TRUST PRINCIPLES FOR PRINCIPALS: BUILDING RELATIONAL TRUST WITH

TEACHERS THROUGH THE INTERPERSONAL AND TASK-ORIENTED DIMENSIONS

OF LEADERSHIP

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A Dissertation

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by

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ABSTRACT

The trust that teachers have in their principal (teacher-principal trust) is essential for positive school reform. This dissertation explores principal actions associated with increasing teacher-principal trust in elementary and middle schools through three independent studies. Study 1 employs a comparative case study design to examine principal actions associated with teacher-principal trust in three elementary schools that began the school year with similar low levels of teacher-principal trust. This study suggests that principals can enhance trust by acknowledging existing conflicts, prioritizing spending time on building relationships with teachers, and empowering teachers by sharing leadership. Study 2 examines the implementation and effectiveness of *Leading Together*, a unique adult trust-building intervention, during a two-year pilot study with eight schools. This study proposes that implementing Leading Together effectively is associated with increases in teacher-principal trust. Processes needed for successful implementation of the program are discussed. Study 3 examines the relations between principal-driven teacher working conditions and teacher-principal trust in a large sample of fourth through eighth grade teachers in six urban districts across the United States who participated in the Measures of Effective Teaching (MET) study. This study finds that Teacher Leadership, which refers to teacher involvement in decisions that impact classrooms and school practices, is the only working condition significantly and positively associated with teacher-principal trust when baseline trust is included as a covariate. Collectively, each of the studies in this dissertation contribute to the important question of how to enhance teacher-principal trust in schools.

DEDICATION

For my family who always believed in me, always supported me, and who taught me to love learning purely for the sake of learning (and for helping others).

And for my advisor, Dr. Sara Rimm-Kaufman, who showed me the type of researcher, and person, that I wanted to be.

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"Although an analysis of social trust was not initially our primary research priority, we gradually came to recognize this as a powerful concept shaping the thinking and behavior of local school actors…. Trust has important consequences for the functioning of a school and its capacity to engage in fundamental change."
–Bryk and Schneider (2002)

School reform is an issue that is at the forefront of our national consciousness. Standardized testing has illuminated the achievement gaps not only between the socio-economic classes (Aud, Fox, & KewalRamani, 2010), but also globally between our students and those in other developed countries (Martin, Mullis, & Foy, 2008). The most common types of interventions include improving math or reading curricula (Goe, Bell, & Little, 2008; Seethaler & Fuchs, 2005) or establishing new systems for measuring and improving teacher effectiveness (Cohen-Vogel, 2005). However, the magnitude of the effort required to create school change requires us to consider a broader range of options for systemic school improvement. A growing body of empirical research accumulated over the past three decades points to trust as essential for improving schools and enhancing student outcomes (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Hoy, Smith, & Sweetland, 2002; Hoy, Tarter, & Wiskowskie, 1992; Tschannen-Moran & Hoy, 1998, 2000; Tschannen-Moran, 2014b).

Though trust in schools has been defined in a number of different ways (Forsyth, Adams, & Hoy, 2011; Tschannen-Moran & Hoy, 2000), this dissertation follows Bryk & Schneider's (2002) conceptualization of *relational trust*, which is anchored within role relationships in the school community that require reciprocal trust (e.g., principals and teachers). Relational trust can be thought of as the extent to which there is synchrony between each groups' expectations of

people in a specific role (e.g., the principal) and the actions of people in that role. It is based on discernments of social respect, personal regard, role competence, and integrity during the many day-to-day interactions between individuals in different role groups that occur throughout the school year (Bryk & Schneider, 2002; Bryk et al., 2010). Relational trust can be considered an organizational property of schools, as its presence (or absence) has important consequences for the functioning of the school as a whole (Schneider, Judy, Ebmeye, & Broda, 2014). Relational trust influences four organizational conditions that affect student outcomes: (a) orientation to innovation; (b) outreach to parents; (c) professional community and (d) high expectations and high academic standards (Bryk et al., 2010).

An emerging body of descriptive research points to the importance of relational trust in developing shared leadership, professional community, professional capacity, high quality instructional practices and a greater uptake of reform efforts (Cosner, 2009; Louis, 2007; Louis, Dretzke, & Wahlstrom, 2010; Supovitz, Sirinides, & May, 2009). A longitudinal study of over a hundred public elementary schools in Chicago found a relation between high levels of relational trust and improved academic and social-emotional outcomes for students (Bryk et al., 2010). These outcomes have been found to persist even after accounting for the socioeconomic status of the students (Goddard, Salloum, & Berebitsky, 2009). Despite evidence of the important associations between relational trust and school outcomes, less is known about *how* to increase relational trust within a school (Adams, 2008; Ford, 2014).

Principals drive school change (Bryk et al., 2010). Therefore, understanding the processes needed to build relational trust within a school begins with the role of the principal as school leader (Bryk et al., 2010). The principal sets the tone of professionalism and trust in the school building (Tschannen-Moran, 2014b). Additionally, principals set the intellectual and

organizational tone of the school and are responsible for maintaining trusting relationships (Tschannen-Moran, 2014a). Faculty trust in the principal (teacher-principal trust) is especially important for an array of teacher beliefs, perceptions, and attitudes, including school climate, collective teacher efficacy, increased professional community, a teacher "can do" orientation and high academic standards (Bryk & Schneider, 2002; Bryk et al., 2010; Forsyth, Adams, & Hoy, 2011). Teacher-principal trust correlates highly with trust between other role groups in schools, such as teachers and their colleagues (teacher-teacher trust) (Bryk et al., 2010; Tschannen-Moran, 2014a). Therefore, this dissertation mainly focuses on teacher-principal trust, with the idea that enhancing trust between individuals in these two role groups will also enhance relational trust between individuals in other role groups in the school. Understanding *how* principals can build trust with their teachers is a new, and thus underexplored, area of research. The process of building trust within a hierarchical relationship where one person is the supervisor of the other (e.g. the principal- teacher relationship) is complex and requires detailed investigation. This important topic is the focus of this dissertation.

Leadership research in various disciplines (e.g., business, education, organizational theory) provides insights about the antecedents of effective and trusting relationships. Pyle (1973) suggests that trust in leadership arises from an equal focus on the *interpersonal dimension* of leader behavior, which refers to the emphasis leaders put on relationships with others, and the *task-oriented dimension* of leader behavior, which refers to the emphasis leaders put on the responsibilities of their position (e.g., providing effective professional development). For principals to be effective leaders, and garner the trust of their faculty, they must perform well on both the interpersonal and task-oriented dimensions of leadership, while also balancing these two dimensions (Tschannen-Moran, 2014b; Tschannen-Moran & Gareis, 2015).

The first two studies in this dissertation focused on how principals build trust with teachers through the interpersonal dimension of leadership. The third study in this dissertation explored how principal's task-oriented actions were related to teacher-principal trust. Each paper in this dissertation used a unique method for data analysis (e.g., qualitative, mixed-methods, quantitative), which allows for a varied lens in exploring the complex construction of teacher-principal trust.

Paper 1, *Principal Actions Related to Increases in Teacher-Principal Trust: Comparative Case Studies,* presents the findings from an exploratory qualitative study. In this study a comparative case study design was used to examine principal actions related to changes in teacher-principal trust in three schools over one school year. I found that principal actions related to building trust were acknowledging existing conflict, prioritizing relationships, and empowering teachers through shared decision-making. These principal actions are described in detail in this paper. This study describes some actions that principals who are able to build trust are taking. However, this does not necessarily mean that any principal could take these actions and build trust with their staff. A principal acting in these ways without authenticity would most likely not build trust with his or her teachers: it is not just actions that build trust, but also how the action is perceived by the teachers (Hoy & Kupersmith, 1984; Tschannen-Moran, 2014a). Therefore, I next looked to the intervention research to explore whether principals could effectively be trained to build trust with teachers.

Though research from the past two decades positions relational trust as a key factor in facilitating and sustaining school reform (Bryk et al., 2010), there is a paucity of research on programs or interventions that specifically aim to build teacher-principal trust. *Leading Together* (LT) was created by Pamela Seigle and Chip Wood in 2011 to fill this gap. LT is a multi-year

professional development approach that was specifically designed to improve trust and communication among adults in schools. Eight schools participated in a two-year pilot study of LT from 2012 to 2014. In Paper 2, *Building Trust through* Leading Together: *Initial Findings from a Pilot Study of a Teacher and Principal Trust-Building Program*, I present mixed-methods findings from research on this pilot study. In this paper I investigated the implementation of LT and explored the relation between successful implementation and changes in teacher-principal and teacher-teacher trust. Results showed that teacher-principal trust and teacher-teacher trust increased by moderate effect sizes in schools that were implementing LT effectively. This paper describes these changes as well as the types of processes needed for the successful implementation of this adult trust-building intervention. Though this was a small pilot study, these findings suggest that LT has the potential to build teacher-principal and teacher-teacher trust in schools where it is implemented successfully. LT can be thought of as an interpersonal intervention, as it teaches participants how to build trust through their interactions with others.

Though the first two papers focused exclusively on how principals can build trust with teachers directly through the interpersonal dimension of leadership, it is widely accepted that principals build trust with teachers through an equal focus on the interpersonal *and* the task-oriented dimensions of leadership (Tschannen-Moran & Gareis, 2015). Therefore, in the third paper of this dissertation, I explored the relation between the task-oriented dimension of leadership and teacher-principal trust. As the leader of the school, principals play an important role in structuring the teachers' working environment, or *teacher working conditions* (Leithwood, Louis, Anderson, & Wahlstrom, 2004). Thus, the task-oriented dimension of leadership can be conceptualized as the structuring of teachers' working conditions (Bryk et al., 2010; Leithwood et al., 2004; Tschannen-Moran, 2014b).

Several teacher working conditions have been the focus of attention among educational policy makers because of their relation to teacher satisfaction, teacher retention, and student outcomes. These teacher working conditions are: community support and involvement, facilities and resources, instructional support, manageable demands on time, professional development, student conduct management, and teacher leadership (Johnson, 2006; Johnson, Berg, & Donaldson, 2005; Swanlund, 2011). To date, little is known about how these seven teacher working conditions independently contribute to teacher-principal trust.

Therefore, in Paper 3, *The Role of Teacher Working Conditions for Building Teacher-Principal Relational Trust*, I quantitatively investigated the relation between teacher working conditions and teacher-principal trust to identify potential points of intervention for improving teacher-principal trust. Participants were 1,625 fourth through eighth grade teachers in 229 schools in six large urban districts enrolled in the Measures of Effective Teaching (MET) study. Structural equation modeling was used to examine the associations between teacher working conditions in spring 2010, and teacher-principal trust reported in early summer 2011. I found that *teacher leadership*, which describes teacher involvement in decisions that impact classrooms and school practices, made significant independent contributions to teacher-principal trust the following year. Teacher leadership explained 25 percent of the variance in teacher-principal trust, indicating a sizeable contribution. Findings showed no statistically significant relation among the other six teacher-working conditions and teacher-principal trust. These findings suggest that principals who focus their efforts on improving the quality of teacher leadership in their school foster teacher-principal trust. Given recent work establishing the importance of relational trust for enhancing teacher and student outcomes (Bryk et al., 2010), this finding

presses for developing and evaluating approaches that teach principals to enhance teacher leadership in their schools.

Over the past 25 years, relational trust has emerged as a critical ingredient for school change (Bryk et al., 2010; Forsyth et al., 2011). Principals who build trust with their faculty are better-equipped to address current issues facing schools (Tschannen-Moran, 2014a). However, though many studies point to the importance of relational trust in schools, less is known about how principals can build trust with their teachers. Taken together, the body of work presented in this dissertation provides information about how principals can build trust with teachers by focusing on both the interpersonal and task-orientation dimensions of leadership. This work is exploratory in nature, which is needed at this point in time.

This work contributes to the field by expanding upon the scarce literature on both adult trust-building interventions and the relation between teacher working conditions and teacher-principal trust. In addition to adding to the research literature, this work is valuable as it provides empirical evidence that can be used to inform program development or principal preparation programs.

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PRINCIPAL ACTIONS RELATED TO INCREASES IN TEACHER-PRINCIPAL TRUST:

COMPARATIVE CASE STUDIES

School reform is an issue that is at the forefront of our national consciousness

(Tschannen-Moran & Gareis, 2015). The most common types of interventions that schools are

trying focus on improving math or reading curricula or establishing new systems for measuring

teacher effectiveness (Goe, Bell, & Little, 2008; Seethaler & Fuchs, 2005). However, the

magnitude of the effort to create school change requires us to consider a broader range of options

for school improvement (Bryk & Schneider, 2002). Building *relational trust* within schools

emanates as a factor that holds promise for improving schools and enhancing student outcomes

(Bryk & Schneider, 2002; Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Goddard,

2003; Hoy, Smith, & Sweetland, 2002; Hoy, Tarter, & Wiskowskie, 1992; Robinson, 2010;

Tschannen-Moran & Hoy, 1998, 2000; Tschannen-Moran, 2014a, 2014b).

Relational trust describes the agreement between each group's understanding of the

responsibilities of their role in the school and their beliefs about the responsibilities of others in

different role groups (Bryk et al., 2010). For example, when a teacher holds views about his or

her own responsibilities and the responsibilities of the principal that are coherent with those held

by the principal, then there is a match in perceived values, which begins to build a foundation for

the growth of trust (Cranston, 2011). Relational trust can be thought of as the foundation of

school effectiveness (Cunningham & Gresso, 1993), as it fosters a context that supports positive

school climate, teacher professionalism (Tschannen-Moran & Hoy, 1998), professional learning

communities (Cranston, 2011) and student achievement (Goddard, Tschannen-Moran, & Hoy, 2001).

The trust that teachers have in their principal (*teacher-principal trust*) is especially important in supporting school change, teacher collaboration, and organizational commitment (Hoy et al., 2002; Hoy, Tarter, & Kottkamp, 1991; Tarter & Hoy, 2004). Teacher-principal trust is essential for developing shared leadership, professional community, high quality instructional practices, academic press, professional capacity and the uptake of reform efforts (Cosner, 2009; Louis, 2007; Louis, Dretzke, & Wahlstrom, 2010; Supovitz, Sirinides, & May, 2009; Tschannen-Moran & Gareis, 2015). When teachers trust their principal they are more willing to put in higher levels of effort into their teaching, try new innovations in teaching and collaborate more to solve the challenging problems of schooling, all of which relate to productive and healthy school environments and positive changes in student outcomes (Bryk et al., 2010; Chughtai & Buckley, 2009; Forsyth & Adams, 2014; Handford & Leithwood, 2013; Leithwood & Seashore-Louis, 2012; Notman & Henry, 2011; Tschannen-Moran, 2003, 2009, 2014a, Zeinabadi, 2014). In the absence of trust, people tend to behave cautiously and are less willing to take risks, making teachers more likely to disengage from the educational process and less likely to try new reforms, both of which can negatively impact student learning (Tschannen-Moran & Hoy, 2000; Tschannen-Moran, 2014b).

Though the importance of teacher-principal trust for school reform has strong support in the literature, less is known about the mechanisms for building teacher-principal trust (Tschannen-Moran & Gareis, 2015). In this study we were interested in exploring the specific actions that principals can take to purposefully build trust with their teachers, especially in schools with initial low levels of teacher-principal trust. The goals of this paper are to add to the

literature on relational trust in schools and to provide some insights for principals who are struggling to build trust with their teachers.

Literature Review

This literature review focuses on relational trust between teachers and principals and on the principal's role in trust formation.

Teacher-Principal Relational Trust

Teacher-principal trust is essential to a school's task achievement, as it has direct and indirect benefits for both organizational and individual performance (Tschannen-Moran & Gareis, 2015). Trust has many different definitions across education, psychology, and organizational theory literature (Dirks & Ferrin, 2002; Fukuyama, 1995; Tschannen-Moran & Hoy, 2000). The conceptualization of trust used in this study is that of *relational trust*, proposed by Bryk and Schneider (2002). According to this framework, there are four determinants that lead to relational trust: *respect, regard, integrity,* and *competence*.

Respect refers to the conversations that occur within a school community, and is created through respectful exchanges, the valuing of other's opinions, and timely communication. Respectful exchanges are conversations in which both parties demonstrate their genuine interest in listening to one another and consider their respect for each other in future actions. *Regard* means caring for the other person beyond the workplace, or acting in a way that reduces the other person's sense of vulnerability. *Integrity* refers to a person acting in a way that aligns with their spoken goals, doing what they say they are going to do, and taking responsibility for their actions. *Competence* describes the perception an individual has that another person has the ability to perform his or her job well. When individuals discern competence they consider the

extent to which colleagues have the knowledge, skill, and/or technical capacity to both manage

routine affairs and to deliver on their intentions and promises (Bryk et al., 2010).

These determinants are important to consider when thinking about trust between teachers

and principals. Principals show *respect* toward teachers by listening to teachers' concerns,

showing they value teachers' opinions, and showing they value teachers through open, honest,

and timely communication. Principals show *regard* for teachers by acting in a way that reduces

the teachers' sense of vulnerability (e.g., by being fair and not showing favoritism). If a teacher

feels disliked by their principal, they are unlikely to trust him or her (Tschannen-Moran & Hoy,

2000). Principals show *integrity* by acting in a way that aligns with their goals, doing what they

say they are going to do, and taking responsibility for their actions. Teacher-principal trust is also

highly dependent on the teacher's perception of the competence of their principal in their role as

a school leader (Handford & Leithwood, 2013). Teachers believe a principal is *competent* when

they believe the principal has the knowledge, skill, and/or technical capacity both to manage

routine affairs and to deliver on their intentions and promises (Bryk & Schneider, 2002). These

four determinants of trust tend to vary together (Bryk et al., 2010). Thus, teachers reporting high

levels of trust in their principal are likely to report that the principal is competent, has integrity,

and treats them with regard and respect, whereas teachers reporting low levels of trust in their

principal are likely to report a lack of all of these qualities.

