuum towards teacher leadership practices, school systems have opportunities to leverage the expertise of teachers leaders to help train and retain those newer to the profession; mobilizing teachers as leaders through new teacher leadership roles can provide additional support for administrators and instructional coaches in those systems to support newer teachers, existing teachers, and can produce an organic and flourishing

knowledge-community to help balance traditional power structures in education (Angelle & Schmid, 2007; Day et al., 2007; Donaldson, Simmons, & Grogan, 2007). If school systems use teacher leaders in their contexts to evoke positive local change through action research, Darling-Hammond, Bullmaster, and Cobb (1995) caution school systems to avoid "artificial, imposed, formal, hierarchies and positions" (Darling-Hammond et al., 1995, p.89) for teachers as leaders and, instead, adopt leadership as an expectation for all teachers. Data from the TLC supports this in that NBCTs expressed a desire for flexible roles and definitions for teacher leadership. School systems should stay mindful of this as they work to create more teacher leadership opportunities in their contexts. Like action research, teacher leadership roles may be contextual and subject to local interpretations of needs and change.

Lessons Learned

A practical lesson learned for future research may be to change the location of the focus groups to one that is not housed at the district office. Because former cycles of research indicated there might be a dichotomous relationship between teachers and administrators in their contexts, I purposefully selected the CUSD district office as a meeting space to help bridge the "us vs. them" divide that is sometimes seen in school systems. As a result of this choice, I may have limited the population sample to exclude people who did not feel safe expressing themselves openly in a location like a district office space. Participants in the TLC did express themselves freely due to the personal relationship I had with them, but I wonder if changing the location may have better accommodated more NBCTs' levels of concern, and may have attracted more NBCTs that did not know me personally.

Another practical implication may be to extend the sessions to more than three focus groups; TLC participants valued the experience and often commented on wanting the learning and experience to continue. School systems adopting a TLC model to foster increased teacher leadership practices might consider extending the structure to meet for longer periods of time, if not the entire school year. Similarly, if engaging in a collective coding process for data collected to study a problem of practice, school systems should consider extending those sessions from two to three hour timeframes to account for the extensive levels of active engagement that may occur. Participants in the TLC stayed 30 minutes later than the designated end time for the last session and expressed an interest in having more time for future activities. As a facilitator, I could see how extending the time could have resulted in more dialogue to enhance the constructive meaning-making process.

An additional lesson that I learned is that action research is very similar to what I experienced as I engaged in the National Board Certification process. According to Herr and Anderson (2015), "the goals of action research deliberately blur the lines of terms such as *expert*, *participant*, and *researcher*" (Herr & Anderson, 2015, p. 150). The cyclical nature of the goals of action research mirror the structure of the NBPTS' Architecture of Accomplished Teaching, which shows the interconnectedness of learning, reflection, and action under the surface of what teachers should know and be able to do (NBPTS, 2014). Figure 11 shows the Architecture of Accomplished Teaching.
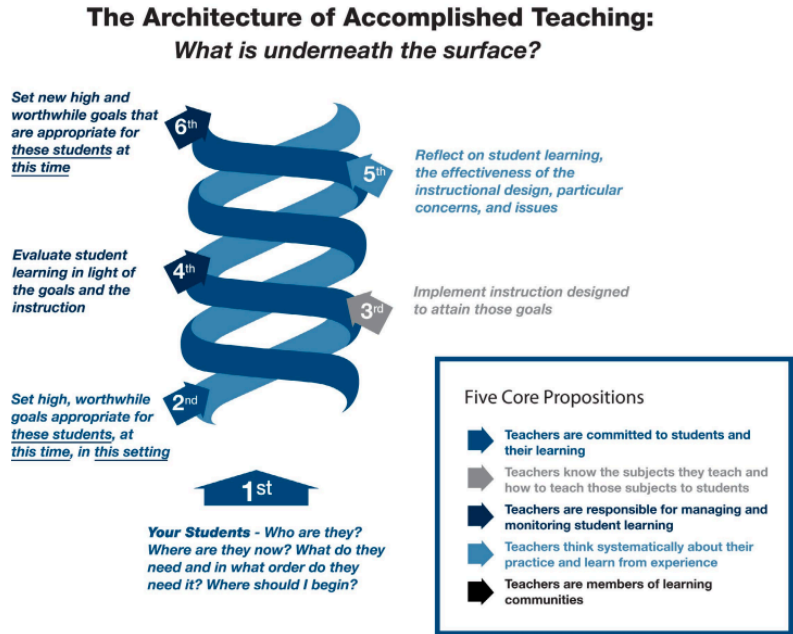
The Architecture of Accomplished Teaching:
What is underneath the surface?

Set new high and worthwhile goals that are appropriate for *these students* at *this time* — 6th

Reflect on student learning, the effectiveness of the instructional design, particular concerns, and issues — 5th

Evaluate student learning in light of the goals and the instruction — 4th

Implement instruction designed to attain those goals — 3rd

Set high, worthwhile goals appropriate for *these students*, at *this time*, in *this setting* — 2nd

1st

Your Students - Who are they? Where are they now? What do they need and in what order do they need it? Where should I begin?