Relational trust is not static. Trust is an emotional phenomenon (Beatty & Brew, 2004),

which can be "altered instantaneously with a simple comment, a betrayed confidence, or a

decision that violates the sense of care one has expected of another" (Tschannen-Moran & Hoy,

1998, p. 335). The dynamic nature of trust means that specific, consistent, principal actions have

the ability to change the trust that teachers have in their principal (Tschannen-Moran, 2014a).

Principal's Role in Trust Formation

There exists a hierarchical relationship between the principal and the teachers (Bryk et al., 2010; Price, 2012). Trust between principals and teachers is asymmetric, and the principal tends to act as the driver for establishing an atmosphere of trust (Bryk et al., 2010, Bryk & Schneider, 2002; Tschannen-Moran, 2014). Researchers have found that principals influence teacher attitudes and behaviors directly, which in turn, influences students' engagement and achievement outcomes (Bryk et al., 2010; Kelley & Finnegan, 2003; Spillane & Healey, 2010). Empirical evidence suggests that the degree of trust that teachers feel toward their principal depends on the behavior of the principal (Tschannen-Moran & Hoy, 1998).

<div align="center">

Theoretical Framework

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Figure 1 presents the theoretical framework used in this study. As the leader of the school, the principal is responsible for building and sustaining trusting relationships with teachers (Bryk et al., 2010; Tschannen-Moran, 2014a). The principal can do this by being respectful to teachers, showing that they care for teachers as individuals, acting in ways that are aligned with his or her communicated values, and demonstrating competence in completing the tasks of the principal (Bryk & Schneider, 2002; Bryk et al., 2010). Though principal leadership drives teacher-principal trust, there is a bidirectional association between these two constructs because high levels of teacher-principal trust make it more likely that teachers will consider multiple reasons for principals' actions, thus making it easier for principal actions to contribute to building trust (Tschannen-Moran, 2014a). Teacher-principal trust is considered to be dynamic, and thus able to be changed by the actions of the principal (Tschannen-Moran, 2014a).

In this study we wanted to understand the specific principal behaviors, or actions, that were related to changes in teacher-principal trust in schools with initial low levels of teacher-

principal trust. We conducted comparative case studies of schools participating in a two-year study of a new professional development program to explore the answer to our research question: What specific principal actions are related to increases in teacher-principal trust in schools that had low initial leavels of teacher-principal trust? Though trust is reciprocal in nature, the principal's contributions to teacher-principal relational trust are the main focus of this study, as principals have greater leverage in the extent to which they initiate and sustain trusting relationships with teachers (Bryk et al., 2010; Price, 2012).

Method

This study is embedded in the first year of a two-year pilot study of a new professional development approach aimed at building adult community and distributing leadership in schools that took place between 2012 and 2014. Ten schools in the New England region participated in this pilot study. The approach provided a valuable context for examining principal actions that build teacher-principal trust, as all the principals involved in the study were interested in improving the adult community and distributing leadership at their school. They were also actively engaged in the research effort. To understand how teacher-principal trust changed over the course of one school year, we employed a comparative case study design to examine three schools participating in the pilot study. The comparative case study design allowed us to conduct an in-depth analysis of a phenomenon bounded by time and location (Hancock & Algozzine, 2006), and to focus on the participants' context-specific behaviors (Mayer, Donaldson, LeChasseur, Welton, & Cobb, 2013) that led to changes in teacher-principal relational trust. Within the case studies, we used an analytic induction approach (Glaser & Strauss, 1967) to posit specific principal actions related to teacher-principal trust.

School Selection for Case Studies

The *comparable-case selection* method (Goetz & LeCompte, 1984) was used to select schools that had similar relevant characteristics. We considered several factors in selecting the schools. First, we limited our study to schools that started off the school year with low teacher-reported levels of teacher-principal trust, which resulted in four schools. Second, we looked at school characteristics, including school and teacher demographics, school size, and school type, due to the importance of school context when thinking about the ability of the principal to build trust (Bryk et al., 2010; Rumberger, 1995). Three of the schools, which we have dubbed Ash, Oak, and Elm, had similar characteristics across all of these different areas (see Table 1). We chose to focus this comparative case study on these three schools, as this purposive sampling (Miles & Huberman, 1994) allows for a greater ability to make generalizations about principal actions that are related to changes in teacher-principal trust.

Participants

Study participants consisted of the principal of each school, a group of three to five teachers selected by each principal to participate in the professional development program, and three teachers at each school who did **not** participate in the professional development program (*n* = 22). The principals had on average 5.3 years of experience as a principal at their current school (range = 2-9 years). The teachers were 95% female, and 100% Caucasian. The average age of teachers was 45.8 years (*SD* = 8.2 years). Ninety-five percent had Master's degrees. All had taught for at least six years (*M* = 17.05, *SD* = 7.5, Range = 6 − 38 years). Thirty-seven percent had taught at their current school for 5 to 9 years and 63% had taught at their current school for 10 to 15 years. Sixteen percent of teachers taught specialized subjects (e.g., reading only) across grade levels, while the other 84% taught in self-contained classrooms in grades 1 through 5.

Data Sources and Collection

Quantitative and qualitative data collection occurred concurrently. Quantitative surveys were given at two time points – at the beginning (August, 2012) and end of year (May, 2013). Surveys measured teacher-principal trust, as reported by teachers, through the Teacher-Principal Trust scale, a six-item teacher report questionnaire (Consortium on Chicago School Research, 2011). Teachers reported both on how they felt respected by their principal (e.g., "The principal has confidence in the expertise of the teachers ") and how they felt about their principal (e.g., "I trust the principal at his or her word"). Teachers rated each item on a four-point scale indicating how much they agreed with the item (1 = strongly disagree; 4 = strongly agree) or to what extent they agreed with the item (1 = not at all; 4 = to a great extent). The survey was given to all teacher participants ($n = 19$). Internal consistency reliability was $\alpha = .92$. Teacher scores were averaged to create an aggregate teacher-principal trust score for each school. Survey data gathered in August 2012 were used to select schools for the comparative case study (as described previously) and survey data gathered in June 2013 were used as a source of triangulation in the case study analysis. Surveys were also used to examine teacher-principal trust trajectories over time.

Data sources for qualitative analysis included interviews and observations. Phone interviews were conducted with the principal and two teachers in August 2012 and June 2013. An additional interview was conducted with one randomly-selected teacher from each school in April 2013. Interviews included questions targeted teachers' feelings of trust in their principal (i.e., In general would you say that you trust your principal? Why or why not? Have these feelings changed throughout the year?). In-person interviews were conducted with the professional development facilitators in July 2012, November 2012, and April 2013. These interviews included questions focused on facilitator observations of changes in adult community

(i.e., "What did you observe today that suggests improvement in the adult community at these schools since the summer? Feel free to be specific about the individual schools."). All interviews lasted between 15 and 45 minutes, and were digitally recorded. All interviews were transcribed verbatim.

Observations included both researcher observations of the professional development training, and facilitator observations conducted within the schools. Observations conducted by members of the research team typically lasted for eight hours. Additionally, facilitators visited each school twice, and observed classrooms and faculty meetings. These observations typically lasted a half to a full school day, plus after-school meetings. Facilitators wrote notes about their observations and summaries of events they had witnessed, and sent these to the research team.

Analytical Procedures

First, the data were organized into a case study database (Yin, 1994) for each of the selected schools. This involved reading field notes, observation notes, and interview transcripts. The full scan of the data allowed for an identification of major themes and categories related to principal actions and teacher-principal trust (Corbin & Strauss, 1990). This was an iterative process, as the identification of each theme led to a re-examination of the database for each school to search for either confirmatory or contradictory examples (Conrad, 2001). The consistency of these themes was examined through triangulation of multiples sources: interviews from multiple people at the same time point; interviews from the same people at multiple time points; and observations at multiple time points (Creswell, 2008). These themes were then synthesized across data sources and used to write detailed and comprehensive case studies that included narratives of each school (Ylimaki, 2006).

Analytic induction, which involves inferring conclusions from a systematic examination of similarities and differences between various social phenomena (Glaser & Strauss, 1967), was used to analyze the case studies. Following Cressey's (1953) procedure for analytic induction, we started with one case study and used it to theorize about principal actions that were related to teacher-principal trust. We then examined principal actions in the second case study and compared these to our findings from the first case study. We then re-examined the first case study looking for themes inferred from the second case study. We then repeated this comparative process with the third case study (Yan & Gray, 1994). Two other members of the research team provided interpretation checks and served as peer examiners for these conclusions (Creswell, 2008).

To honor the anonymity and confidentiality commitments made to study participants, we attribute quotations to members of broad groupings (i.e., principals, teachers, facilitators). We also changed the gender of some individuals to disguise their identity.

Findings

The three schools in this study appeared to have similar reported low levels of teacher-principal trust at the beginning of the 2012 school year, but exhibited different trajectories over time (Figure 2). There were marked differences in reported teacher-principal trust trends at each school. Teacher-reported teacher-principal trust increased at Ash Elementary, and decreased at the other two schools. In August 2012, 33% of teachers at Ash, 43% of teachers at Oak, and 40% of teachers at Elm reported general low levels of trust in their principal (average scores less than 3 on the teacher-principal trust measure). By contrast, in May 2013, only 14% of teachers at Ash reported low levels of trust in their principal, while these percentages had risen to 71% and 60% at Oak and Elm respectively.

Comparative case study analysis led to the generation of hypotheses for these different trajectories. We suggest three themes related to principal actions that are related to changes in teacher-principal trust: (a) acknowledging existing conflict, (b) prioritizing relationships and (c) empowering teachers through shared decision-making. In the following sections we examine the actions of principals in each school in relation to these three themes. We also explore how teacher-principal trust shifted in each of these three schools.

An Initial Climate of Distrust

The principals at Ash, Oak, and Elm differed in age, gender, the amount of time they had been at their school, the amount of time they had been in their current position, and their professional background. Despite these differences, teachers at all three schools reported similar reasons for the reported low levels of teacher-principal trust at the beginning of the school year: outside pressures on schools that were causing high levels of stress. In particular, teachers tended to feel like "the standard movement is just doing a horrendous job in undercutting building community in classrooms and in schools" (Teacher Interview, August 2012). They felt like the push towards standardization was taking away their autonomy as teachers:

> We had a new superintendent three years ago and we were pretty much a district where it was not so discretely top down leadership. But we had a lot of autonomy… And we've always had our objectives, but how we meet them is up to us. And with this new leadership, not only our new superintendent, but the new state standards, we have really felt that we've been under pressure to make everything the same. To standardize everything. That there's been this push to go back to the out-of-the-box, standard, textbook kind of learning and everyone has the same test which really goes against what we believe good education is. So there's been a lot of frustration, a lot of feeling really

overwhelmed, a lot of feeling that there's things being jammed down our throats. So

there's a lot of discord in our school and people have been trying to find ways to live with

it and tweak it so we can find ways to still be who we are. (Teacher Interview, August

2012)

At all three schools, the teachers were feeling a lot of pressure from outside sources to

focus on standardized tests, which went against their beliefs about what teaching should be

focused on, and they did not feel like the principal was protecting them from this external

onslaught. Some teachers lost respect for their principal due to what they viewed as his inability

to stand up for the teachers and students in the school. Instead of helping protect teachers from

high levels of stress, the principal, who was also dealing with high levels of pressure from the

district, had increased the number of initiatives that teachers were required to participate in. In

addition to the new teacher evaluation system, which was a requirement being rolled out in the

state, teachers were also required to participate in "new math PD, new assessment and data

teams, new Anti-Bullying program, etcetera" (Facilitator Observation Notes, Fall 2012).

Additionally, teachers at all schools reported that they noticed that their principal was

feeling stressed, but that that stress was negatively influencing his or her relationship with the

teachers at the school: "When [the principal] is overstressed or feeling somehow threatened or at

risk, he might not be at his best and may do things that erode the trust that others have in him"

(Teacher Interview, Fall 2012). Several teachers reported feeling like their principal would make

negative comments to teachers, or make decisions about the school that did not make sense to

them, and which were making them lose confidence in the competence of their principal.

In sum, the increased levels of stress on both teachers and principals from external

sources appear to have adversely impacted the trust relationships between teachers and their

principal at all three elementary schools at the start of the school year in 2012. However, by the

end of the school year, teacher-principal trust had significantly increased at Ash Elementary

School, whereas it had declined at both Oak and Elm. In the following sections we explore the

differences in principal actions between the principal at Ash and the principals at Oak and Elm.

Acknowledging Existing Conflict

At Ash Elementary school, the principal openly addressed past conflict with staff

members. He took an issue that specific teachers had complained about, expressed it openly in a

staff meeting, and asked teachers how they were feeling, and what he should do to address this

issue. One teacher explained that in addressing this conflict, the principal "really opened himself

up, and put himself in a vulnerable position. To do that, I thought took a lot of courage and also

showed that he had a tremendous amount of trust in us" (Interview, March 2013).

At Oak and Elm, the more common motto of "ignore it and it will go away", seemed to

have been followed. Though there were conflicts that arose at these schools, the principals did

not address them directly. Teachers expressed that conflicts with the principal from the previous

year had never directly been confronted, and that because of that, there was a lot of distrust

simmering under the surface (Teacher Interview, August 2012). A teacher at Oak noted the

avoidance of confrontation:

> [We] haven't gotten to that point of "How do we deal with negative interactions that are
>
> against the grain of what we're trying to develop? And how are we going to deal with
>
> that?" So it's there, and I guess it always will be there in any group of people anyways,
>
> but we don't really have mechanisms in place to address it. (Interview, June 2013).

At Ash Elementary the principal specifically took action to address both prior and current

conflicts openly with the teachers at his school. He showed teachers that he cared about them as

individuals by choosing to address topics that were of issue to them. He showed teachers that he

respected them by openly communicating with them about the conflict. He showed that he had

integrity by asking teachers what to do about a conflict and then following their advice. He also

showed teachers that he was competently able to settle conflicts, part of the role of the principal.

By choosing to ignore both prior and existing conflicts at Elm and Oak, the principals of these

schools lost a valuable opportunity to build trust with their teachers.

Prioritizing Relationships

Focusing on relationships was a main priority of the principal at Ash Elementary. He

explained that he believed "it is really crucial to set aside time for reflection and renewal and

work on relationships within the school setting" (Interview, August 2012). This principal thought

that relationships were central to positive student outcomes:

> I have a deep commitment to the notion that when children and staff members feel
>
> comfortable in their school setting, feel like it's safe to take risks, feel like it's okay to
>
> make mistakes, feel like they're safe within the context of this school, you create an
>
> environment where teacher collaboration around curriculum and student learning can
>
> really take off. Now this doesn't mean that you don't have to put things in place for
>
> those things to happen and make sure that there are structures in place for building a
>
> strong academic program but I believe that really these relationships are fundamental for
>
> that magic to happen. That is something philosophically that I believe in and I have seen
>
> it in action in my own teaching. (Interview, August 2012)

He believed that relationships between staff members would grow stronger when teachers and

principals had "opportunities to share [their] inner lives as coworkers" (Principal Interview,

August 2012). He thought that carving out time to "laugh and share and be creative and be reflective… really allowed us to deepen our working relationships" (Interview, August 2012).

This principal consistently devoted time at school specifically to relationship building. Multiple teachers reported that he used one full staff meeting a month to do relationship building work.

> We did a lot of activities where people had to communicate with one another in small groups, and often with people who they didn't normally get a chance to talk to. And so you build that trust by having to share with those people, talk in a way that you're not used to talking. Listen with people you're not used to listening to, and that builds relationships. And sometimes you have to set that up artificially, because people are not working in the same circles during the school day, they don't have that contact with one another. (Teacher interview, June 2013)

At Oak and Elm, the principals expressed that they cared about building relationships: "If adults are working and learning together it just creates a climate that is good for student learning" (Interview, August 2012). However, their actions did not always reflect this belief. A teacher at one of the schools reported on an interaction with the principal in which valuing relationships with teachers did not seem to be of huge import:

> So when I went earlier in the year and said [to the principal]: you need to know people are feeling extremely stressed, tension is very high, when you drop demands on us and deadlines and aren't understanding of the stress we're already under, it's creating a lot of tension and making things worse. And he said he appreciated my input, but in the group committee meeting it was like it had never been given. And later in the group setting where I say publicly, or in general, there is clearly an amount of stress in the building

about deadlines and confusion about things. There's a retort of, well that's what teaching

is about these days and people are going to have to accept it. So that didn't feel like he

was really wanting input or valuing information that I felt was critical to have for things

to go better in the building. (Interview, March 2013)

At Ash Elementary the principal specifically took action to prioritize building

relationships between faculty members. He showed teachers that he cared about them as

individuals by demonstrating that he cared about their happiness. He demonstrated integrity by

telling teachers that he thought building relationships was important, and then he made sure to

provide time for building relationships. At Oak and Elm, the principals expressed that they

thought it was important to build relationships, but then did not provide any time for this to

occur. In doing this, teachers could perceive lack of integrity, as the principals did not do what

they said they were going to do.

Empowering Teachers through Shared Decision-Making

The principals at all three schools reported a strong belief in shared, or distributed

leadership. However, each principal approached sharing leadership differently. At Ash

Elementary, the principal believed that distributed leadership meant involving the teachers at the

decision-making level:

[It] is really important to have as much shared leadership as possible and to make use of

the tremendous people resources in the building who can really help with the running of

the school and help together shaping the schools direction…. When teachers are involved

in making powerful decisions on how a school is run then they are more invested in the

school and the philosophy and making things happen. I just think that there are so many

different ways … that teachers can be involved in the functioning of the school.

(Interview, August 2012)

The principal consistently acted in accordance with these beliefs. He gave control of the

preparation and leading of certain staff meetings to teachers. He also asked teachers for their

opinions on important school matters, and listened to their advice. During a lunch break at a

professional development training, the principal of Ash Elementary asked some of his teachers

their thoughts about what collaboration should look like within their school. "I really want your

opinion. Do you think that collaboration should be top-down and enforced by the principal, or if

it should radiate out from the teachers?" (Field Notes, April 2013).

A teacher explained that the principal acts the same way in the school "he invites the staff

to give their opinion and work toward a solution" (Interview, March 2013). One example of this

is when the principal included the teachers in an activity to design staff guidelines. One of the

teachers described this process:

One of the things we've actually been working on are guidelines for how we want to

communicate with each other whenever we work as adults, whether it's in a committee

meeting or a staff meeting, or professional development work. And we've had some

conversations. We tend to break up into random small groups, brainstorm ideas, talk

about what's really important. And then we come together as a larger group and share

those ideas. We're now at the point where we're ready to put together a document…. We

have collected information teachers have written, because one of the activities we now do

at our staff meetings is journal also. We've collected a survey after we did a number of

conversations and group sharings. We now have all of that written piece. Now a smaller

committee is going to meet and come up with a draft document that we can then bring

back to the school. We're at the point where we're just developing that document.

(Interview, March 2013)

At Oak and Elm Elementary, the principals viewed distributed leadership in a more

hierarchical, top-down, way. In their view, distributed leadership involved having teachers take

the lead on different presentations. However, the decision-making power still rested with the

principal:

> I've structured time with the staff to provide them with authentic opportunities to have
>
> learning experiences as adults. Sometimes it's received better than others because they
>
> are invested in it or not invested in it. You know, time of the day, 2:30 in the afternoon,
>
> if I ask them to be professional and read an article and reflect on it. Sometimes the
>
> response isn't really respectful and it's frustrating. But having a group of people with me
>
> building this from the ground up so it's not all on me so I can turn to one of these
>
> individuals that has been to this workshop with me and say alright today I need you to be
>
> the leader and I may be better received, it would appear, because I am always going to be
>
> viewed as the supervisor, it's just something he is making us do. But if a peer is doing it
>
> and a peer is engaged in it then there is that pressure that builds up, I want that, a healthy
>
> pressure that this is the way we do things, and need to get on board with it. (Principal
>
> Interview, August 2012)

This view of distributive leadership sometimes led to the principal making final decisions that

made teachers feel disempowered. One teacher explained:

> [In] a committee meeting where we specifically as a committee made a decision about a
>
> way to proceed on a program initiative and [the principal] said ok we're going to go
>
> ahead and do it like this and turned around two days later and did something completely

different that he had wanted to do in the first place and nothing to do with what the

committee had decided. So then again, it was like wait a minute, you asked us, we

discussed, we came to consensus, we made a decision and then all of the sudden it

seemed that there was never a process and we never made a decision. So if you are doing

that, people are going to be willing to help with that leadership…. I felt not valued.

(Interview, March 2013)

As noted in this quote, the principal expressed a desire to share leadership, but then ended up

making decisions independently without considering the teachers' opinions that he had solicited.

At Ash Elementary the principal acted to share leadership with his teachers by involving

teachers in the decision-making process and then taking the teachers' recommendations into

account when making decisions. He showed teachers that he cared about them as individuals by

showing that he cared about their thoughts. He showed teachers that he respected them by asking

for their opinions and then taking their advice into consideration. He showed that he had integrity

by asking teachers for their opinion and then following their advice. The principals at Oak and

Elm said that they valued shared leadership, but did not actually share any decision-making

power with the teachers. At these schools the principals showed a lack of regard for teachers'

feelings and a lack of respect for teachers' opinions. The differences in actions taken by the

principal at Ash compared to the principals at Oak and Elm were related to changes in teacher-

principal trust at the different schools.

Changes in Teacher-Principal Trust

The principal at Ash Elementary: consistently made himself vulnerable by

acknowledging and addressing conflicts; prioritized relationships with teachers, and devoted

time for building these relationships; and empowered teachers by consistently giving them a

voice in important school decisions. Teachers at Ash noticed these actions, and expressed more

trust in their principal:

> I think overall there is a more positive feeling toward our administrator than earlier in the
>
> year. I think people are aware that [building relationships] is something that he thinks is
>
> important, and it's a good thing for all of us. Knowing that he is making an effort in that
>
> direction, I think, means something to people. There is less negative talk. (Interview, June
>
> 2013)

This increased level of trust acted as a buffer against stress induced by the increasingly intense

state and district requirements. One teacher explained how trust in the principal influenced the

implementation of a new evaluation system required of all teachers in the state:

> I think overall [relational trust is] quite strong in terms of people feeling like they can to
>
> go to each other with problems and issues as well as to our administrator. We have a new
>
> evaluation system that we piloted this year. And part of what we all agreed to at the
>
> beginning of the year was that, you know we tell children all the time that we learn by
>
> making mistakes, and we as adults do as well, so that even though we were being
>
> evaluated by our educator, we trusted him to know and to be responsive to if we make a
>
> mistake, help us fix it without feeling like we would be written up or have a bad report or
>
> a bad evaluation and just that it's an ongoing process, and I think that kind of trust is
>
> huge because people's jobs could be on the line. I think for the most part people do have
>
> that trust in our administrator, that they can take risks even in their teaching. If things
>
> don't work out quite the way they expected, they'll have his support. (Interview, June
>
> 2013)

In contrast, the principals at Oak Elementary and Elm Elementary had a more difficult time relinquishing control and overcoming a hierarchical top-down orientation. Though both principals expressed a desire to have distributed leadership, they retained control. As the leader of the school, these principals did not show vulnerability, but instead ignored issues that had led to prior conflicts. Accordingly, the issues that had cause these conflicts were still influencing teacher-principal trust. One teacher explained that she is hearing more and more teachers saying "I can't trust [the principal]" (Interview, June 2013). Another teacher explained that the relationship with the principal is an added stressor for teachers, who are already dealing with trying to implement Common Core and learning about a new teacher evaluation system (Teacher Interview, March 2013).

Discussion

The schools in this study shared many common attributes. Despite the similar contexts of the schools and the similar low-levels of teacher-principal trust at the beginning of the school year, teacher-principal trust increased over the year at one school and decreased at the other two schools. This study explored the principal actions that might be related to these changes in teacher-principal trust. Our findings illuminate three specific principal actions that related to increased teacher principal trust:

1) The principal acknowledged existing conflict. Conflict arises from trust violations in the sense of care that one has expected from another, and leads to distrust (Tschannen-Moran & Hoy, 2000). Distrust is self-perpetuating and impedes the communication that could help to overcome it (Govier, 1992). Distrust also leads to feelings of anxiety and insecurity, which lead people to use their energy to monitor the behavior and motives of others (Fuller, 1996). The principal at Ash Elementary acknowledged existing conflict by bringing teachers who distrusted

him to a community-building retreat. This principal also addressed conflict within the school,

making himself vulnerable to the teachers. Research shows that without vulnerability, there is no

need for trust (Tschannen-Moran & Hoy, 1998). By making himself vulnerable, the principal is

showing that he trusts his teachers, even if they do not trust him. The principals at the other

elementary schools did not address distrust at their school or at the professional development

retreats.

   2) The principal prioritized relationships. When people feel confidence in their trust

relationships, their confidence is based partly on the assumption that the other party genuinely

cares about them and feels concerned for them. In turn, the perception of caring and concern

leads to mutual feelings of positive regard (McAllister, 1995; Tschannen-Moran & Hoy, 2000).

However, the hierarchical nature of the teacher-principal relationship can interfere with the

development of trust. The teacher is in a more vulnerable position because the principal plays the

role of evaluator in their professional life. This unequal balance of power influences trust

differently for the different parties involved (Tschannen-Moran & Hoy, 2000). As the person in

power, it is possible for a principal to both dislike a teacher personally, and still trust his or her

professional competence (Gabarro, 1978). However, even in the presence of principal's trust

toward a teacher, if a teacher feels disliked by their principal, the teacher is likely to feel

distrustful of the principal (Tschannen-Moran & Hoy, 2000). There seems to be a positive

relationship between a principal focusing his or her energy on building relationships (showing

the teachers that they are cared about as people), and positive increases in teacher-principal trust.

The principal at Ash Elementary consistently dedicated time to building relationships with

teachers. This finding fits the research that has shown that in hierarchical relationships, such as

the ones between teachers and principals, there are differences in expectations of trust

(Tschannen-Moran & Hoy, 2000). Blake and MacNeil (1998) found that in schools, principals based their trust on teacher commitment and competence, while teachers trust in the principal was dependent on kindness, friendliness, and integrity.

     3) The principal empowered teachers through shared decision-making. At Ash Elementary the teachers reported feeling empowered because they were being asked to partake in the decision-making process. At the other two schools, the principals delegated some control to the teachers, but the decision-making power still rested with the principal. This finding is supported in the literature. Business research has shown that managers can build trust by delegating control and allowing teachers to participate in school-level decision-making (Whitener, Brodt, Korsgaard, & Werner, 1998). Smylie, Mayrowetz, Murphy, and Louis (2007) proposed that the relationship between the development of distributed leadership and trust is dynamic and mutually reinforcing. They found that the trust relationship between teachers and principal was of key importance to the development of distributed leadership. When distributed leadership is planned, the principal's decisions are more transparent, which helps generate teacher trust in the principal (Mascall, Leithwood, Straus, & Sacks, 2008). Teachers who perceived that they were empowered in their school had higher levels of trust in their principals (Moye, Henkin, & Egley, 2005).

     These three principal actions are consistent with the business literature, which suggests five behaviors that managers can engage in to cultivate trust: consistency, integrity, concern, communication, and sharing control (Whitener et al., 1998). They are also consistent with recent research on actions that principals can take to build trust with teachers (Forsyth, Adams, & Hoy, 2011; Tschannen-Moran, 2014a) The reason why there was a decrease in teacher-principal trust at Oak and Elm Elementary could be attributed to a perceived lack of integrity. The principal

told the teachers that he or she wanted to share leadership, but then did not actually act in a way that gave power to teachers (Bryk & Schneider, 2002).

Study Limitations

This study has certain limitations that should be acknowledged. By design, case study research does not permit causal conclusions. Schools are complex social systems and a case study approach does not enable us to identify the factors that, in isolation, caused increased teacher-principal trust. Findings suggest that addressing conflict contributed to relational trust. However, other alternatives are also possible. The characteristics of the principal and teachers and the history of their relationship might be the cause of increased trust. Or perhaps, the principal had some inherent ability to build relationships that we did not measure. Second, the study has limited generalizability. Schools, principals and teachers were not randomly sampled from a large population; instead, principals self-selected into the study and chose the teachers who participated in the surveys and interviews. Thus, our findings should be interpreted cautiously. They are based on distinct samples within particular schools that chose to participate in a pilot study that focused on building adult community. Third, principals chose teachers to participate in the interviews and surveys, and thus sampling bias may have been a problem. Therefore, although the teachers seemed willing to speak honestly, we may not have gotten a full picture of what was occurring in the school. Despite these shortcomings, the exploratory nature of this study allows for both affirmation of theory regarding actions principals can take to enhance teacher-principal trust in schools (Tschannen-Moran, 2014a), and for the provision of examples of actions principals can take to build trust with teachers.

Implications

Relational trust is an essential component of school reform efforts (Bryk et al., 2010). Our findings suggest that principals can take specific actions to build trust, even in the face of conflict. One way this information could be used is to focus on creating measures of these constructs, and then hiring principals who already have the ability to do these three things. However, it seems probable that trust-building skills can be integrated into principal professional development efforts, thus allowing for principal selection based on broader characteristics. Describing and understanding specific principal actions that can build trust represents a critical first step in intervention development efforts. Knowledge of these actions suggest creating an intervention that: (1) teaches principals clear strategies for addressing conflict; (2) enforces the importance of making a sustained commitment to building relationships; and (3) elaborates on how to empower teachers by sharing decision making. Our findings indicate that each of these actions should be approached in a way inclusive of each determinant of relational trust - *social respect, interpersonal regard, integrity,* and *role competence* (Bryk et al., 2010). Several studies from business research indicates that trust interventions can successfully build trust in hierarchical relationships between supervisors and supervisees (Pesuric & Byham, 1996; Porras & Anderson, 1981). However, to our knowledge, the field of education lacks well-researched interventions that focus specifically on teaching principals how to build trust with teachers (Adams, 2008). This is the next step that research in this field should take.

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Table 1

Demographic Characteristics of Schools

	Ash	Oak	Elm
Grades offered	PK - 6	K – 5	K – 5
Total Number of students	605	249	538
% Minority	8.9	6.4	8.7
% Female	46.4	51.8	45.2
% Low-income	3.5	9.6	3.5
% ELL	4.0	2.0	1.1
% Teachers licensed in Teaching Assignment	100	100	100
% White Teachers	97.2	100	100
% Female Teachers	93.2	96	92
Student/Teacher ratio	17.3 to 1	14.3 to 1	15.5 to 1
2013 MCAS % Proficient - ELA	81	72	78
2013 MCAS % Proficient - Math	83	82	79
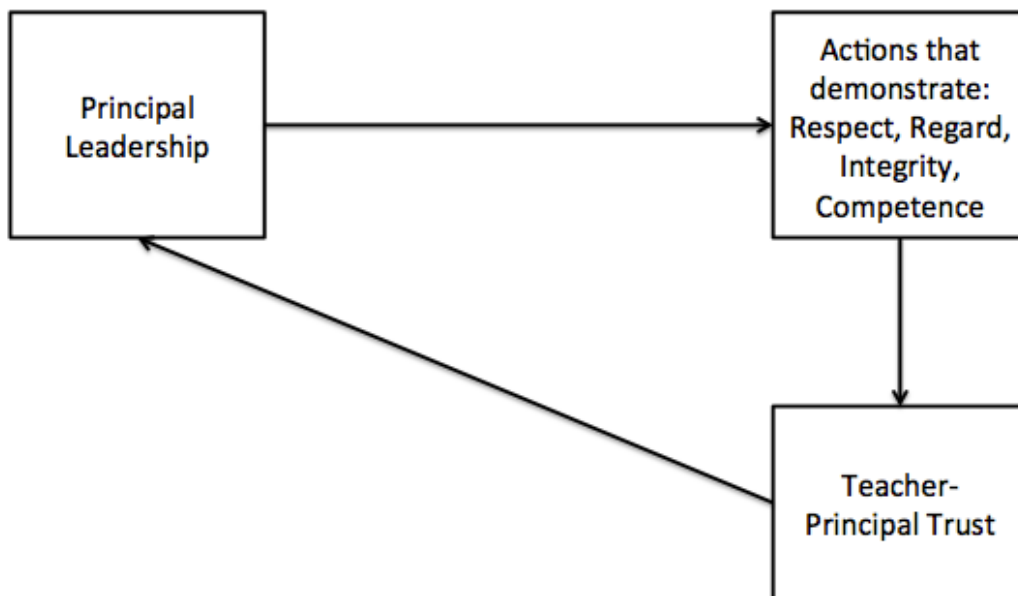
Figure 1. Theoretical framework describing the relationship between principal leadership and teacher-principal trust.
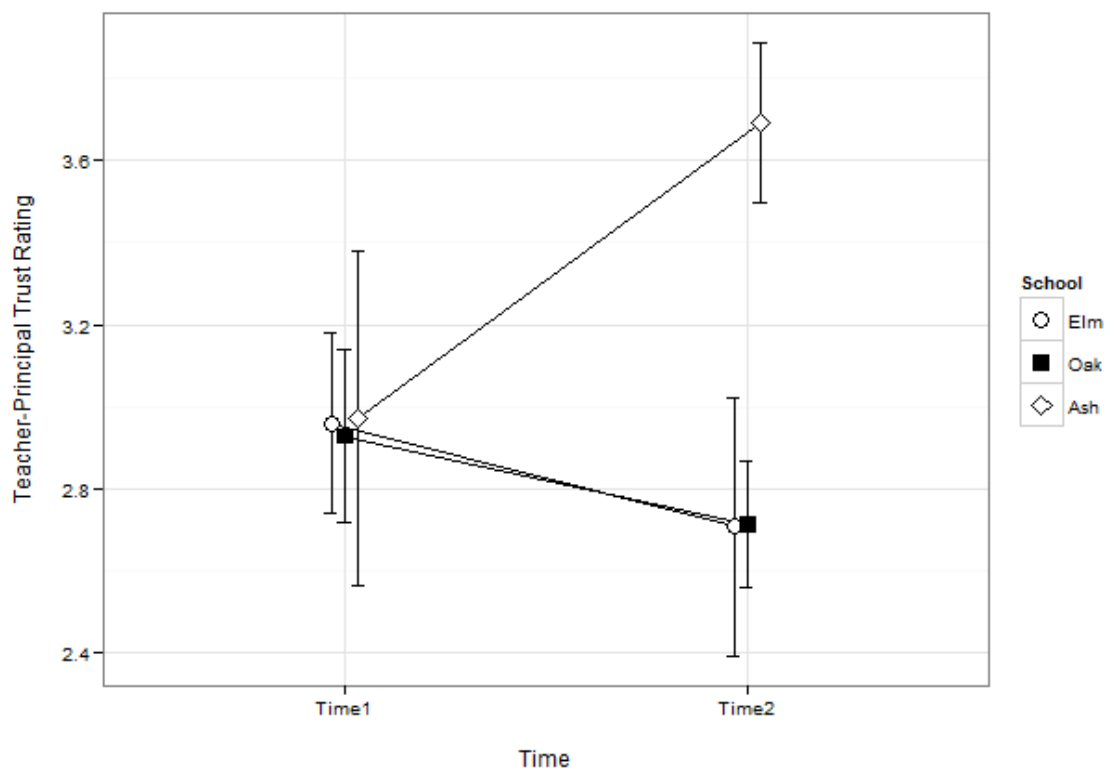
Figure 2. Change in average teacher-reported teacher-principal trust at Ash, Oak, and Elm

elementary schools over time. Time 1 is August 2012 and Time 2 is June 2013. The bars

represent 95% confidence intervals.