Five Core Propositions

Teachers are committed to students and their learning

Teachers know the subjects they teach and how to teach those subjects to students

Teachers are responsible for managing and monitoring student learning

Teachers think systematically about their practice and learn from experience

Teachers are members of learning communities

Figure 11. NBPTS Architecture of Accomplished Teaching

As NBCTs in this study engaged in the action research process through the TLC, many of them commented on how much the TLC felt like what they experienced when they went through the National Board Certification process. These comments, combined with my own similar feelings, solidify my belief that the National Board Certification process is the gold-standard of the teaching profession and should be systematically embedded into the fabric of our school systems from pre-service through teacher leadership development. As the definition of accomplished practice created for teachers, by teachers, the National Board Certification process provides a way for educators to model lifelong learning for students, demonstrates to the public that teachers are professional stewards of learning and change, and provides a framework of learning, reflection, and action that can help us all work toward the challenge of advancing the teaching profession.

A personal lesson learned is that, when given safe times and spaces to think critically and creatively, teachers really do have all of the answers to improve education in our state and country. In only three focus groups, participants in this study were able to create solutions to authentic problems of practice in their contexts and they left the experience with immediate actions they could implement to improve learning for students, increase collaboration with their colleagues, and increase their own actions as teacher leaders within their contexts. Though teacher leaders may not readily have all the answers when they enter a room, witnessing the power of action research through the TLC experience has taught me that teacher leaders can, most certainly, leave a room with many co-constructed answers to even the most daunting problems in education.

Famous anthropologist, Margaret Mead, encourages us to "never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has" (Mead, 2009, para. 1). Throughout this action research study, I have learned that the NBCTs in CUSD truly do change the world. As I worked alongside them to move our collective cognition from reflection to action, I was continually reminded that teachers naturally bring good into the world and, day-by-day, change it for the better through their interactions with the students they serve. I also learned that participants' courage to lean into discomfort and vulnerably examine themselves as teacher leaders is the kind of learning experience that I would want my own daughter to experience; as I send my personal child into Arizona's public school system, I am simultaneously humbled and filled with hope to know that teachers like the NBCTs in CUSD are modeling these best practices for our children.

Strengths and Limitations

A strength of this study was my positionality as an insider conducting action research. Herr and Anderson (2015) state that the task of a practitioner action researcher is to study a setting by acting in it, while simultaneously studying the effects of their actions (Herr & Anderson, 2015). As an NBCT who worked in CUSD during this study, I had intimate knowledge about participants' teaching contexts and had pre-existing relationships with all TLC participants. This positionality enabled me to structure the study in ways that allowed for an ongoing reframing of articulated problems. I involved study participants as co-constructors of knowledge through focus groups and journal reflections during each phase of research. This collective analysis of evidence provided a form of process validity, in addition to providing an outlet for triangulation through the inclusion of multiple perspectives (Herr & Anderson, 2015).

Similarly, the collaborative nature of the data collection and analysis provided a democratic validity. According to Herr and Anderson (2005), democratic validity is the extent to which research is done in collaboration with all parties who have a stake in the problem being studied. As NBCTs, participants in my study were viewed as leaders on a national level. My study provided a forum for this group of leaders to analyze their collective leadership identities, and provided implications for school systems about how to best support NBCTs' leadership development on local and systemic levels. Process validity was fostered through the inclusion of multiple voices for triangulation, and the local nature and inside positionality of all participants in this study provided an additional, democratic type of validity.

In addition to fostering process and democratic validity, this study also generated catalytic validity. As participants in the study examined and theorized about data presented from phases of the research design, they documented their reflections in a leadership journal; I also kept a journal as a researcher to engage in similar reflections and document findings. This act of cyclical reflection emulated the cyclical nature of the action research process and helped participants deepen their understanding of the social realities that emerged throughout the study. My hope was that the catalytic nature of this validity highlighted the transformative potential of action research done by and for teacher leaders (Herr & Anderson, 2015).

A limitation noted in this study was my inability to disaggregate quantitative pre-survey data for the 7 NBCTs who participated in the TLC. Though action research is "fundamentally about questioning the status quo and working toward change," (Herr & Anderson, 2015, p. 151) it is also about maintaining ethical relationships with the participants that were part of the investigative process. The high stakes nature of teacher evaluation practices, combined with dichotomous and emotionally coded data from previous action research cycles, influenced my decision to keep the surveys for this study anonymous to protect the identity of participants. Because the pre-survey was anonymous, I could not disaggregate the data for the 7 NBCTs who participated in the TLC. Though TLC participants provided their names for the post-survey, I did not have a way to measure change over time for this specific group connected to how they felt about teacher leadership as defined by InTASC Standard 10.

Another potential limitation for this study was that the unique and purposive characteristics of the group made any findings less transferrable to other contexts. My

focus on the lived experiences of participants within one teacher leadership community of practice, in one school district, revealed rich data that was specific to CUSD, but may not accurately represent the lived experience of NBCTs in different school districts or in Arizona. To strengthen associations between leadership development for NBCTs and their local contexts, studies with more randomly selected participants, and with larger sample sizes across multiple districts, should be considered.