BUILDING TRUST THROUGH *LEADING TOGETHER:* INITIAL FINDINGS FROM A

PILOT STUDY OF A TEACHER AND PRINCIPAL TRUST-BUILDING INTERVENTION

Schools face difficult issues daily: curricular demands, implementation of new curricula,

academic failure, student bullying, and many more. To deal with these issues, teachers and

principals need to be able to come together to collaborate in meaningful ways (e.g., to develop

strategies for instructional practices) (Makiewicz & Mitchell, 2014). Mounting evidence suggests

that *relational trust* between school-relevant pairings (e.g., teachers and principals) is needed to

help teachers and principals negotiate the myriad challenges that occur in schools (Bryk &

Schneider, 2002; Bryk, Sebring, Allensworth, Luppescu & Easton, 2010; Louis, 2007;

Tschannen-Moran, 2014a). Within the context of schools, relational trust is considered to be an

organizational property that is created throughout multiple social exchanges between members of

one group (e.g., teachers) and members of another group (e.g., administrators) based upon

discernments of respect, personal regard, competence, and personal integrity (Bryk & Schneider,

2002). Relational trust is considered an organizational property because it is a school-specific

resource that has important consequences for school functioning and for a school's capacity to

engage in necessary reforms (Bryk & Schneider, 2002; Forsyth, Adams, & Hoy, 2011;

Tschannen-Moran, 2009; Tschannen-Moran, 2014a).

Accumulating evidence over the past two decades points to relational trust as a key factor

in facilitating and sustaining school reform (Bryk et al., 2010; Kochanek,

2005; Louis, 2007; Meier, 2002) and improving student performance (Bryk et al., 2010; Forsyth,

2008; Forsyth, Barnes, & Adams, 2006; Goddard, 2003; Goddard, Tschannen-Moran, & Hoy,

2001). However, less is known about strategies that schools can use to build relational trust (Adams, 2008; Kochanek, 2005). We do know that relational trust is dynamic and can change over time as expectations are, or are not, fulfilled (Tschannen-Moran, 2014b; Tschannen-Moran & Hoy, 2000). Since trust can change, interventions targeted specifically at enhancing the determinants of relational trust (i.e., regard, respect, integrity, competence) between specific role groups (e.g., teachers and administrators) hold promise as a way to build relational trust. There is some research on the growth of trust relationships between teachers as a byproduct of a student-focused intervention (Ford, 2014). However, there is a paucity of research on interventions specifically aimed at building relational trust between teachers and their principal (teacher-principal trust) or teachers and their colleagues (teacher-teacher trust).

The absence of such interventions is worrisome. Perhaps this absence is due to the relatively recent realization of the importance of relational trust in schools (Bryk et al., 2010). It is also possible that educators do not focus on this problem directly because it is too distal from student outcomes. Another reason for a lack of these types of interventions could be that people do not believe that an intervention can be effective in changing teacher-principal or teacher-teacher trust. In 2012, our research team was approached by Pamela Seigle and Chip Wood, developers of two well-known social emotional learning programs, Open Circle and Responsive Classroom. They wanted to collaborate with us to conduct research on a program they were in the process of developing through the Center of Courage & Renewal, called *Leading Together: Building Adult Community in Schools (LT)*. The goal of LT was to build the capacity of groups of teachers and their principal for facilitating positive, trusting relationships between adults in their school community. Thus, LT addresses the adult trust-building intervention gap.

When testing a completely new program, it is important to conduct small mixed-methods pilot studies early in the process to signal to the field whether this is an intervention worth pursuing (Comer, 1993; Comer & Emmons, 2006). This is an important first step before conducting a resource-intensive randomized controlled trial (RCT), exposing large numbers of educators to an intervention that may not be effective or that may be difficult to implement (Grissmer, Subotnik, & Orland, 2009). Therefore, our collaboration with the LT creators was initiated with two main goals in mind: to understand how LT activities and protocols were being implemented in schools involved in a pilot study of LT, and to examine respective changes in teacher-principal and teacher-teacher relational trust in these schools. We focused on implementation given decades of work indicating the necessity of proper implementation for interventions to work as intended by the developers (Dane & Schneider, 1998; Dobson & Cook, 1980; Durlak & DuPre, 2008). It is of utmost importance to understand the specific implementation processes that need to occur for a program to function as intended (Weiss, 1997), especially when considering the scalability and dissemination of an intervention (Elias, Zins, Graczyk, & Weissberg, 2003).

Relational Trust

There is a mutual dependence and vulnerability between individuals in different roles in schools. For instance, teachers depend on the principal to keep the school functioning smoothly so that they can focus on teaching. In turn, the principal depends on teachers to be able to communicate information to students in a way that increases learning. During the school day there are multiple social exchanges between individuals in these different role groups. Principals may come into classrooms to observe teachers, or may interact with them more informally in the lunchroom or school hallway. Teachers may talk to other teachers in the break room or may walk

by an open door and observe what is happening in another teacher's classroom. Relational trust is formed and grows, or changes, during these social exchanges (Bryk & Schneider, 2002). Three key elements define relational trust: (a) it is embedded in interpersonal relationships; (b) the strength of the social exchanges between different role groups is based on the fulfillment of obligations and shared expectations; and (c) it functions as an organizational property, as it is seen as enhancing the quality of a school (Schneider, Judy, Ebmeye, & Broda, 2014).

Determinants of Relational Trust

Individuals try to discern the intentions of the other person during every social exchange. Even in hearing about interactions that have happened between others within their organization, people make judgments about each person's objectives. This discernment builds a foundation for the growth of either trust or distrust. Relational trust comes from individuals making judgments about the *social respect, interpersonal regard, integrity,* and *competence* of the other person (Bryk et al., 2010). *Social respect* refers to inferences about whether the other person recognizes the important role each person plays in educating students and recognizes the mutual dependencies between role groups (e.g., teachers and principals). It is comprised of respectful exchanges, the valuing of other's opinions, and timely communication. *Interpersonal regard* refers to acting in a way that reduces the other person's sense of vulnerability (e.g., showing that you care for the person as an individual, not just a cog in the machine). *Integrity* refers to a person acting in a way that aligns with their spoken goals (e.g., doing what you say you will). *Competence* involves the perception that the other person has the ability to achieve desired outcomes (e.g., do their job well) (Bryk & Schneider, 2002).

In thinking about these determinants, it is important to keep in mind that they refer to social exchanges that occur because of the roles that people play in the school, not only due to

the individuals who are in those roles (Schneider et al., 2014). Each person has a perception of

what is expected from a person in a specific role (e.g., the principal). Then, each person

appraises whether the individual in that role is meeting his/her expectations (Tschannen-Moran,

2014b). For example, if a teacher expects principals to be able to set a compelling vision, a

teacher may have less trust in a principal who is unable to do so. Within the context of schools,

key role groups include: principals, teachers, parents, and students (Tschannen-Moran, 2014a).

Teacher-Principal and Teacher-Teacher Trust

Tschannen-Moran (2014a) found that 78% of the variance in student achievement could

be explained by faculty trust in principal, colleagues, and families; parent trust in the school; and

student trust in teachers. Though relational trust between each of these role groups is important,

in this paper we focus specifically on faculty trust in principal (teacher-principal trust), and

faculty trust in colleagues (teacher-teacher trust). There is a growing body of research that links

teacher-principal and teacher-teacher trust to important school outcomes, such as a healthy and

productive school climate (Bryk & Schneider, 2002; Smith, Hoy, & Sweetland, 2001; Tarter,

Sabo, & Hoy, 1995; Tschannen-Moran, 2009; Uline & Tschannen-Moran, 2008). Research

suggests that higher levels of teacher-principal trust are related to increased levels of

collaboration between teachers and principals in school improvement efforts, which result in

fewer student behavior and attendance issues and gains in student achievement (Bryk &

Schneider, 2002; Hoy & Tschannen-Moran, 2003; Tschannen-Moran, 2001). Teacher-teacher

trust has also been linked to important school outcomes, such as a school climate of continuous

learning (Kensler, Caskie, Barber, & White, 2009), innovation (Moolenaar & Sleegers, 2010)

and student achievement (Tschannen-Moran & Barr, 2004). Trust between these two role groups

is correlated, in that the trust that teachers have in their principal relates strongly with the extent

to which teachers trust one another (Tschannen-Moran, 2014a). Therefore, theoretically, enhancing teacher-principal trust should also result in enhanced teacher-teacher trust, as the principal leads the school staff in more collaborative efforts (Bryk & Schneider, 2002).

In this era of school reform, one would expect to find a variety of interventions focused on increasing relational trust in the adult community. Bryk and Schneider's (2002) seminal work on relational trust in Chicago public schools built a strong case for trust as a catalyst for organizational school change. They found that relational trust amplified teachers' school commitment and positive orientation toward change, while also facilitating collective decision making and supporting teacher learning. In turn, these organizational changes fueled instructional changes, leading to improvements in student engagement and learning (Bryk et al., 2010). Despite research demonstrating the importance of relational trust in schools, research on interventions designed to build teacher-principal or teacher-teacher trust are especially lacking in the literature (Adams, 2008; Ford, 2014).

Interventions That Build Relational Trust

Studies of relational trust between teachers, or between teachers and their principal, tend to explore organizational or student outcomes based on levels of relational trust that do, or do not, currently exist in the school (Bryk et al., 2010; Cranston, 2011; Goddard, Goddard, & Tschannen-Moran, 2007). Although these studies add to the growing evidence of the importance of relational trust in schools, they do not examine whether teacher-principal or teacher-teacher trust can be built through a focused program or intervention.

Evidence from the business literature suggests that interventions aimed at building trust between leaders and subordinates are effective in changing behaviors and improving business outcomes (Pesuric & Byham, 1996; Porras & Anderson, 1981). Porras and Anderson (1981)

studied an intervention at a large business company, where supervisors received seven weeks of six-hour training sessions in building interpersonal skills such as active listening, group problem solving, and positive reinforcement. They found that supervisors who received training had less turnover and absenteeism among their workers and a 17 percent increase in production compared to the control condition.

This study supports the notion that a trust-building intevention could be successful. However, training teachers or principals in interpersonal skills to see if this builds teacher-principal or teacher-teacher trust has not been previously tested in schools. This paper addresses this gap in the literature by presenting initial findings from research of a pilot study of *Leading Together* (LT), a unique intervention focused specifically on building teacher-principal and teacher-teacher trust.

Leading Together

Leading Together (LT) is a multi-year professional development experience for leadership teams in K-12 schools, designed to build their capacity to facilitate positive relationships among all the adults in the school community and develop the trust and social capital necessary to improve student outcomes. Similar to the business interventions mentioned previously, LT focuses on enhancing the interpersonal skills (e.g., active listening) of participants.

Figure 1 shows the theory of change explaining how LT influences relational trust. Participants (i.e., the principal and a group of several teachers from each school; called the LT team) attend a four-day summer institute and follow-up retreats led by the LT facilitators. The institute and retreats are designed to teach participants a new set of practices designed to build their interpersonal skills. Participants engage in various activities designed to improve their

listening skills, increase empathy, and build trust. Participants also receive a guidebook that

contains instructions for activities and protocols designed to unite the group, create a safe and

social space, enhance listening skills, show gratitude to others, reflect on "traffic" in their mind,

and build community through appreciation (Seigle, Wood, Ackerman, & Sankowski, 2011).

After attending the summer training institute, the LT team returns to their school and

leads LT activities and protocols with the rest of their staff. The principle behind this train-the-

trainer approach is that each LT team knows the teachers at their school, and thus will be better

able to select activities from the LT guidebook that will be well-matched for their teachers and

the challenges present at their school. According to the theory of change (Figure 1), the

implementation of LT by the LT team will result in the full use of LT activities, practices and

protocols within the school.

An example LT activity is *Developing Adult Community Guidelines.* In this activity, staff

members work together to establish guidelines for the adult school community based on the

hopes and dreams for the school year of each staff member. These guidelines are then distributed

and posted throughout the school. The activity follows a structured protocol that allows for all

teachers to participate. The idea behind this activity is that it takes everyone's ideas into

consideration, thus helping to build a tone of respect among adults in the school.

All of the LT activities and protocols are designed to enhance the capacity of participants

for demonstrating respect, regard, and integrity towards others. As respect, regard, and integrity

are three of the four determinants of relational trust, our theory of change posits that enhancing

these determinants will improve relational trust. LT activities do not focus specifically on

improving perceptions of competence. However, Bryk and colleagues (2010) demonstrated that

the determinants of relational trust have been shown to vary together, so our theory of change

assumes that perceptions of competence will change as perceptions of these other determinants of trust change. Improvements in relational trust should eventually lead to improvements in instructional quality as teachers become more willing to collaborate, and improved outcomes for educators and students (Bryk et al., 2010).

For LT to have its intended positive proximal and distal effects it must be transferred successfully from the summer institute training into the school (Dane & Schneider, 1998; Dusenbury, Brannigan, Falco, & Hansen, 2003; Elliott & Mihalic, 2004; Metz, Halle, Bartley, & Blasberg, 2013). Positive intervention outcomes hinge on high-quality implementation (Berkel, Mauricio, Schoenfelder, & Sandler, 2011; Durlak & DuPre, 2008). When a program is implemented successfully, we expect to see higher levels of responsiveness on the part of the participants, increased levels of participation in the intervention and a greater amount of enthusiasm for the intervention (Berkel et al., 2011). If intervention components are not delivered in a way consistent with program objectives, then what is actually being assessed is how the program is being implemented, not the effectiveness of the program itself (Dobson & Cook, 1980). Therefore, before evaluating a new intervention, such as LT, it is important to examine whether it has been successfully implemented in the school. LT's train-the-trainer approach has the advantage that specific LTactivities and protocols can be chosen that match the immediate conditions at the school. However, this approach also has a disadvantage; by design, the implementation of LT will be different for each school. Therefore, in conducting this study, we considered successful implementation as adherence to a set of processes rather than focusing on adherence to a set of specific activities (O'Donnell, 2008; Weiss, 1997).

Context of the Current Study

As mentioned previously, educators need interventions that focus specifically on building teacher-principal and teacher-teacher trust (Adams, 2008). LT is a program that provides protocols and activities to help teachers and administrators strengthen their interpersonal skills, specifically in regards to respect, regard, and integrity, three of the determinants of relational trust (Bryk et al., 2010). LT was piloted with eight schools in New England over a two-year period. We were specifically interested in examining: (a) the implementation process of LT within each school, and (b) how teacher-principal and teacher-teacher relational trust was changing in schools that were successfully implementing LT compared to schools that were not successfully implementing LT. We hypothesized that teacher-principal and teacher-teacher trust would increase in schools that were implementing LT successfully but remain stable in schools that were not implementing LT successfully.

Method

To answer our research questions, we conducted a sequential mixed-methods study (Johnson, Onwuegbuzie, & Turner, 2007). We investigated LT implementation through the Implementation Process for Teams Instrument (IPT) that we created based on interview data (see Measures section). We used scores on the IPT to categorize schools as either *Proactive* (having successfully implemented LT) or *Reactive* (not having successfully implemented LT). Then we used quantitative survey measures to examine changes in relational trust between and within Proactive and Reactive schools.

Participants

Information about the intervention was offered through the Northeast Center for Courage & Renewal, and school participation was at the behest of the school principal. Eight public schools in the New England region participated in the full two-year pilot study. The schools

served elementary (n = 7) or middle school students (n = 1), with enrollments between 250 and 650 students (M = 493 students). The schools were demographically diverse in percentage of students receiving free/reduced price lunch (FRPL) (Range = 4% - 98% FRPL, *M* = 30% FRPL) and minority student composition (Range = 7% - 94% racial minority, *M* = 36% racial minority). Sixty-three percent of schools (n = 5) were Title I schools. The principal from each school selected a group of teachers and/or specialists from their school to attend the initial LT training with them. The principal and staff members constituted the school LT team. Each LT team held responsibility for bringing LT activities and practices back to their individual schools.

In Year 1, each school had an LT team that consisted of between three and five members (total n = 33). Seventy-nine percent of LT team member participants were female and 88% were Caucasian. In Year 2, the LT teams expanded to include five or six members from each school (total n = 45). Most (92%) of LT team member participants were female, and 91% were Caucasian. All principals remained in their positions for both years of the study. Principals (n = 8) were 38% female and 88% Caucasian.

Each principal identified an additional three teachers at their school to participate in data collection. These teachers (called site teachers) were not part of the LT team and did not participate in LT retreats but were recruited to participate in data collection, allowing assessment of school change from another perspective. Site teachers (n = 24) were 88% female and 100% Caucasian.

Procedures

LT teams received initial training in LT during a four-day summer institute in July 2012, followed by day-long retreats in November 2012, April 2013, October 2013, and April 2014. LT developers provided two days of on-site coaching in the winter and spring of each year. The

research team gathered qualitative and quantitative data during this same two-year period. The

initial baseline data collection occurred prior to the start of the school year (in August 2012) and

the final data collection occurred at the end of the second year of intervention (May 2014). All

LT team members and site teachers were administered surveys online via Surveymonkey.com

during data collection periods. The surveys were intended to collect information about changes

in relational trust as well as to gather information on school leaders' and teachers' perceptions of

whether LT "worked" at their school.

     The principal and one school leader from each school (randomly selected from the two to

five school leaders) were interviewed at the beginning and end of every school year, for a total of

four times during the study (Summer 2012, Spring 2013, Fall 2013, and Spring 2014).

Additionally, one site teacher per school was selected at random to participate in interviews

during the same data collection periods. The interviews were designed to collect information

about how LT was being implemented in the school and how the intervention was viewed by the

staff (i.e. "If any, what specific Leading Together activities has your school used? Please

describe how the activities were received by the group and what happened"). Research team

members followed scripted questions to conduct phone interviews lasting 15 to 30 minutes. All

interviews were audio-recorded and transcribed.

Measures

     Implementation Process for Teams (IPT) Instrument. The Implementation Process for

Teams (IPT; Leis, Sandilos, & Rimm-Kaufman, 2014) is a qualitative measure of the LT team's

competent delivery of and commitment to LT, developed by the research team with feedback

from LT program developers. The IPT evaluates schools on five categories of implementation

processes: *purpose, introduction, intervention-commitment, team-commitment,* and *shared*

leadership. Each category is rated from 1 to 4, with 1 representing low or non-existing evidence

of implementation and 4 representing high levels of implementation. Key questions that

represent each category, and coding criteria for each category are presented in Table 1.

A five-person team consisting of the lead author, one post-doctoral fellow, and three

undergraduate research assistants rated each school independently on the IPT based on

transcripts of interviews with LT team members across the two years of the study. Inter-rater

reliability for the five categories was calculated using Conger's (1980) exact Kappa. Kappa

scores were .79 for independent scoring. The ratings for each school were discussed until 100%

agreement was reached between all coders, following procedures described by Hill, Thompson,

and Williams (1997). All correlations among the five categories were between .55 and .82. The

categories were averaged to form a composite score called Implementation Level (IL) for each

school ($\alpha = .92$).

To examine the validity of the IPT for measuring successful implementation, we

inspected the relationship between IL and the holistic perception of whether LT "worked". The

end-of-the-year interview of LT members and site teachers (described above) included the

question: "Did LT 'work' at your school?". Coders assigned either a negative or positive valence

to every response. Negative valences were given to responses that said that LT was not working,

not implemented properly, or not well-received in their school. Positive valences were given to

responses that said LT was working, making positive changes and/or enhancing school culture.

We then summed negative and positive responses separately by IL and conducted a chi-square

test of independence to examine the relation between IL and response type.

Chi-squared tests revealed a relation between IL and response to whether LT "worked" in

the school, X^2 (1, $N = 50$) = 15.47, $p < .01$. Schools with IL scores of greater than or equal to 3

had almost four times more positive responses than negative responses. Schools with IL scores

less than 3 had over three times more negative responses than positive responses These results

showed a relation between implementation level, as measured by the IPT, and teachers'

perceptions of the successful implementation of the intervention. Thus, we used a score of 3 or

higher on the IPT as the criterion for successful implementation of LT within the school. These

schools were categorized as *Proactive*. Schools with IPT scores less than 3, which can be

thought of as not having implemented LT successfully, were categorized as *Reactive*.

Relational trust. Teachers reported on the trust they had for their administrator and for

other teachers through surveys administered at the beginning and end of each school year.

Administrators reported on the amount of trust between teachers in their school.

Teacher-principal trust. The Teacher-Principal Trust scale is a six-item teacher report

measure ($\alpha = 0.92$) that examines the extent to which teachers feel their principal respects and

supports them (Consortium on Chicago School Research [CCSR], 1997). Items address each

determinant of relational trust: respect ("To what extent do you feel respected by the principal at

your school"), regard (It's OK for staff members to discuss feelings, worries, and frustration with

the principal"), competence ("I have confidence in the expertise of the principal"), and integrity

("I trust the principal at his or her word"). Teachers rated each item on one of two four-point

scales (1 = strongly disagree; 4 = strongly agree or 1 = not at all; 4 = to a great extent). The six

items were averaged to create a composite teacher-principal trust score for each teacher, which

was then aggregated to the school level.

Teacher-teacher trust. This scale is a four-item teacher- and administrator-report

questionnaire ($\alpha = 0.92$) that measures the extent to which teachers and administrators believe

that the teachers in the school generally have open communication with and respect for each

other (CCSR, 2011). Questions focus on whether teachers in the school respect other teachers who lead school improvement efforts and whether teachers trust and respect each other (e.g., "Teachers respect other teachers who take the lead in school improvement efforts"). Teachers and administrators rated each item on a four-point scale (1 = strongly disagree; 4 = strongly agree). The four items were averaged to create a composite teacher-teacher trust score for each individual and then were aggregated to the school level.

Analyses

Using the IPT to establish implementation group membership. We used the IPT to examine variation in implementation among the eight schools and categorize schools as either Proactive or Reactive. Independent-sample *t* tests were conducted to compare schools in the two groups on each category of implementation measured on the IPT.

Changes in relational trust based on implementation level. Quantitative survey responses from all teachers in the study were used to investigate changes in trust over the two-year intervention period between and within Reactive and Proactive schools. Independent-sample *t* tests were conducted to evaluate whether differences between relational trust measures in Proactive and Reactive schools were statistically different. We also analyzed the determinants of relational trust (respect, regard, competence, and integrity) independently for teacher-principal trust for schools in each implementation group. Independent-sample *t* tests were conducted to compare various demographic characteristics (e.g., percent low-income) between Proactive and Reactive schools. Then we examined effect-size changes (Cohen, 1994) for relational trust in Proactive schools in order to examine how the direction and the degree of these variables had changed in schools that had implemented LT successfully.

Lastly, since relational trust is a school organizational property (Schneider et al., 2014),

we were interested in exploring whether participating in LT was related to changing the

perceptions of relational trust within a school community. To examine this, we calculated

intraclass correlations (ICCs) at baseline and two years later. In data with a nested structure (e.g.,

teachers within schools), ICCs show how much variation in scores is attributable to the cluster

(e.g., schools). Thus, the ICC value reflects the coherence of opinions within a school, where a

higher value indicates greater coherence (Forsyth & Adams, 2014). If LT contributed to

changing perceptions of trust at the organization level, then we would expect to see more

coherence in teacher beliefs within a school (higher between-school variability) over time.

Results

Using the IPT to Establish Implementation Group Membership

Half of the schools were categorized as Proactive (n = 4), and half were categorized as

Reactive (n = 4), based on IPT scores (Figure 2). Differences between the implementation

processes of LT teams in Proactive and Reactive Schools are described in Table 2.

Proactive schools had significantly higher scores than Reactive schools on all five

implementation process categories: *purpose*, $t(6) = -4.24$, $p < .01$; *introduction*, $t(6) = -4.90$, $p <$

.01; *intervention-commitment*, $t(6) = -3.27$, $p = .02$; *team-commitment*, $t(6) = -4.90$, $p = .02$; and

shared leadership, $t(6) = -5.89$, $p < .01$. These results suggest that the two groups were

significantly different from each other in terms of successful implementation.

We would expect that Proactive schools would be more successful than Reactive schools

in positively changing teacher-principal and teacher-teacher trust since successful

implementation of an intervention is related to higher levels of participant responsiveness

(Berkel et al., 2011). To explore this hypothesis, we turned to the quantitative data gathered in the teacher surveys.

Changes in Relational Trust Based on Implementation Level

There were no significant differences in teacher-principal trust and teacher-teacher trust between Reactive and Proactive schools in August 2012 (Table 3), suggesting that schools had similar levels of these variables at the beginning of the LT intervention. However, teacher-principal trust was significantly higher in Proactive schools compared to Reactive schools after two years of the LT intervention (Table 3). Upon closer examination of the determinants of teacher-principal trust, there were no differences in teachers' perceptions of respect, regard, or integrity of their principal between schools in different implementation groups prior to the start of LT. However, teachers in Proactive schools had significantly higher beliefs in the competence of their principal than teachers in Reactive schools. After two years of LT, teachers' perceptions of the respect, integrity, and competence of their principal were significantly higher in Proactive schools than in Reactive schools (Table 3). Inspection of the means and effect sizes showed a somewhat upward trend in teacher-teacher trust among the Proactive schools and a somewhat downward trend in teacher-teacher trust among the Reactive schools. These trends are not statistically significant which could stem from insufficient statistical power (given the small sample size) or weak signal.

Next, we investigated if there were demographic differences between Proactive and Reactive schools. T-tests showed that the Proactive and Reactive schools did not differ on any of the demographic outcomes (e.g., number of teachers, number of students, percent Caucasian, percent English Language Learners (ELLs), percent low-income, and Title I status of the schools) (Table 4).

Effect-size changes were calculated for teacher-principal trust and teacher-teacher trust for Proactive schools (Table 5). We wanted to examine changes in trust in the adult community for schools considered to have successfully implemented LT. In Proactive schools, there was an effect size change of .22 standard deviations for teacher-principal trust and .51 standard deviations for teacher-teacher trust. For teacher-principal trust, the majority of this effect appears due to changes in respect. However, there was also a small positive change in perception of principal competence. These analyses suggest a relation between being in a school where LT has been successfully implemented and increases in both teacher-principal and teacher-teacher trust.

Lastly, to explore the relation between participating in LT and changing perceptions of relational trust at the organizational level, we calculated ICCs for all schools before and after exposure to the LT intervention. We found that the between-school variability more than doubled for teacher-principal trust between baseline and the end of the intervention (Figure 3). The ICC for teacher-teacher trust (n = 73) nearly tripled from .13 in August 2012 to .34 in May 2014. This confirmed our hypothesis that there would be more coherence in teacher beliefs within a school after exposure to LT. However, as a caveat, the presence of greater coherence over time does not imply that the principal and teacher beliefs are more positive. Rather, coherence over time suggests amplification where positive schools become more homogeneously positive and negative schools become more homogeneously negative. One interpretation is that LT appears to be opening channels of communication and creating common definitions within schools of trustworthy and untrustworthy behavior.

Discussion

The aim of LT was to enhance teacher-principal and teacher-teacher relational trust in schools by providing leadership teams with activities and protocols that help build interpersonal

skills and enhance participants' capacity for building trust. To examine the evidence of the

ability of LT to build relational trust, we first needed to understand how effectively LT teams

were able to implement LT in their school. We found that LT was implemented successfully in

half of the schools, which we labeled Proactive. LT teams at Proactive schools understood that

the purpose of LT was to build relational trust and they explained this purpose clearly to their

faculty. These teams showed their faculty members that they believed the LT work was

important by consistently giving time to LT activities. In these schools, the LT teams met

consistently and shared ownership of the LT intervention.

In the schools where LT was not implemented successfully, which we labeled Reactive,

LT teams tended to have different views of the purpose of LT. They did not explain clearly to

their staff why the school was participating in LT or how LT was supposed to help the school

advance its goals. Lack of enthusiasm from the staff resulted in the LT team not providing time

for LT activities or purposefully not explaining that specific activities were part of the LT

intervention. The principals at Reactive schools tended to neither share leadership of the LT

intervention, nor devote time to LT activities or team meetings, despite prior promises to do so.

At the end of the two-year LT intervention, teacher-principal and teacher-teacher trust

were significantly higher in Proactive schools compared to Reactive schools. Additionally,

teacher-principal and teacher-teacher trust had increased by moderate effect sizes in Proactive

schools. ICCs demonstrated that all teachers involved in the pilot study were becoming more

cohesive in their perceptions of both teacher-principal and teacher-teacher trust after exposure to

the LT intervention. LT appears to be giving teachers a common language and view of trust.

Since relational trust is based on perceptions of the other person's motives (Bryk & Schneider,

2002), having common definitions and language is an important first step. However, this also

highlights one of the difficulties of building trust, which is that it is not a task to be undertaken

lightly. If a school leader says that trust is important and then does not provide time for building

relationships, it can make teachers think their leader is untrustworthy. This may be due to the

perceived lack of integrity that accompanies the dissonance between words and actions

(Tschannen-Moran, 2014b).

Two primary limitations of this study require mention. First, the small sample size in this

pilot study may have underestimated changes in relational trust. Second, we examined the

natural variation in LT implementation between schools, but did not manipulate levels of

implementation. This limits our ability to make causal claims about the ability of LT to build

teacher-principal and teacher-teacher trust in schools where the program has been implemented

successfully. The initial average teacher rating of principal competence in Reactive and

Proactive schools suggests that perceptions of principal competence may influence whether

successful implementation occurs. More competent principals may be better at explaining the

purpose of the intervention or may be better at handling other issues that arise so that they can

make time for LT activities. Additionally, the perceived competence of the principal may have

influenced the willingness of teachers to participate in LT or might be related to the ability of the

principal to foster trust with teachers as well as between teachers (Kam, Greenberg, & Walls,

2003; Leithwood & Montgomery, 1982).

However, making causal claims about the efficacy of LT was not the purpose of this pilot

study. Before testing the efficacy of any intervention with an RCT, which is costly for a school-

level intervention, it is important to conduct a pilot study. Pilot studies provide redesign and

retargeting insights to make an intervention more effective, while also establishing viability for

an intervention (Grissmer et al., 2009). Pilot work also leads to the identification of critical

components of the intervention so that the program can be honed and developed further, without compromising the elements that are essential to its success (Hulleman, Rimm-Kaufman, & Abry, 2013). Our study of LT exemplifies an important first step in a line of research needed to develop and establish the efficacy of new programs.

This study provides information to the developers of LT about critical implementation process components needed for future development and success of the intervention (Elias at al., 2003; Han & Weiss, 2005). Future iterations of LT should involve helping LT teams develop strategies for the following implementation processes:

Purpose: LT teams should discuss the purpose of LT prior to introducing it in the school to make sure that they share a common understanding of how LT will help the school achieve its goals. This discussion should include a focus on understanding the research on the relation between increased relational trust and improved student outcomes, and understanding how LT increases relational trust.

Introduction: LT teams should work together to practice introducing LT to the rest of the faculty at their school. The introduction should include an explanation of the purpose of the intervention and why the school is participating. Teams should create sample scripts to practice introducing LT in their school.

Intervention commitment: The LT team should agree on a consistent time to conduct LT activities and protocols with faculty members. Time needs to be allotted to LT activities and protocols at least once a month in staff meetings.

Team commitment: LT teams should decide on a time for team meetings, where they can discuss the implementation of LT activities and protocols. These meetings should occur at least monthly to reflect on intervention implementation and to plan which LT

activities and protocols to use with staff in the upcoming staff meeting. LT team meeting

time should be devoted to discussing LT. Future iterations of LT could consider having

the existing leadership team in a school become the LT team, given that most schools

have a leadership team that meets consistently.

Shared leadership: LT teams should decide which team members will be responsible for

leading different types of LT activities and protocols. LT consists of different types of

activities, some of which may be beyond the comfort level of some members of the team.

For instance, we found that many team members felt uncomfortable leading the singing

activities. Sharing leadership of the intervention allows team members to discuss who

should lead different intervention activities based on personal strengths. Additionally,

shared ownership between all team members will strengthen the commitment to

implementing the intervention consistently, as previously theorized by Bryk et al. (2010).

It should be noted that the commitment of the principal to the intervention is highly related to the

last three categories (i.e. intervention commitment, team commitment, and shared leadership). As

the leader of the school, the principal needs to show that he or she is committed to LT by

consistently setting aside time for the intervention, creating time for LT team meetings, and

sharing leadership with other members of the LT team.

This study also provided an opportunity to identify the target population for this type of

intervention as well as how the benefits of the intervention are (or are not) well-matched to the

needs of this population. This is valuable information because schools' readiness to implement

school-wide programs has been found to be related to the effectiveness of those programs (Holt,

Raczynski, Frey, Hymel, & Limber, 2013). It appears that focusing on the commitment and

perceived competence of the principal is an important factor when selecting schools that would most benefit from this intervention.

Future Directions and Implications

The implementation processes related to the successful implementation of LT point to the process of implementation as a trust-building mechanism in itself. In implementing the intervention in their school, teams can show *respect* for teachers by explaining the purpose of the intervention and how it relates to school goals. Teams can show *regard* for teachers by explaining why the intervention is going to help them accomplish their goals. Teams can show *integrity* by saying that they will commit to the intervention and then making sure to provide enough time for intervention activities. Teams can show *competence* by being able to deliver intervention components successfully. Theoretically, following these implementation processes could build trust while implementing any intervention. This is an idea that should be examined in future research.

This is the first study, that we are aware of, that examines an intervention focused specifically on building relational trust between adults in schools. Trust-building interventions are needed if schools are to engage in positive reforms for teachers and students (Bryk et al., 2010). This research adds some support to the theory of the value of a trust-building intervention for changing perceptions of teacher-principal and teacher-teacher trust. Effect sizes showed modest gains in teacher-teacher and teacher-principal trust in schools that successfully implemented LT. Though this was a small pilot study, these findings suggest that LT has the potential to build teacher-principal and teacher-teacher trust in schools where it is implemented successfully. Follow-up research that uses a more rigorous experimental design with a larger sample of schools and teachers could contribute to an enriched understanding of the value of LT

for enhancing teacher-principal and teacher-teacher relational trust, a critical need in school adult

communities.

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Table 1

Implementation Process for Teams Instrument (IPT)

Items/ Questions	Coding Criteria
1. PURPOSE What is the purpose of the intervention? How is this purpose related to your school goals and vision?	1 = All implementation team members have incorrect views of the purpose of the intervention; 2 = Implementation team members have different views of the purpose of the intervention. At least one member of the team has a correct view of the purpose of the intervention; 3 = Implementation team members have a similar, correct, view of the purpose of the intervention. No mention of relationship between purpose of intervention and school vision/goals; 4 = Implementation team members have a similar, correct, view of the purpose of the intervention. Implementation team members can explain exactly how the purpose of the intervention aligns with school vision/goals, and will help move these goals forward.
2. INTRODUCTION How did you explain the intervention? How did you explain why your school was participating in the intervention?	1 = The intervention is not introduced to the staff. An intervention activity may be introduced, but it is not connected to the overall intervention; 2 = The intervention is introduced (perhaps with an activity), but the purpose of the intervention is not clearly explained. There is confusion about the purpose of the intervention or why the school is participating; 3 = The intervention is clearly introduced to the faculty. The team explains what the intervention is; 4 = The intervention is clearly introduced to the faculty. The team explains what the intervention is, why the school is participating, how the work will move the goals of the school forward.
3. INTERVENTION-COMMITMENT How much time per month do you devote to intervention activities with the **entire** staff? With specific groups of staff members? How consistent has this been so far?	1 = No time is given to intervention activities; 2 = Some time is given to intervention activities. However this time is sporadic or inconsistent or stops completely over time; 3 = Time is consistently given to at least some aspects of the intervention; 4 = Time is consistently given to implementing most aspects of the intervention. The intervention has been applied beyond the confines of the intervention (permeated the school culture).