Conclusion

There is much potential to use action research to foster authentic communities of practice for teacher leaders in education, and the intent behind my study was to contribute to a wider body of literature about teacher leadership. My hopes are that the results from this study informed how to best (1) support National Board Certified Teachers as leaders in their local contexts, (2) meet the fullest extent of the leadership and collaboration indicators for InTASC Model Core Teaching Standard 10, and (3) advance the teaching profession. If teachers and those who support them can better understand the knowledge, beliefs, and dispositions teachers hold about their leadership identities and opportunities, new supports and programs can be created to meet teachers, wherever they are at, on a continuum of professional practice. If school systems develop ways to support teachers as reflective learners and leaders, students will be the beneficiaries - and may be more likely to be reflective learners and leaders themselves.

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APPENDIX A

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX A

INNOVATION TIMELINE

Interval Dates, Fall 2015	Activity	Data Collection Tools / Resources
Phase One: August - September, 2015	**Focus Group 1: Innovation Intro**: Introduce TLC model, purpose, options, informed consent, online pre-survey, DATL Activity, Google Leadership Journal introduction	Electronic Teacher Leadership Survey (Appendix E) Informed Consent Email Language (Appendix B) DATL Artifact Creation (Appendix F) Online Leadership Journal (Appendix G) Researcher Field Notes/Journal
Phase Two: November, 2015	**Focus Group 2**: Visual artifact data discussion (group discussion)	DATL Focus Group Questions (Appendix H) Online Leadership Journal (Appendix G) Researcher Field Notes/Journal
Phase Three: December, 2015	**Focus Group 3**: Coding analysis group discussion, final journal entries, online post-survey	Data Analysis Discussion Protocol (Appendices I and K) Electronic Teacher Leadership Survey (Appendix E) Online Leadership Journal (Appendix G) Researcher Field Notes/Journal

APPENDIX B

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX B

INFORMED CONSENT LETTER

Dear NBCT,

As some of you may know through the National Board Certification work we have done together, I am currently enrolled in a doctoral program at Arizona State University. What am I studying? Teacher Leadership! Specifically, I am exploring how NBCTs perceive or experience teacher leadership for my dissertation focus. Now that I have transitioned from working in higher education to a classroom position in the Cortez Unified School District, I am even more excited to study alongside so many talented NBCT-colleagues!

I am sending you this email to invite you to take part in my action research study because your work as an NBCT identifies you as a teacher leader in Arizona. I also think your contributions will lend a unique perspective on teacher leadership in the CUSD, who has approved my request to conduct this study. Benefits to participating in this research study include opportunities to inform teacher leadership practices within CUSD, in addition to contributing to state-level conversations about how to mobilize NBCTs once they obtain their National Board Certification.

Should you choose to be part of this research, there are two ways that you can be involved!

1. **Take a brief and anonymous electronic survey** (approximately 5-10 minutes). Click the following link to take the survey by September 23rd and you can be entered into a drawing to win a $25 Amazon or Target gift card! Survey link: https://www.surveymonkey.com/r/nbctlead.
2. **Attend three focus groups.** Focus groups will be held from 4:00-6:00pm at our district office on these dates: September 29th, November 17th, and December 8th, 2015. The last survey question will ask if you would like to participate in these three focus groups and I will use that information to select participants.
    a. If you are selected as a focus group participant, I will notify you via email, and participants who attend all three sessions will be entered into a drawing to win a $50 Visa gift card.
    b. Food and beverages will also be provided at each focus group.
    c. Together, we will engage in fun and reflective leadership activities about ourselves as leaders. We will, specifically, create visual artifacts, engage in group discussions about those artifacts, and reflect on our experiences using an online reflection journal in Google docs.

In addition, your responses will be strictly confidential and any video/audio recordings will only be shared in the form of data to inform my dissertation; they will not be published for public use. Additionally, no identifying information will be shared

connected to this data. All data will be stored in electronic, password-protected form and any printed data will be locked in a secure file cabinet. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at 480-965-6788.

Thank you for considering this request to participate in my research! Please contact me at aburcky@asu.edu with any questions you may have. I will send a survey reminder in one week.

Excited to connect with you soon!