Table 1 Continued

4. TEAM-COMMITMENT How often does the implementation team meet? What is discussed in these team meetings regarding the implementation process? What proportion of those meetings are devoted to pushing the intervention work forward?	1 = The team almost never meets or only meets when program facilitators are coming into the school; 2 = The implementation team occasionally meets. They may have planned to meet consistently, but other priorities take precedent. Or the team meets consistently, but the meeting time is not devoted to talking about the intervention; 3 = The implementation team meets consistently. Team meeting time is dedicated to planning next steps of implementation, following intervention protocol (not taking into account how the intervention is being received by teachers); 4 = The implementation team meets consistently. Team meeting time is dedicated to planning next steps of implementation, based on an evaluation of how the intervention is going and how it should be adapted for the specific school.
5. SHARED LEADERSHIP How is leadership distributed within the implementation team? How do you decide who is responsible for the different aspects of implementation?	1 = Leadership is not shared. Leadership is driven by one individual (usually the principal). Though the leader may sometimes delegate specific tasks to team members; 2 = Leadership is not shared between all team members. Rift between principal and rest of implementation team in terms of commitment to the intervention; 3 = Leadership is shared between most of the team members. A couple of team members (not the administrator) may feel disconnected from the rest of the team, or may not participate in all implementation team meetings or decisions; 4 = Leadership is shared between all team members. The team works together to decide how to implement aspects of the intervention with the rest of the staff. All members of the team share responsibility for the different activities and decide together who is responsible for each aspect of the intervention.

Table 2

Differences in Implementation Processes between LT teams in Reactive and Proactive Schools

Implementation Category	Reactive Schools	Proactive Schools
Purpose of LT	LT team members had different views of the purpose of LT. LT team members did not mention the relationship between LT and the goals of their school.	All LT team members understood that the purpose of LT was to build trust and collaboration. Additionally, team members could explain how the purpose of LT helped improve school goals.
Introduction of LT	The LT team did not clearly explain why the school became involved with doing LT work. In these schools, there was confusion among the staff about the purpose of LT. Teachers questioned the purpose of LT, because it was not introduced to them in a way that showed it was a good fit for the school.	LT teams introduced LT to the rest of their staff by explaining the purpose of the intervention and why LT fit with the work their school was doing. This reason was unique to each school and was tied to the history and goals of the specific school.
Commitment to LT	The LT teams did commit some time to introducing and leading LT activities. However, this time tended to be sporadic or inconsistent or stopped over time.	The LT team consistently committed time to implementing most aspects of LT. Team members in these schools reported that LT had spread beyond specific activities dedicated to relationship-building and had integrated into the culture of the school. LT activities were also used to help implement other priorities of the school, such as a new curriculum.

Table 2 Continued

Implementation Category	Reactive Schools	Proactive Schools
Commitment to LT team	The LT teams seldom met. They only met as an LT team during the LT retreats; or when the facilitators of LT had planned visits to the school. In some schools, LT teams met consistently when LT started, but then stopped meeting as the school year progressed.	The LT team met consistently. Meeting time was dedicated to planning how to implement LT in the school. Teams reflected on how LT had worked so far and planned future implementation to address any issues that might arise.
Shared Leadership	There was usually a divide between the principal and the rest of the team, with the principal not sharing decision-making power about LT. Another common theme in these schools was that the LT team worked together to plan how to use LT with the staff, but then there was a lack of follow through from the principal, and time was not provided for LT activities.	All members of the leadership team, including the principal, shared ownership of LT. The team worked together to decide how to implement LT activities and protocols with the staff.

Table 3

Differences in Relational Trust between Proactive and Reactive Schools in August 2012 and May 2014

Group	August 2012						May 2014					
	Reactive		Proactive				Reactive		Proactive			
	M	(SD)	M	(SD)	t(49)	p	M	(SD)	M	(SD)	t(49)	p
Teacher-Principal Trust	3.13	(.51)	3.44	(.69)	1.83	.07	**2.88**	**(.66)**	**3.57**	**(.49)**	**4.23**	**<.01**
Respect	3.52	(.68)	3.79	(.63)	1.47	.15	**3.29**	**(.85)**	**3.89**	**(.32)**	**3.31**	**<.01**
Regard	3.00	(.67)	3.05	(.89)	0.23	.82	2.71	(.85)	3.11	(.90)	1.63	.11
Integrity	3.09	(.67)	3.50	(.83)	1.94	.06	**2.65**	**(.61)**	**3.56**	**(.62)**	**5.28**	**<.01**
Competence	**2.74**	**(.62)**	**3.40**	**(.68)**	**3.62**	**<.01**	**2.47**	**(.62)**	**3.50**	**(.79)**	**5.19**	**<.01**
Teacher-Teacher Trust	3.04	(.56)	2.87	(.70)	0.96	.34	2.90	(.55)	3.19	(.55)	1.88	.07

Note. Numbers in bold are statistically significant. M = mean. SD = Standard Deviation.

Table 4

Demographic Differences between Reactive and Proactive Schools

Variable	Reactive Schools (n = 4)		Proactive Schools (n = 4)	
	average	range	average	Range
Number of teachers	34.5	$25 - 38$	45	$25 - 85$
Number of students	447.5	$250 - 550$	539	$450 - 650$
Percent Caucasian	80	$49 - 93$	62	$6 - 88$
Percent ELLs	9	$3 - 26$	27	$8 - 76$
Percent low-income	12	$3 - 33$	31	$4 - 98$
Title I School	1 of the 4 schools		4 of the 4 schools	

Note. ELL = English Language Learner

Table 5

Changes in Relational Trust over time for Proactive Schools (n =4)

| | August 2012 | | May 2014 | | |
Group	M	(SD)	M	(SD)	Effect size
Teacher-Principal Trust	3.44	(.69)	3.57	(.49)	.22
Respect	3.79	(.63)	3.89	(.32)	.20
Regard	3.05	(.89)	3.11	(.90)	.07
Integrity	3.50	(.83)	3.56	(.62)	.08
Competence	3.40	(.68)	3.50	(.79)	.14
Teacher-Teacher Trust	2.87	(.70)	3.19	(.55)	.51

Note. Missing data resulted in n = 13 for participants who responded in both August 2012 and May 2014. The small sample size reduces the power needed to detect an effect. Effect sizes were calculated to indicate the magnitude of changes. M = mean; SD = standard deviation

PROGRAM COMPONENTS

Resources
- LT program facilitators
- LT Guidebook
- Meeting facility
- Funds for time and travel

Training
- LT teams receive training during:
  - 4-day summer institute
  - 2 additional retreat days (Fall and Spring)
- Retreats focus on:
  - Coaching teams in reflective practices
  - Teaching LT objectives and modeling LT practices and protocols
  - Teaching teams how to use the LT guidebook

LT Facilitation within Schools
- LT team works together to introduce and implement LT practices and protocols within their school

Full Use of LT Principles and Practices
- Mindfulness Practice
- Listening Protocols
- Reflective Journaling
- Communication Exercises
- Coaching Protocols
- Shared Poems, Text, Media, & Music
- Community-Building Exercises
- Understanding Paradox
- Shared Purpose to Work with Integrity

PROGRAM OUTCOMES

Proximal Outcomes
- Improved teacher-teacher and teacher-principal relational trust
  - Increased interpersonal respect, personal regard, and perceptions of integrity

Distal Outcomes
- Improved instructional quality
  - Improved adult collaboration and teamwork
  - Improved implementation of other programs and educational improvement initiatives
- Improved outcomes for educators and students
  - Improved adult satisfaction and personal growth
  - Improved student social and academic gains
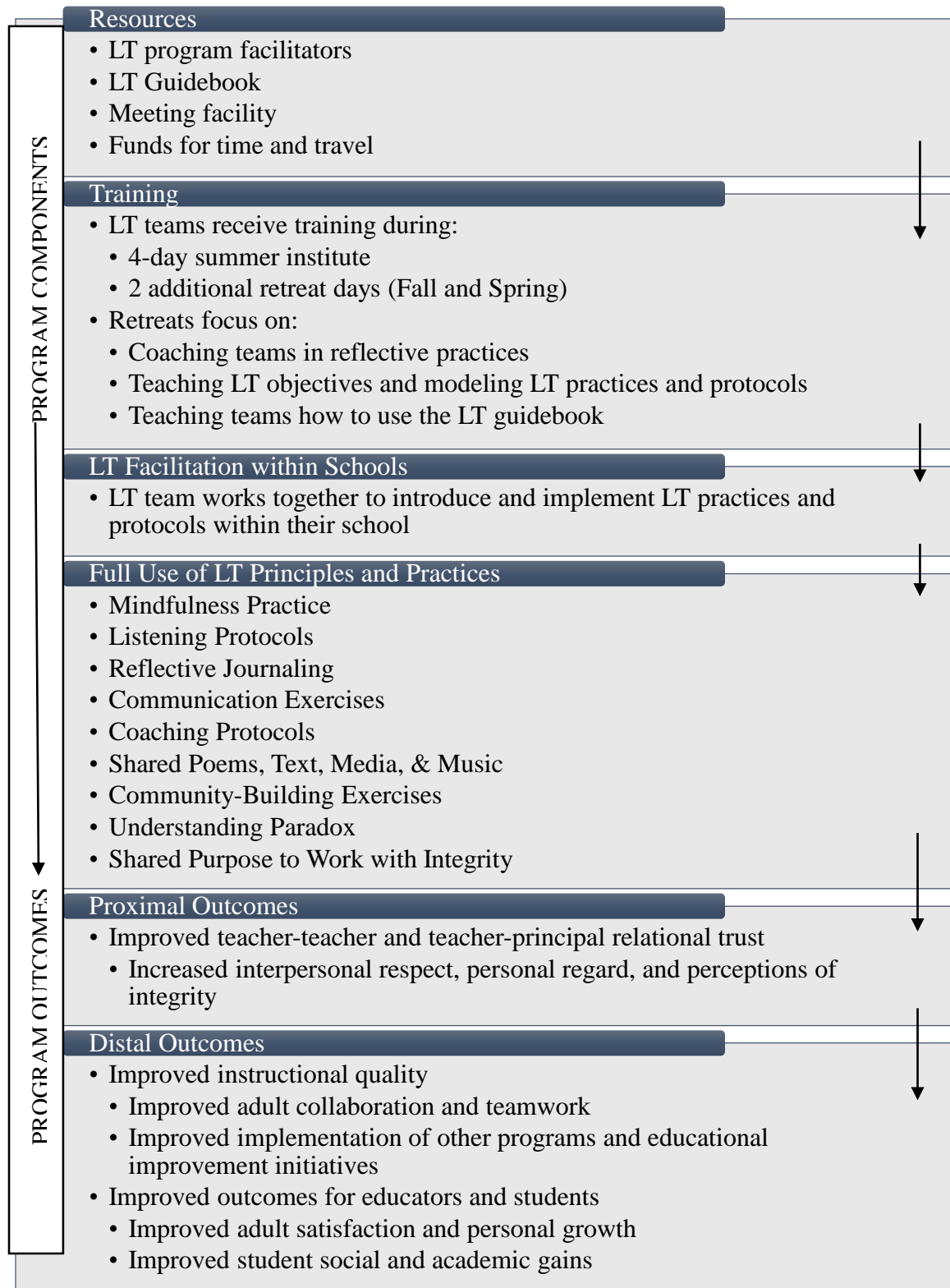
Figure 1. Leading Together (LT) theory of change.
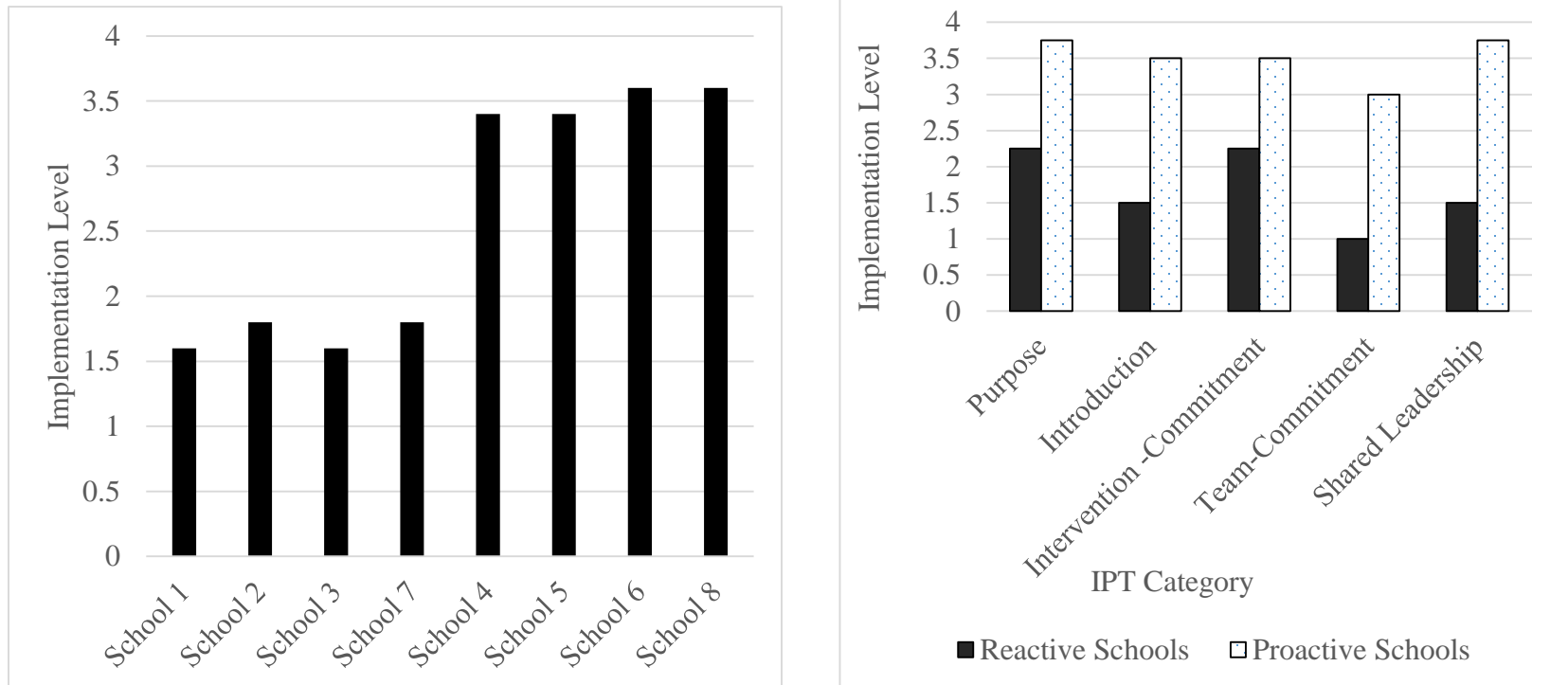
Figure 2. Scores on the Implementation Process for Teams instrument (IPT). The figure on the left depicts the scores for each school based on averaging scores on each of the five categories of the IPT. The figure on the right depicts the average scores on each IPT category for Reactive schools compared to Proactive schools.
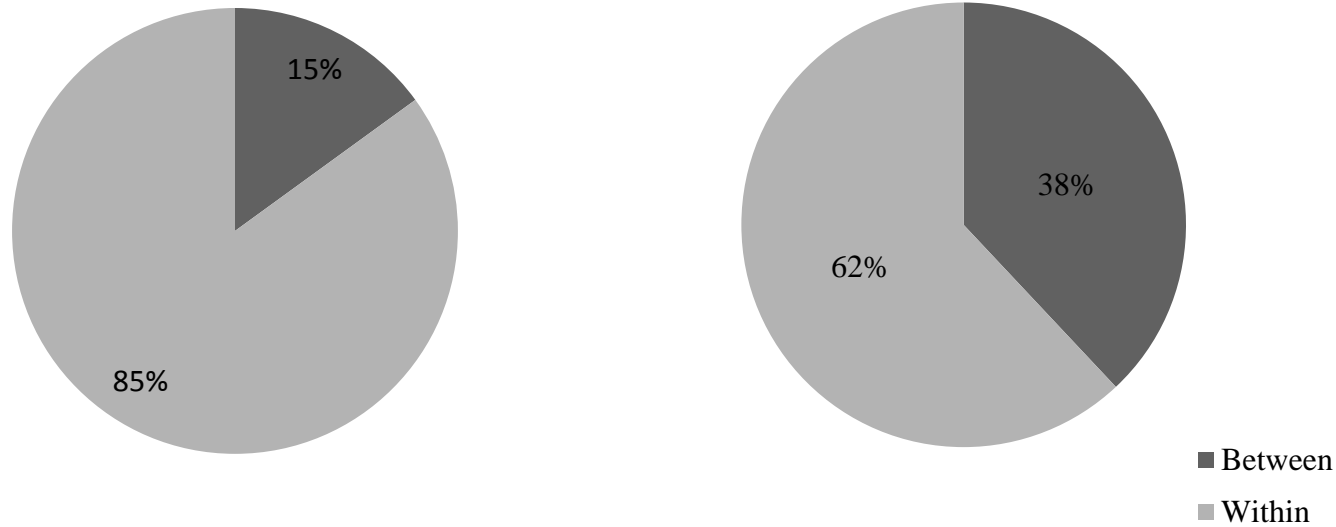
Figure 3. Teacher-principal intraclass correlations (ICCs). The chart on the left represents the variability of teacher responses to the

teacher-principal trust measure in August 2012, while the graph on the right represents the variability of teacher responses in May

2014 (n = 59). 'Between' refers to between school variability, while 'Within' refers to within school variability. These graphs show

that teachers' perceptions of teacher-principal trust are becoming more homogeneous within schools.

THE ROLE OF TEACHER WORKING CONDITIONS FOR BUILDING TEACHER-

PRINCIPAL RELATIONAL TRUST

Positive school reform depends on high levels of relational trust in the school community

(Bryk & Schneider, 2002; Bryk, Sebring, Allensworth, Luppescu, & Easton 2010; Byrne-

Jimenez & Orr, 2012; Hoy, Gage, & Tarter, 2006; Smith, 2002; Smith & Birney, 2005; Smith,

Hoy, & Sweetland, 2001; Tschannen-Moran, 2001, 2014b). Relational trust refers to the belief

that individuals in schools are able to carry out the duties of their role (e.g., teacher, principal)

competently and with integrity, while also showing respect and regard for individuals in other

roles in the school (Bryk & Schneider, 2002; Bryk et al., 2010). The trust that teachers have in

their principal (*teacher-principal trust*) is especially important in supporting school change,

teacher collaboration, and organizational commitment (Hoy, Tarter, & Kottkamp, 1991; Hoy,

Smith, & Sweetland, 2002; Tarter & Hoy, 2004). Teacher-principal trust expands teacher effort,

enhances teacher performance and helps focus collective energy on what is important (Forsyth,

Adams, & Hoy, 2011). As teacher-principal trust plays a crucial role in establishing a positive

climate and enhancing student outcomes, principals must foster and maintain trust with teachers

to lead schools effectively (Tschannen-Moran & Gareis, 2015). Despite the importance of

teacher-principal trust, we have surprisingly little knowledge about the underlying forces that

nurture teacher-principal trust.

Organizational leadership theory posits that teacher-principal trust arises from the

principal's focus on both the *interpersonal dimension* of leadership behavior, which

refers to the emphasis leaders put on relationships with others, and the *task-oriented dimension* of leader behavior, which refers to the emphasis leaders put on the responsibilities of their position (Pyle, 1973; Tschannen-Moran & Gareis, 2015). There is a growing body of research that describes the ways that principals use interpersonal interactions with teachers to engender trust, including being willing to take responsibility for their mistakes, not using their authority to manipulate teachers, doing what they say they are going to do, and living according to a set of core values that show that they are open, honest, and have integrity (Hoy & Kupersmith, 1984; Leis & Rimm-Kaufman, *in press*; Louis, 2007; Tschannen-Moran, 2014a; Tschannen-Moran & Hoy, 1998). However, there is significantly less work that focuses on the relation between the task-oriented dimension of principal leadership and teacher-principal trust.

As the leader of the school, principals enact the task-oriented dimension of leadership in the ways that they structure teachers' working environment, referred to in this paper as *teacher working conditions* (Leithwood, Louis, Anderson, & Wahlstrom, 2004). Examples of teacher working conditions include facilities and resources, instructional support, teacher leadership, and student conduct management (Johnson, 2006). One metric of success of the principal's task-oriented leadership can be quantified by measuring teachers' perceptions of the quality of teacher working conditions. However, little research has been done on understanding the independent contributions of various teacher working conditions to teacher-principal trust. Due to the lack of information in this area, division leaders or program developers eager to provide professional development for principals have little empirical basis for program creation.

This article addresses this gap in the literature by exploring this relationship for a sample of over 1,500 teachers in more than 200 schools in six large urban school districts, who participated in the Bill and Melinda Gates Foundation's Measures of Effective Teaching (MET)

study. Goals of this study are to provide some empirical basis for program development and to add to the literature on developing principal capacity to undertake the essential work of building and sustaining trust with teachers.

Literature Review

Teacher Working Conditions

Teacher working conditions refer to the physical features of the workplace, the organizational structure of the school, and the psychological, educational, political, and sociological features of the work environment (Johnson, 2006; Johnson, Berg, & Donaldson, 2005; Ladd, 2011). Teacher working conditions influence teachers' career paths (Borman & Dowling, 2008), teachers' retention or attrition decisions (Boyd et al., 2011; Johnson, Kraft, & Papay, 2012; Ladd, 2009; Loeb, Darling-Hammond, & Luczak, 2005; Pogodzinski, Youngs, Frank, & Belman, 2012), and student achievement outcomes (Ferguson & Hirsch, 2014; Kraft & Papay, 2014; Johnson et al., 2012; Ladd, 2009).

There is a large body of literature that examines a variety of teacher working conditions in public schools (see Johnson, Berg, & Donaldson, 2005, for a review of the literature). Several distinct teacher working conditions stand out from this literature and have attracted the attention of policy makers because of their role in forecasting teacher satisfaction, teacher retention, and student outcomes (Ingersoll & May, 2011; Ladd, 2011). This paper focuses on seven teacher working conditions that are widely used to evaluate school climate (Clifford, Menon, Gangi, Condon, & Hornung, 2012): (1) *community support and involvement,* which refers to the relationship between the school and families/community; (2) *facilities and resources,* which refers to the instructional and school resources available to teachers; (3) *instructional practices and support*, which describes the data and support available to teachers to improve instruction

and student learning; (4) *manageable demands on time*, which refers to the elimination of

barriers to instructional time so that teachers can teach; (5) *professional development*, which

refers to the availability and quality of learning opportunities for educators to enhance their

teaching; (6) s*tudent conduct management,* which describes the policies and practices that ensure

a safe school environment by addressing student conduct issues; and (7) *teacher leadership*,

which describes teacher involvement in decisions that impact classrooms and school practices

(Swanlund, 2011).

Recent work supports the idea that principal leadership is a driver or broker of these

seven teacher working conditions (Bryk et al., 2010; Deal & Peterson, 1990; Johnson, 2006;

Ladd, 2011; Leithwood & McAdie, 2007). Principals can enhance *community support* by

partnering with community agencies that provide support services to schools. Principals can

support teacher *professional development* by arranging professional workshops in areas in which

teachers have expressed interest in improving (Spillane, Hallett, & Diamond, 2003). Principals

can improve the school *facility and resources* by working with the district to make sure that

school facilities are maintained and that sufficient instructional resources are provided to

teachers (Johnson, 1990, 2006). Principals can also serve as the broker of higher quality working

conditions. Imagine a school that has low quality facilities, such as buildings in need of

maintenance and repair. The principal can make the physical problems of the school seem less

problematic by acknowledging the problem to teachers, mentioning the limitations in creating

changes outwardly, and then focusing on improving the collaboration and professionalism of

teachers in their school (Uline, Wolsey, Tschannen-Moran, & Lin, 2010).

Although these seven working conditions stand out as important for enhancing teacher

satisfaction, teacher retention, and student outcomes, we know little about the extent to which

principals' focus on these various working conditions cultivates trusting relationships with teachers. Do principals who provide professional development that differentiates to match teachers' needs and aligns with the school improvement plan boost relational trust at their school? Do principals who consistently enforce rules for student conduct boost relational trust at their school? Do principals who minimize the amount of routine paperwork teachers are required to do boost teacher-principal trust?

These three questions are examples of the professional development, student conduct management, and manageable demands on time teacher working conditions respectively. It seems likely that all the teacher working conditions would contribute to teacher-principal trust, but to the best of our knowledge, no empirical study has examined how the individual teacher working conditions specifically contribute to teacher-principal trust. Given recent work establishing the importance of relational trust in schools (Bryk et al., 2010), an important next step in the field is to explore the relation between the teacher working conditions and teacher-principal trust.

Teacher-Principal Trust

Teachers constantly observe and scrutinize their principals, whether the principals are facilitating professional development, observing in a classroom, or overseeing the installation of new recess equipment. Teachers use their observations and interactions with principals to help them decide whether or not to extend trust to their principal. Part of this decision involves the teacher evaluating whether their principal's actions match their expectations of what a principal should do and how a principal should act (Tschannen-Moran, 2014a). In large part, teacher-principal trust is based on teachers' perceptions of the *respect, regard, integrity,* and *competence* of their principal (Bryk et al., 2010).

Principals show *respect* toward teachers by listening to teachers' concerns, showing they value teachers' opinions, and showing they value teachers through open, honest, and timely communication. Principals show *regard* for teachers by acting in a way that reduces the teachers' sense of vulnerability (e.g., by being fair and not showing favoritism). If a teacher feels disliked by their principal, they are unlikely to trust him or her (Tschannen-Moran & Hoy, 2000). Principals show *integrity* by acting in a way that aligns with their goals, doing what they say they are going to do, and taking responsibility for their actions. Teachers' trust in the principal is also highly dependent on the teacher's perception of the competence of the principal in their role as a school leader (Handford & Leithwood, 2013). Teachers believe a principal is *competent* when they believe the principal has the knowledge, skill, and/or technical capacity both to manage routine affairs and to deliver on their intentions and promises (Bryk & Schneider, 2002). These four determinants of trust tend to vary together. Thus, teachers reporting high levels of trust in their principal are likely to report that the principal is competent, has integrity, and treats them with regard and respect, whereas teachers reporting low levels of trust in their principal are likely to report a lack of all of these qualities (Bryk et al., 2010).

Over two decades of research point to the importance of relational trust for improving schools and enhancing student outcomes (Bryk, et al., 2010; Goddard, 2003; Hoy et al., 2002; Hoy, Tarter, & Wiskowskie, 1992; Tschannen-Moran & Hoy, 1998, 2000; Tschannen-Moran, 2014a, 2014b). Teacher-principal trust is essential for developing shared leadership, professional community, high quality instructional practices, academic press, professional capacity and the uptake of reform efforts (Cosner, 2009; Louis, 2007; Louis, Dretzke, & Wahlstrom, 2010; Supovitz, Sirinides, & May, 2009; Tschannen-Moran & Gareis, 2015). When teachers trust their principal they are more willing to put in higher levels of effort into their teaching, show greater

investment in their school, demonstrate greater willingness to try new innovations in teaching

and collaborate more to solve the challenging problems of schooling, all of which relate to

productive and healthy school environments and positive changes in student outcomes (Chughtai

& Buckley, 2009; Forsyth & Adams, 2014; Handford & Leithwood, 2013; Bryk et al., 2010;

Leithwood & Seashore-Louis, 2012; Notman & Henry, 2011; Tschannen-Moran, 2003, 2009,

2014a, Zeinabadi, 2014). Teacher-principal trust also relates to teachers' satisfaction and

commitment to remaining in their school (Price, 2012). When teachers do not trust their

principal, they are less likely to take risks, be innovative with their instruction and collaborate

with other faculty members, and are more likely to spend their time protecting themselves from

anticipated harm (DiPaola & Tschannen-Moran, 2001; Hoffman, Sabo, Bliss, & Hoy, 1994;

Tarter, Sabo, & Hoy, 1995; Tschannen-Moran, 2009). In sum, teacher-principal trust is essential

to a school's task achievement, as it has direct and indirect benefits for both organizational and

individual performance (Bryk et al., 2010).

Despite the importance of teacher-principal trust for enhancing teacher and student

outcomes, and despite the importance of high quality teacher working conditions for enhancing

teacher and student outcomes, we have a limited understanding of the extent to which teacher

working conditions contribute to teacher-principal trust. Bryk and colleagues (2010) found a

reciprocal relationship between relational trust and school working conditions in an empirical

study of over 400 elementary schools in Chicago. However, they did not test the specific teacher

working conditions discussed in this paper and they explored changes in relational trust as a

composite of teachers' trust in principal, colleagues and parents/students. The high correlations

between teachers' trust in their principal, colleagues, and students/parents (Bryk et al., 2010;

Tschannen-Moran, 2014b) suggest that the quality of working conditions are related to teacher-

principal trust specifically, however this has yet to be tested empirically. To date, little is known

about how the seven teacher working conditions described in this literature review uniquely

contribute to teacher-principal trust.

Theoretical Framework

Figure 1 presents a theoretical framework that links teacher working conditions and

teacher-principal trust (Bryk et al., 2010). Principal leadership drives both teacher working

conditions (Johnson, 2006) and teacher-principal trust (Bryk & Schneider, 2002; Tschannen-

Moran, 2014b). Both of these associations are bidirectional. High quality teacher working

conditions facilitate principal leadership (Bryk et al., 2010), and high levels of teacher-principal

trust makes it easier for principals to act in a way that will build more trust (Tschannen-Moran,

2014a).

As shown in Figure 1, Teacher working conditions and teacher-principal trust are also

linked through a bidirectional association. We follow Hoy and Miskel (2008) in defining teacher

working conditions as aspects of school climate and teacher-principal trust as an aspect of school

culture. School climate and culture are distinct but related variables that can be thought of as the

"personality" of the school and the "feel" of the school, respectively (Hoy & Miskel, 2008).

School climate manifests in teachers' collective perceptions of school working conditions, while

school culture manifests in shared norms, values, and assumptions (Hoy & Miskel, 2008).

Though a school's culture and climate are interrelated, this study focuses on the unidirectional

relation between teacher working conditions and teacher-principal trust since principals can more

easily influence school climate variables than school culture variables (Hoy & Miskel, 2008).

Given the existence of theory and initial evidence for associations, the next step needed is to

conduct an empirical examination of the extent to which teacher working conditions contribute

to teacher-principal trust. Understanding the contributions of unique teacher working conditions to teacher-principal trust could help identify potential points of intervention for improving teacher-principal trust.

The Current Study

The MET study provides a unique opportunity to explore the association between individual teacher working conditions and teacher-principal trust in a large national sample of teachers. We first established the factor structure of teacher working conditions in this data set prior to exploring the primary research question. Therefore, the first research question asked: What are the distinct teacher working conditions in a large, national sample of teachers and schools? We hypothesized that teachers in this data set would confirm the existence of seven distinct factors: community support and involvement, facilities and resources, instructional support, manageable demands on time, professional development, student conduct management, and teacher leadership (Swanlund, 2011).

The second research question asked: What are the contributions of teachers' perceptions of teacher working conditions to teacher-principal trust the following year (after controlling for baseline trust from the previous school year)? We hypothesized that each teacher working condition would be significantly and positively related to teacher-principal trust after controlling for baseline trust. Because this is an exploratory study and these relations have not been examined previously, we did not make specific hypotheses about which specific teacher working conditions would have the greatest associations with teacher-principal trust.

Method

This study used data collected for the Measures of Effective Teaching (MET) Project, one of the largest education studies conducted in the United States. The MET project was funded

by a grant from the Bill and Melinda Gates Foundation. The purpose of the MET Project was to identify multiple measures and tools that, taken together, provide a reliable and accurate picture of what effective teaching looks like (Kane & Staiger, 2012). The MET research team used opportunity sampling to enroll teacher participants in six large urban school districts in Colorado, Florida, New York, North Carolina, Tennessee and Texas (Kane & Staiger, 2012). Researchers collected a variety of data from teachers between 2009-2011 including classroom observations and teacher surveys at the end of each school year.

Participants

Teachers were included in the current study if they had completed at least one teacher survey and if they taught in grades 4-8 during the first year of the study. Teachers of students in grades 4-8 were chosen because of existing work indicating different distinct teacher working conditions (Ladd, 2011) and different impacts of principal leadership on working conditions (Bryk et al., 2010; Leithwood et al., 2004; Seashore-Louis, Wahlstrom, Leithwood, & Anderson, 2010; Sebastian & Allensworth, 2012) for teachers in high schools compared to teachers in elementary and middle schools.

The final sample of teachers consisted of 1,625 fourth through eighth grade teachers in 229 schools in Charlotte, Dallas, Denver, Hillsborough, Memphis or New York City. Teachers were distributed fairly evenly across grade levels, with between 256 and 367 teachers teaching grades 4-8. The majority of the teachers were female (81.5%; n = 1324). Twenty-eight percent (n = 450) had a Master's degree or higher. On average, teachers had about ten years of experience but variability was considerable (mean = 10.13 years, range = 0 – 46 years). Fifty-eight percent of teachers were Caucasian/White (n = 942), 31% were African American/Black (n = 507), 5% were Hispanic (n = 87), and 2% identified as Other (n = 33).

Procedures

The MET research team collected data during a two-year period from 2009 - 2011. Teacher demographic information were garnered from district data. Teacher reports of teacher working conditions and trust in their principal were collected through two teacher surveys: the *Teacher Working Conditions Survey (TWCS)* and the *Teacher Web Survey (TWS)*[i]. The surveys were distributed to teachers one year apart; the TWCS in Spring 2010, and the TWS in Spring 2011. Both surveys were administered through confidential online systems.

Measures

Teacher Working Conditions Survey (TWCS). The TWCS (Bill and Melinda Gates Foundation, 2013) is a 232-item survey that asked teachers to report on the quality and characteristics of their school environment and the availability of supports for improved teaching and learning (Clifford et al., 2012). The TWCS included 58 items that had been found to describe seven distinct teacher working conditions in a previous psychometric analysis: *Community Support and Involvement, Facilities and Resources*, *Instructional Practices and Support*, *Manageable Demands on Time*, *Professional Development*, *Student Conduct Management* and *Teacher Leadership* (Swanlund, 2011).

Community Support and Involvement is an eight-item measure (α = .89) that represents the quality of the relationship between the school and the community ("The community we serve is supportive of this school"), and the school and parents ("Parents/guardians support teachers, contributing to their success with students"). This measure also captures the communication and collaboration between school and families ("Parents/guardians are influential decision-makers in this school").

     Facilities and Resources is a nine-item measure (α = .85) that describes the physical environment of the school ("The school environment is clean and well maintained") and the resources related to instructional needs that are available for teachers ("Teachers have sufficient access to appropriate instructional materials").

     Instructional Practices and Support is a five-item measure (α = .75) that captures the professional support available for teachers outside of professional development. This measure includes items on whether teachers work in professional learning communities to align instructional practices ("Teachers work in professional learning communities to develop and align instructional practices"), whether teachers are encouraged to try new approaches ("Teachers are encouraged to try new things to improve instruction"), and whether teachers use assessment data ("Teachers use assessment data to inform their instruction").