Alaina Adams
Mary Lou Fulton Teachers College
Arizona State University
(480) 862-2640

By signing below you agree to participate in this study:

Name: _____Date: _____

By signing below you agree to audio and video recording for focus groups:

Name: _____Date: _____

APPENDIX C

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX C

DATA COLLECTION TOOLS INVENTORY

Instrument	Description	Inventory
Electronic Survey – Appendix E (Quantitative and Qualitative) Phases 1 and 3 (pre and post)	This survey used a 4-point Likert scale with 37 items to determine teachers' perspectives on teacher leadership and collaboration characteristics outlined by the 11 performance indicators of InTASC Model Core Teaching Standard 10: Leadership and Collaboration. This survey also included open-ended questiosn and was administered during the first and final weeks of the study.	1 per participant
Draw a Teacher Leader Tool (DATL) Appendix F (Qualitative) Phase 1	This tool was used to provide a concrete way for participants to reflect on what a teacher leader is. An accompanying protocol was also be used to facilitate group discussions to analyze the visual artifacts created.	1 per participant
Focus Groups – Appendices F, H, I, K (Qualitative) Phases 1-3	These focus groups were used to create the DATL artifacts and gather additional data about the DATL artifacts, facilitate group discussions, and analyze transcript data from the first two focus groups.	45-60 minutes each Total: 3
Online Journal – Appendix G (Qualitative) Phases 1-3	Participants created online journal entries where they reflected about each phase of research and the overall process. A Google doc was used to house journal entries.	1 Collective Google doc Total: 3 journal responses
Researcher Field Notes (Qualitative) Phases 1-3	The researcher created notes about the research process and initial findings during the course of this study. Evernote was used.	Periodically over 11 weeks

APPENDIX D

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX D

INTASC STANDARD 10 PERFORMANCE INDICATORS

InTASC Model Core 10 Teaching Standard Performance Indicators

10a. The teacher takes an active role on the instructional team, giving and receiving feedback on practice, examining learner work, analyzing data from multiple sources, and sharing responsibility for decision making and accountability for each student's learning.

10b. The teacher works with other school professionals to plan and jointly facilitate learning on how to meet diverse needs of learners.

10c. The teacher engages collaboratively in the school wide effort to build a shared vision and supportive culture, identify common goals, and monitor and evaluate progress toward those goals.

10d. The teacher works collaboratively with learners and their families to establish mutual expectations and ongoing communication to support learner development and achievement.

10e. Working with school colleagues, the teacher builds ongoing connections with community resources to enhance student learning and well being.

10f. The teacher engages in professional learning, contributes to the knowledge and skill of others, and works collaboratively to advance professional practice.

10g. The teacher uses technological tools and a variety of communication strategies to build local and global learning communities that engage learners, families, and colleagues.

10h. The teacher uses and generates meaningful research on education issues and policies.

10i. The teacher seeks appropriate opportunities to model effective practice for colleagues, to lead professional learning activities, and to serve in other leadership roles.

10j. The teacher advocates to meet the needs of learners, to strengthen the learning environment, and to enact system change.

10k. The teacher takes on leadership roles at the school, district, state, and/or national level and advocates for learners, the school, the community, and the profession.

APPENDIX E

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX E

TEACHER LEADERSHIP SURVEY

Participant Demographics

1. What is your gender?
    Male
    Female
    Prefer not to answer

2. In which certificate area did you earn your National Board Certification? (Select from drop down menu).

3. How many years of teaching experience do you have?

    4-8
    9-12
    13-16
    17-20
    More than 20
    Retired

4. What is your current role/position? (Check all that apply).

    Teacher
    Mentor/Coach
    Principal
    District administrator
    Other (provide additional details below)
    Prefer not to say

5. How many years of experience do you have in your current position?

    1-5
    6-10
    11-15
    16-20
    More than 20
    Other (please specify)

6. Which of the following academic degrees do you hold? (select all that apply).

    Master's Degree

Doctoral Degree
I am currently enrolled in a master's program of study
I am currently enrolled in a doctoral program of study
None of the above

7. List any additional specialized certifications or endorsements you have connected to your teaching certificate.

8. What subjects do you teach/most frequently influence through your work?

9. What characteristics best represent the students you teach/most frequently interact with? (select all that apply).

9th grade students
10th grade students
11th grade students
12th grade students
Gifted students
Students identified as having learning disabilities
English language learners
I don't work directly with students in my current role
Other (please specify)

Teacher Leadership Beliefs

10. How important do you believe collaboration with colleagues is for teachers to be leaders?

Not important
Somewhat important
Important
Very important

11. How important do you believe it is to lead professional learning activities with adult learners for teachers to be leaders?

Not important
Somewhat important
Important
Very important

12. How important do you believe it is for teachers to use technology to build **local** communication networks as teacher leaders?

Not important
Somewhat important
Important
Very important

13. How important do you believe it is for teachers to use technology to build **global** communication networks as teacher leaders?

Not important
Somewhat important
Important
Very important

14. How important is it that teachers use research to inform their practice in order to be teacher leaders?

Not important
Somewhat important
Important
Very important

15. How important do you believe generating research is for teachers to be leaders?

Not important
Somewhat important
Important
Very important

. 16. How important do you believe advocacy is for teachers to be leaders?

Not important
Somewhat important
Important
Very important

Teacher Leadership Through Collaboration

Pick the option below each statement that you believe best completes each sentence.

17. I am _____ to lead instructional teams through giving feedback on examining learner work and analyzing data about students' learning.

Not prepared

Somewhat prepared
Prepared
Highly prepared
Not applicable

18. I am _____ to collaborate with other school professionals to plan and jointly facilitate learning on how to meet diverse needs of learners.

Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

19. I am _____ to lead school-wide efforts to build a shared vision and supportive culture, identify common goals, and monitor and evaluate progress toward those goals.

Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

20. I am _____ to work collaboratively with learners and their families to establish mutual expectations and ongoing communication to support learner development and achievement.

Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

21. I am _____ to work with school colleagues to build ongoing connections with community resources to enhance student learning and well being.

Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

22. I am _____ to engage in professional learning that contributes to the knowledge and skill of others through collaboration to advance professional practice.

Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

Teacher Leadership Through Network-Building

Though many of the questions in this section sound similar, please note differences denoted with the words "local" and "global."
23. I am _____ to use technological tools and communication strategies to build **local** learning communities that engage **students**.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

24. I am _____ to use technological tools and communication strategies to build **local** learning communities that engage **families and/or community partners**.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

25. I am _____ to use technological tools and communication strategies to build **local** learning communities that engage **colleagues**.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

26. I am _____ to use technological tools and communication strategies to build **global** learning communities that engage **students**.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

27. I am _____ to use technological tools and communication strategies to build **global** learning communities that engage **families and/or community partners**.
Not prepared

Somewhat prepared
Prepared
Highly prepared
Not applicable

28. I am _____ to use technological tools and communication strategies to build **global** learning communities that engage **colleagues**.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

Teacher Leadership through Research and Advocacy

29. I am _____ use research on education issues and policies to inform my practice.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

30. I am _____ generate research on education issues and policies.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

31. I am _____ to advocate for the needs of learners and the learning environment.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

32. I am _____ to advocate for system change within the teaching profession.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

33. I am _____ to take on leadership roles on a school or district level.
Not prepared

Somewhat prepared
Prepared
Highly prepared
Not applicable

34. I am _____ to take on leadership roles on a state or national level.
Not prepared
Somewhat prepared
Prepared
Highly prepared
Not applicable

35. What additional comments might you have about teacher leadership within your context?

36. If interested in staying connected to the researcher about this research, please provide your preferred contact method and contact information here.

37. Focus groups for the remainder of this study will take place from 4-6pm on September 29th, November 17th, and December 8th; participants will be entered into a drawing to win a $50 Visa gift card. Are you interested in participating in focus groups for this study?

Thank you for taking this survey! Your efforts will help shape my research about how National Board Certified Teachers can influence teacher leadership practices and opportunities in Arizona.

*For the post-survey, Question 36 was revised to read: "How might the social interactions experienced during this research study have influenced your perceptions of yourself as a teacher leader?"

APPENDIX F

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX F

FOCUS GROUP 1:

DRAW A TEACHER LEADER ARTIFACT PROTOCOL

Set up:

Introduce the Draw A Science Teacher studies used in the past. Used to explore science as an act of inquiry by students rather than something done to them. I am aiming to explore leadership as something done with teachers and not on their behalf.

Script:

Today, we are going to engage in an activity in this spirit. I will give you one prompt to respond two and you will make two drawings. The key is to not overthink things and not worry about your drawing skills. At the end of the activity, I will create a digital image of your artifact and send it to you via email for your reference.

After today's activity, we will communicate via phone and email, and I will use a private, online space called Google docs to engage in collective reflection and dialogue about our experiences. Please take a moment to sign the consent form before we begin. Take a moment now to read and sign the informed consent letter. I will send a copy of this signed letter to you via email for your records.

Directions:

Will you please draw a picture of a teacher leader doing teacher leadership?

Materials:

 Colored pencils, markers, paper, Google doc for online reflection

APPENDIX G

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX G

ONLINE LEADERSHIP JOURNAL PROMPTS

Directions: Thank you for participating in today's focus group! As a method of closure and extended learning, please type a response to each of the 5 questions below. Because this is a group activity, we can all type our answers collectively in this same Google doc! Feel free to use any color font or formatting you prefer, and only include your name if you want to. *Please also note that, though we can collaborate here, your access permissions will not allow you to invite others or download a copy for your records.*

Focus Group One:

1. How did you feel about constructing the Draw a Teacher Leader artifact?

2. What are your hunches about what caused your feelings?

3. What learning might you want to take away from the activity?

4. How might you apply your new learning?

5. How might this collective leadership journal entry have supported your learning?

Focus Group Two:

1. How did you feel after the group analysis of the collective drawings?

2. What are your hunches about what caused your feelings?

3. What learning might you want to take away from the activity?

4. How might you apply your new learning?

5. How might this collective leadership journal entry have supported your learning?

Focus Group Three:

1. How did you feel after the group analysis of the focus group transcript codes?

2. What are your hunches about what caused your feelings?

3. What learning might you want to take away from the activity?

4. How might you apply your new learning?

5. How might this collective leadership journal entry have supported your learning?

6. Is there anything else you want to say about being part of this teacher leadership collaborative experience?

APPENDIX H

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX H

FOCUS GROUP 2:

DRAW A TEACHER LEADER ANALYSIS PROTOCOL

1. When looking at the group of drawings on your table, what stands out to you? Are there any similarities, differences, or patterns that you notice?

2. What are your hunches about what caused these similarities, differences, or patterns?

3. How might these similarities, differences, or patterns connect with your individual DATL explanations as reviewed in your transcript from the last focus group?

4. How might these similarities, differences, or patterns influence new, collective learning?

5. How might we apply this new learning?

6. How might this discussion have contributed to our collective knowledge?

APPENDIX I

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX I

FOCUS GROUP 3:

DATA ANALYSIS DISCUSSION PROMPTS

1. Would you like to engage in analysis of preliminary codes and transcript data from focus groups 1 and 2 as individuals or together as a group?

2. When looking at the list of codes generated from your focus group transcripts, how might they connect with the contents of the transcribed data? How might we display the connections between the codes and transcribed data?

3. How might similarities, differences, or patterns that you notice contribute to the placement of the codes and data?

4. What are your hunches about what caused these similarities, differences, or patterns?

5. How might these similarities, differences, or patterns influence new learning?

6. How might you apply this new learning?

7. How might this activity have contributed to your collective knowledge?

APPENDIX J

DATA COLLECTED AUGUST-DECEMBER 2015

DATA ANALYSIS CODEBOOK

Cycle 1 Coding Examples		
Codes	*Definition*	*Examples and Data Sources*
Figurative Language used	Figurative language used to express something emotional.	• "I feel smothered and suffocated by all of my roles." (Pre-survey) • "These are the tablets I carry down the mountain." (FG 1) • "It's all a dog and pony show." (FG 2) • "Just a tick on a school's failure list." (FG 2)
Defining roles	Use of language that clarified or defined teacher leadership roles.	• "I'm innovative and have started new things on my campus as a leader." (Pre-survey) • "I see being a teacher leader as a process." (FG 1) • "We lead in the classroom." (FG 2) • "Sometimes I feel like we're asked to be teacher leaders to serve someone else's agenda." (FG 2)
Versus Statement used	Dichotomous language used to express something emotional.	• "Teacher leadership is prevalent, however, administrators do not utilize the expertise of teacher leaders." (Pre-survey) • "Teacher leadership is a good concept, but maybe we have too many leaders." (FG 1) • "Cuz this is how I felt when I first got Nationally Board Certified [motions to TeacherForce's drawing], I was like 'yeah!' But then as you get going, you're like, 'Hmm.'" (FG 2)
Expressing Confidence	Positively connoted language used to express increased efficacy.	• "My experience as a national board candidate helped me become empowered." (Pre-survey) • "Teachers have a lot of power… we do lots to influence the future." (FG 1) • "The bold colors and directionality in the set of images denotes power and confidence." (FG 2)

Expressing Frustration	Negatively connoted language used to express frustration.	• "With a 170 students and a litany of things I'm supposed to do in a school day, I don't have much energy left over." (Pre-survey) • "It seems like other people that come in are saying 'No, we need to do it like *this*' [emphasis added]." (FG 1) • "It's all about what can we create to show other people, and that's where my frustration came because it's like here I am, 'I'm this person' [references TeacherForce's drawing] and I'm this person doing what's right [references JaPe's drawing] and then it's like, all of a sudden, 'no no no no no, you need to have a team norm tab in this [PLC] folder.' We're micro-managed to death." (FG 2) • "It's like, 'OK, here's what the Instructional Specialist agenda is, here's our agenda, here's admins' agenda, here's district's agenda' [large open arm movements and lots of group nodding]. It is RARELY that they ALL [emphasis added] mesh together. And, so that gets really frustrating and I am going rogue." (FG 2)
Call to Action	Use of language that called for some kind of action to make change.	• "Reflecting on teaching practices has prepared me to take on more leadership roles." (Pre-survey) • "I see myself as a leader now too in just bringing people in 'hey come do this.'" (FG 1) • "I *can* [emphasis added] get involved over here [small circle], and I try to, but I don't know how successful I've been." (FG 2)

Cycle 2 Codes		
Codes	*Definition*	*Data Sources*
Parent Code: Collaboration	Reference to teacher leadership connected to collaboration	FG1, FG2, FG3, Post-survey, Leadership Journal
Nested Code: Choice	Expressed frustration at lack of choice	FG2, FG3, Post-survey

Nested Code: Communication	Reference to communication of some kind	FG2, FG3
Parent Code: Disconnection	Expression of some kind of disconnection between desired and experienced realities	FG1, FG2, FG3, Pre/Post-survey, Leadership Journal
Nested Code: Conformity *Sub codes:* Accountability, Reality	Negatively connoted reference to conformity, the realities of conformity, and accountability measures in education	FG1, FG2, Post-survey
Nested Code: District Office	Negatively connoted reference to the CUSD district office and/or administrators	FG1, FG2, FG3, Pre-survey, Leadership Journal
Nested Code: Isolation *Sub code:* Outsider	Reference to being isolated or feeling like an outsider	FG1, FG2, Pre-survey, Leadership Journal
Nested Code: Time	Expression of frustration for having lack of time	FG1, FG2, FG3, Pre-survey, Leadership Journal
Parent Code: Feeling Restrained	Frustration expressed about feeling restrained	FG1, FG2, FG3, Post-survey
Nested Code: Being Transparent	Reference to being transparent or frustration expressed about	FG1, FG2, FG3

Sub code: Invisible	being invisible	
Nested Code: Equity	Expression of the need for equity for students or teachers	FG1, FG2, FG3, Leadership Journal
Nested Code: Trust	Expression of lack of trust or need for trust for teachers	FG1, FG2, FG3, Post-survey
Nested Code: Voice *Sub code:* Insider	Reference to using voice for advocacy or identifying being an insider versus an outsider	FG1, FG2, FG3, Post-survey, Leadership Journal
Parent Code: Power	Expressed feelings of having power	FG1, FG2, FG3, Pre/Post-survey, Leadership Journal
Nested Code: Change	Reference to positive change or forward movement	FG1, FG2, FG3, Post-survey, Leadership Journal
Nested Code: Defined Roles	Identification of a formalized leadership role	FG1, FG2, FG3, Pre/Post-survey, Leadership Journal
Nested Code: Increased Confidence	Expressed increase in confidence	FG1, FG2, FG3, Pre/Post-survey, Leadership Journal
Nested Code: Learning	Reference to teacher leaders as learners	FG1, FG2, Leadership Journal
Nested Code: Superpowers	Reference to teacher leaders as superheroes or having superpowers	FG1, FG2, Post-survey
Parent Code: Innovation	Positively connoted reference	Post-survey, Leadership Journal

	to activities in the study	
Nested Code: Flexibility	Expression of increased freedom or flexibility	Leadership Journal
Nested Code: Thinking	Reference to increased thinking or critical thinking	Leadership Journal
Nested Code: Validation	Reference to feeling heard or acknowledged	Post-survey, Leadership Journal
Nested Code: Vulnerability	Expressed discomfort or comfort about activities in the study	Leadership Journal
Nested Code: Taking Action *Sub code:* Student Connections	Reference to using activities from the study with students/colleagues or taking future leadership actions	Leadership Journal

APPENDIX K

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX K

FOCUS GROUP 3 FOCUSED CODE LIST

1. Isolation

2. Collaboration

3. Equity

4. Autonomy

5. Disconnection

6. Accountability

7. Being invisible

8. Feeling restrained

9. Increased confidence

10. Having super-powers

11. Communication

12. Voice

13. Being an outsider

14. Learning

15. Formally defined roles

16. Trust

17. Being transparent

18. Choice

19. Conformity

20. Reality

21. Time

22. District office

23. Change

24. Power

APPENDIX L

DATA COLLECTED AUGUST-DECEMBER 2015

Progression for Standard #10: Leadership and Collaboration

The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

1. The teacher collaborates with learners, families, colleagues, other school professionals, and community members to ensure learner growth.

1	2	3
	And...	And...
The teacher participates on the instructional team(s) and uses advice and support from colleagues to meet the needs of all learners. (10a; 10n; 10r)	The teacher collaborates with colleagues on the instructional team(s) to probe data and seek and offer feedback on practices that support learners. (10a; 10b; 10f; 10n; 10o; 10r)	The teacher brings innovative practices that meet learning needs to the instructional team(s) and supports colleagues in their use and in analyzing their effectiveness. (10a; 10f; 10i; 10k; 10s)
The teacher participates in school-wide efforts to implement a shared vision and contributes to a supportive culture. (10a; 10c; 10n; 10o; 10p; 10r)	The teacher engages in school-wide decision making with colleagues to identify common goals, and monitor and evaluate progress toward those goals. (10a; 10c; 10l; 10n; 10o; 10p; 10r)	The teacher advocates for continuous evaluation and improvement of the school-wide vision, mission and goals to ensure alignment with learner needs. (10b; 10c; 10k; 10l; 10p; 10s; 10t)
The teacher elicits information about learners and their experiences from families and communities and uses this ongoing communication to support learner development and growth. (10d; 10m; 10q)	The teacher works with families to develop mutual expectations for learner performance and growth and how to support it. (10d; 10g; 10m; 10n; 10o; 10q)	The teacher supports colleagues in developing increasingly effective communication and collaboration with diverse families and community members. (8p; 10a; 10d; 10e; 10f; 10g; 10k; 10m; 10n; 10q; 10r)
The teacher uses technology and other forms of communication to develop collaborative relationships with learners, families, colleagues and the local community. (8h; 10d; 10g)	Working with school colleagues, the teacher connects families with community resources that enhance student learning and family well-being. (9l; 10b; 10d; 10e; 10m; 10n; 10o; 10r)	The teacher advocates in the school and community to meet the needs of learners and their families, and to strengthen the community/ school culture for learning. (10d; 10e; 10k;10l; 10m; 10o; 10p; 10q; 10t)
	The teacher structures interactions between learners and their local and global peers around projects that engage them in deep learning. (5a)	The teacher works collaboratively across the learning community of learners, families, teachers, administrators, and others to support enhancement of student learning, for example by showcasing learner work physically and/or virtually for critique and celebration. (10a; 10d;10e; 10k; 10m; 10n; 10q)
	The teacher builds ongoing communities of support for student learning, through exchanging information, advice and resources with families and colleagues. (9l; 10m; 10n; 10o; 10q)	

Shift to increased ability to:

> **Deepen collaborative engagement with colleagues, learners, and learners' families**

> **Engage in advocacy in varied collaborative contexts**

Developed through professional learning that will, for example:

BUILD SKILLS IN WORKING COLLABORATIVELY with learners, colleagues, and communities

❖ Seek feedback and mentoring to improve active listening, empathy, reframing, and perspective taking
❖ Form a study group to read and reflect on processes that can improve collaboration
❖ Use technology to build collaborative skills locally and globally

STRENGTHEN ANALYSIS AND REFLECTION ON STRENGTHS AND WEAKNESSES IN COLLABORATIVE WORK

❖ Seek feedback from learners on use of strategies to support their collaboration with local and global peers
❖ Keep a reflective journal on insights gained from interaction with colleagues and community members

BUILD PROFESSIONAL AND COMMUNITY CONNECTIONS in support of learner growth

❖ Shadow a community member/colleague who demonstrates advocacy for learners
❖ Participate in a professional organization workshop to build specific leadership skills (e.g., evaluation and problem-solving)
❖ Seek mentoring in ways to support colleagues in working with diverse families

BUILD SKILLS IN IDENTIFYING HOW INNOVATION IN ONE AREA CAN IMPACT OTHER AREAS

❖ Read current literature on organizational development and leadership and explore how to apply these strategies to schools and districts
❖ Form a technology think tank with colleagues to explore uses of new technologies for instructional purposes

2. The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning and to advance the profession.

1	2	3
	And...	*And...*
The teacher leads in his/her own classroom, assuming responsibility for and directing student learning toward high expectations. (9l)	The teacher works with other school professionals to plan and jointly facilitate ongoing learning to better meet diverse needs of learners. (8p; 10a; 10b; 10n; 10r)	The teacher models effective instructional strategies for colleagues, leads professional learning activities, and serves in other leadership roles. (10i; 10k; 10n; 10r; 10s)
The teacher makes practice transparent by sharing plans and inviting observation and feedback. (10r)	The teacher contributes to the growth of others through mentoring, feedback and/or sharing of practice. (10k; 10r)	The teacher motivates colleagues to consider leadership roles. (10k)
The teacher works to improve practice through action research. (10h)	The teacher collaborates with colleagues to jointly conduct action research and share results with the learning community. (10a; 10k; 10n; 10r)	The teacher works independently and collaboratively to generate research and use it as a way to impact education issues and policies. (10a;10h; 10k; 10n; 10r; 10s)
	The teacher contributes to establishing and maintaining a climate of trust, critical reflection, and inclusivity where diverse perspectives are welcomed in addressing challenges. (8p; 10k; 10n; 10o; 10p)	The teacher advocates for learners, the school, the community, and the profession through leadership roles at the school, district, state, and/or national levels. (10e; 10k; 10p; 10s)

Shift to increased ability to:

Assume varied leadership roles	Coach and encourage others, generate research that can influence policy, and advocate through leadership roles

Developed through professional learning that will, for example:

BUILD LEADERSHIP SKILLS

❖ Use structured processes (e.g., workshops, in-person or online courses, webinars, social media) to develop skills related to team work, mentoring, and group facilitation
❖ Join colleagues in a book study related to how to build inclusive structures at the school level

STRENGTHEN ANALYSIS AND REFLECTION ON LEADERSHIP SKILLS

❖ Video record self in group situation, analyze interaction, and set goals for improvement
❖ Seek feedback from critical friend(s) on application of leadership skills

BUILD SKILLS TO CONDUCT AND DISSEMINATE RESEARCH

❖ Use structured input (e.g., workshops, in-person or online courses, webinars, social media) to learn and practice research and presentation skills
❖ Join an online discussion group that explores best practices for how to address various school-level issues

STRENGTHEN ANALYSIS AND REFLECTION ON VARIED LEADERSHIP ROLES

❖ Shadow a leader in the profession and debrief the experience
❖ Explore entry pathways to taking leadership roles in schools, districts, or professional organizations
❖ Use structured input (e.g., workshops, in-person or online courses, webinars, social media) to explore theory and strategies around how to support adult learning

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APPENDIX M

DATA COLLECTED AUGUST-DECEMBER 2015

APPENDIX M

IRB APPROVAL

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Scott Marley
Division of Educational Leadership and Innovation - Tempe
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Scott.Marley@asu.edu

Dear Scott Marley:

On 6/9/2015 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Teacher Leadership: A Little Less Conversation, A Little More Action
Investigator:	Scott Marley
IRB ID:	STUDY00002736
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Adams IRB Artifacts.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Adams Recruitment Email.pdf, Category: Recruitment Materials; • Adams Informed Consent.pdf, Category: Consent Form; • Adams Permission 2.pdf, Category: IRB Protocol; • Adams HRP 503a_2.docx, Category: IRB Protocol;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 6/9/2015.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Alaina Adams
        Alaina Adams
        Jo Shurman