     Manageable Demands on Time is a seven-item measure (α = .80) that assesses whether there is sufficient instructional time ("Teachers have sufficient instructional time to meet the needs of all students"), planning time ("The non-instructional time provided for teachers in my school is sufficient"), and time for collaboration with other teachers ("Teachers have time available to collaborate with colleagues").

     Professional Development is a 12-item measure (α = .93) that describes the type and quality of professional development programs in the school that support instruction ("Professional development enhances teachers' ability to implement instructional strategies that meet diverse student learning needs").

     Student Conduct Management is a six-item measure (α = .88) that captures the safety of the work environment ("The faculty work in a school environment that is safe") and the school-

level expectations for student conduct ("Students at this school understand expectations for their

conduct").

Teacher Leadership is a seven-item measure (α = .92) that captures both the

professionalism of the faculty ("Teachers are recognized as educational experts"), the degree that

teachers work well together ("The faculty has an effective process for making group decisions to

solve problems"), and teacher leadership ("Teachers are effective leaders in this school").

Teachers were asked to rate each item on a scale from 1 (*strongly disagree)* to 5 (*strongly*

agree). For the analyses in this paper, the items on the TWCS were treated as categorical

variables due to their non-normal distributions, which can diminish correlations and increase

measurement error (Muthén, 1984).

Baseline Trust. The TWCS contained an item that asked teachers to evaluate whether

"There is an atmosphere of trust and mutual respect in this school" on a 5-point scale from

strongly disagree to strongly agree. This item was used as a proxy measure for initial teacher-

principal trust. Descriptive statistics for this item are provided in Table 3.

Teacher Web Survey (TWS). The TWS (Bill and Melinda Gates Foundation, 2013) is a

48-item survey that was created specifically for use in the MET Project. The TWS asked teachers

to report on current evaluation practices in their school and in their trust in the principal. Twelve

items on this survey asked teachers to reflect on the feelings of trust that they have in their

principal (α = .96). Sample items include: "I can usually trust my principal to do what is good for

me" and "Given my principal's track record, I see no reason to doubt his or her competence".

Teachers rated each item on a scale from 1 (*strongly disagree)* to 5 (*strongly agree)*. Similar to

items on the TWCS, these items were treated as categorical due to the non-normality of their

distributions (Muthén, 1984).

Data Analyses

Data analysis consisted of three steps. In the first step, preliminary analyses were conducted that included examining missingness, descriptive statistics, correlations among variables, multicollinearity among variables and both univariate and multivariate outliers. All preliminary analyses were conducted using SPSS 20.0. In the second step, confirmatory factor analyses (CFA) in a structural equation model (SEM) framework were used to analyze the factor structures of the TWCS and the TWS. The purpose of this was to create teacher working conditions variables and a teacher-principal trust variable for use in subsequent analyses. In the third step, a path analysis within an SEM framework was used to evaluate the associations between each teacher working condition and the teacher-principal trust outcome. SEM is a useful method for studying relations among different variables as these models allow researchers to test multiple hypothesized associations among both observed and latent variables simultaneously (Lei & Wu, 2007). One advantage of SEM over conventional regression analyses is that SEM has more flexible assumptions and calculates all parameters simultaneously, thus providing a test of overall model fit to the data, in addition to path coefficients (Farrell, 1994; Senn, Epsy, & Kaufmann, 2004). SEM was performed in *Mplus* version 7.0 (Muthén & Muthén, 2012).

To maximize the sample, we included all teachers who had completed at least one of the two teacher surveys (n = 1,625). There were 1,488 teachers who responded to the TWCS and 814 teachers who responded to the TWS. Taking into account the amount of missing data as well as the non-normal distribution due to the categorical nature of the data, we used maximum likelihood estimation with robust standard errors (MLR) for all analyses (Muthén & Muthén, 2012). The MLR estimator does not assume that data is normally distributed (Yuan & Bentler, 2000). MLR uses Full Information Maximum Likelihood (FIML) which makes maximal use of

all data available from every subject in the sample when there are missing values, to calculate

parameters with robust standard errors (Enders, 2010). This procedure assumes that data are

missing at random (MAR) (Muthén & Muthén, 2012). Even if data are not MAR, this procedure,

where missing values are handled in a similar way to multiple imputations, typically yields less

biased estimates than listwise deletion (Enders, 2010).

Additionally, all models were specified using the TYPE = COMPLEX function in Mplus

to account for the nested structure of the data (e.g., teachers within schools) when computing

standard errors and χ^2 values. This function maintains a single level of analysis while adjusting

for the non-independence of observations.

Construct Validity. Two CFAs were conducted to: (1) replicate the seven-factor

structure of the teacher working conditions measured on the TWCS (Swanlund, 2011); and (2)

test a one-factor teacher-principal trust model comprised of items from the TWS. Model fit was

assessed and compared using several different fit indices in addition to the chi-square value and

associated degrees of freedom. These included Bentler's comparative fit index (CFI; Bentler,

1990), the Tucker Lewis index (TLI; Tucker & Lewis, 1973), the root mean square error of

approximation (RMSEA; Steiger & Lind, 1980). The CFI measures how well the current model

fits in relation to a baseline model (McDonald & Marsh, 1990) while the RMSEA measures the

amount of discrepancy between the collected data and the specified model (Browne & Cudeck,

1993). TLI and CFI values of .95 or greater are considered to be a good fit (Bentler, 1990;

Tucker & Lewis, 1973) and an RMSEA value of .05 or lower is considered a good fit (Steiger,

Shapiro, & Browne, 1985).

Path Analysis. Items that were retained during the CFA were aggregated to create

composite variables of distinct teacher working conditions or teacher-principal trust. Composite

scores were used instead of factor scores because the results were the same and composites are easier to interpret. Descriptives were run on these composites using SPSS 20.0. These composites were then used to examine the unique associations among the seven teacher working conditions subscales and teacher-principal trust (see Figure 2).

Results

Preliminary Analyses

Preliminary analyses indicated the data met the necessary assumptions for carrying out the analytic plan. There was significant missing data, a common issue with longitudinal designs. For paired variables that were examined in the model, data coverage ranged from 40.8% to 91.6%. Independent t-tests revealed that teachers who participated in both surveys were less likely to have a master's degree [$t(1280) = 2.56, p = .01$] and had a higher degree of baseline trust [$t(1481) = -3.90, p < .01$] as compared to teachers who completed just one survey. There were no differences between teachers in the two groups in terms of gender, race, or years of experience teaching. We treated missing data as missing at random for subsequent analyses (Rubin, 1976).

CFA of the TWCS

We conducted a CFA on the 58 teacher working conditions items on the TWCS survey that assessed the seven working conditions of interest. Items were not allowed to crossload in the CFA; however, the seven teacher working conditions factors were allowed to covary. Three items on the *Instructional Support* and one item on the *Student Conduct Management* subscales had poor fit. These items were removed from all further analyses. Modification indices indicated that some of the items within each of the subscales were correlated. The measurement model was modified accordingly to improve model fit (Kline, 2011). The modified model was used in

subsequent analyses. Figure 3 shows the final CFA model that was tested. Items and their factor

loadings are presented in Table 1.

Overall, the full measurement model provided good model fit, $\chi^2_{(1320)} = 3118.59$, $p < .001$,

CFI = .95, TLI = .94, and RMSEA = .03 (90% CI = .029 - .032). All factor loading were

statistically significant (p < .001), indicating that items were significantly associated with their

latent constructs. Factor loadings ranged from .48 to .81, suggesting that items adequately

reflected their underlying latent factors (Sakiz, Pape, & Hoy, 2012). R^2 values were moderate,

ranging from .23 to .68, which implies that the items were reasonably reliable in measuring the

latent teacher working conditions variables in the model (Cohen, 1988).

Bivariate Pearson correlations between the seven subscales ranged from $r = .40$ to .67

(Table 3). This indicated that each scale seemed to measure a distinct construct, despite some

overlap of the constructs. In addition, the seven teacher working conditions subscales had good

internal consistency reliability ($\alpha = .75 - .93$), which implied that participant responses were

consistent across the items within each subscale (Kline, 2011).

Based on the results of this CFA, items within each subscale were aggregated to create a

composite score for each of seven teacher working conditions. Descriptive statistics and bivariate

correlations for each of these independent variables are presented in Table 3. Average scores on

each teacher working condition ranged from 3.21 to 3.74, with standard deviations ranging from

.78 to .96.

CFA of the TWS

To create the dependent teacher-principal trust variable, we conducted a CFA on the 12

items on the TWS that asked teacher to reflect on the trust relationship that they had with their

principal. These items reflected different facets of trust described in the literature: respect,

regard, integrity, competence, openness (Bryk et al., 2010; Tschannen-Moran & Hoy, 1998). We

conducted a CFA to test whether these items all reflected one latent variable of teacher-principal

trust. One item, which had poor fit, was removed from subsequent analyses. Modification indices

indicated that some of the items within each subscale were correlated. The measurement model

was modified accordingly to improve model fit (Kline, 2011). Figure 4 shows the final CFA

model that was tested. Items and their factor loadings are given in Table 2.

Overall, the full measurement model provided excellent model fit, $\chi^2_{(41)} = 119.46$, $p <$

.001, CFI = .99, TLI = .98, and RMSEA = .048 (90% CI = .039 - .059). All factor loading were

statistically significant (p < .001) and ranged from .73 to .92. R^2 values were high, ranging from

.54 to .84. In addition, this scale had a strong internal consistency reliability of α = .96. All of

these findings suggest that these eleven items provide a good measure of the latent construct of

teacher-principal trust.

Based on the results of this CFA, these 11 items were aggregated to create a composite

score for teacher-principal trust. Descriptive statistics for this dependent variable are presented in

Table 3. Average teacher-principal trust was 3.66, with a standard deviation of .92.

Path Analysis

To evaluate the association between teacher working conditions and teacher-principal

trust we ran a path model design that included a hypothesized path from each teacher working

condition to teacher-principal trust, as shown in Figure 2. The teacher working conditions were

allowed to correlate with each other. The demographic variables of race, gender, master's degree

attained, years of experience, grade level, district, and baseline trust were all added to the model

as covariates. However, for the sake of parsimony, baseline trust was the only covariate retained

in the final model, as the other covariates were unrelated to teacher-principal trust when baseline

trust was included. The final model was fully saturated, and thus did not yield fit statistics.

The results of this path analysis are described in Table 4. Baseline trust and the *Teacher*

Leadership teacher working condition were positively associated with teacher-principal trust

beyond the effect of the other teacher working conditions. A one standard deviation increase in

teacher leadership related to a .15 standard deviation increase in teacher-principal trust. In

contrast, the remaining working conditions did not relate significantly to teacher-principal trust

after controlling for baseline trust and teacher leadership. Overall, the structural model explained

26% of the variance in teacher-principal trust. When baseline trust was not included in the

model, the teacher working conditions explained 25% of the variance in teacher-principal trust.

Discussion

There were two main goals of this study: to understand the factor structure of teacher

working conditions in a large national sample of fourth to eighth grade teachers, and to

investigate the relation between specific teacher working conditions and teacher-principal trust.

Findings from the factor analysis confirmed seven unique teacher working conditions:

community support, facilities and resources, instructional support, manageable demands on time,

professional development, student conduct management and teacher leadership. Findings

examining the relation between each of these seven specific teacher working conditions and

teacher-principal trust showed that teacher leadership made significant contributions to teacher-

principal trust the following year. Teacher leadership explained 25 percent of the variance in

teacher-principal trust, indicating a sizeable contribution. Findings showed no statistically

significant relation among the other six teacher working conditions and teacher-principal trust.

Although baseline trust related significantly to teacher-principal trust, teacher leadership

accounted for a majority of the variance in teacher-principal trust, indicating the importance of teacher leadership and demanding further attention to this important construct.

Teacher-principal trust arises from the combination of the principal's focus on both the task-oriented and the interpersonal dimensions of leadership (Tschannen-Moran & Gareis, 2015). The task-oriented dimension includes the structuring of teachers' working conditions (Leithwood et al., 2004). However, evaluating this task-oriented dimension is difficult because principals are expected to carry out such a wide variety of functions at their schools, so understanding the consequences of these tasks requires attention to the many facets of principals' roles (Council of Chief State School Officers, 2008; Sebastian & Allensworth, 2012). Not all working conditions are equivalently important for cultivating teacher-principal relational trust. The present study draws attention to the ways in which principals encourage and rely upon teachers at the school to make decisions about educational issues as being more related to teacher-principal trust than the ways in which principals structure professional development offerings or facilitate relationships between the school and community members. This study is unique because we leveraged a large national sample of over 1500 teachers in more than 220 schools in six large urban districts to explore the specific contributions of teachers' perceptions of teacher working conditions to teacher-principal trust. This work provides empirical evidence supporting the development and evaluation of approaches and programs that teach principals to enhance teacher leadership in their schools.

Description of Teacher Working Conditions

The findings confirmed seven distinct teacher working conditions found in prior studies: community support, facilities and resources, instructional support, manageable demands on time, professional development, student conduct management, and teacher leadership (Swanlund,

2011). These seven working conditions have been widely measured through the Teaching, Empowering, Leading, and Learning (TELL) survey instrument, which originated from the Governor's Teacher Working Conditions Initiative in North Carolina (2002-2009). Modified versions of the TELL survey have been given to all teachers in North Carolina, Massachusetts, New York, and several other states, and is being used as a component of principal evaluation by several states and school districts (Clifford et al., 2012; Guilfoyle, 2013). It is worth noting that the TELL survey also includes an eighth teacher working condition: principal leadership (Ladd, 2011; Swanlund, 2011). We did not include principal leadership items in our analyses, as we consider principal leadership as the driver of the other working conditions (Bryk et al., 2010; Johnson, 2006). In addition to being beyond the scope of the present study, we were not able to test this theoretical link due to the timing of the data collection. Teachers responded to principal leadership items in the same survey in which they were asked about their perceptions of teacher working conditions.

Since the TELL survey is so widely used, this study provides some valuable information about average teacher working condition scores in this large national sample of fourth through eighth grade teachers, in addition to providing more evidence about the validity and reliability of the factor structure of this survey. Average teacher perceptions of individual teacher working conditions ranged from 3.21 to 3.74. The average teacher response appears to be in the mid-range (between "don't know" and "agree"). There was large variability in scores across teachers, with sizeable standard deviations ranging from .78 to .96. Attention to these teacher working conditions is important given evidence that teacher working conditions have been linked to teachers' retention or attrition decisions and student achievement outcomes (Ferguson & Hirsch,

2014; Johnson et al., 2012; Kraft & Papay, 2014; Ladd, 2009; Loeb et al., 2005; Pogodzinski et al., 2012).

Counter to hypotheses, teacher leadership was the only teacher working condition that significantly related to teacher-principal trust. The other six teacher working conditions (community support, facilities and resources, instructional support, manageable demands on time, professional development, and student conduct management) were not associated with teacher-principal trust when baseline trust was taken into account. Due to the large sample size in this study, it is unlikely that the magnitude of the association between the other working conditions and teacher-principal trust was too small to detect. However, there are a few possible explanations for these findings. One possibility is that teacher leadership is consuming a large part of the variance of the other working conditions because teachers who feel like they have more influence over school decisions are more likely to perceive the other working conditions more positively (Wahlstrom & Louis, 2008). There is some support for this theory in this dataset as other teacher working conditions (student conduct management and instructional support) were significantly positively related to teacher-principal trust when teacher leadership was not included in the model.

Another explanation for these findings is that teachers mainly decide whether to extend trust to their principal based on whether they feel like their principal is extending trust to them and that the other six teacher working conditions are relatively less important in teachers' decisions about whether to trust their principal. The importance of reciprocity in the creation of trust is supported in the literature (Tschannen-Moran & Hoy, 2000). Another possibility is that teachers do not hold their principal responsible for the quality of these six working conditions, and thus their trust in their principal is not affected by their view of these working conditions.

This possibility is less likely given previous work by Johnson (2006) and Ladd (2011) that suggests that teachers do consider principals to be the drivers of teacher working conditions. Though there are different possible explanations for this finding, the important point is that there was a significant positive association between teacher leadership and teacher-principal trust. We explore this association in more detail in the following section.

Teacher Leadership and Teacher-Principal Trust

Teachers who perceived a higher quality of teacher leadership in their school were more likely to report higher levels of trust their principal. This relation between teacher leadership and teacher-principal trust is consistent with other research on distributed leadership, defined as teachers' influence over and participation in school wide decisions, which links effective distributed leadership with higher levels of trust (Short, Greer, & Melvin, 1994; Spillane, Halverson, & Diamond, 2001; Tschannen-Moran, 2001; Wahlstrom & Louis, 2008). The specific teacher leadership items given in Table 1 provide examples of principal behaviors that appeared to produce trust. For instance, principals engendered trust by creating leadership roles for teachers and encouraging teachers' participation in those roles, asking teachers for their input in making decisions about educational issues and instructions, and working collaboratively with the faculty to solve problems.

Teacher leadership can also be thought of as the principal sharing and delegating control with teachers, which is important for building trust (Tschannen-Moran & Hoy, 2000). By sharing control, managers demonstrate significant respect for, and trust in, their employees (Rosen & Jerdee, 1977). Trust tends to be reciprocal in nature: when teachers feel the principal trusts them, they are more likely to trust the principal in return (Tschannen-Moran & Hoy, 2000). Our study adds to the relational trust literature using a much larger than typical sample of teachers.

Limitations

A few limitations of this study warrant mention. The first pertains to constraints of the MET study. The MET study used opportunity sampling of participants, which limits the generalizability of the findings. Additionally, the MET study examines the natural variation that exists among teachers as opposed to introducing an intervention; thus, these analyses do not allow for causal inference. We must be careful in interpreting our findings. There is an association between teacher leadership and teacher-principal trust, however we cannot conclude that higher quality teacher leadership caused higher teacher-principal trust relationship. It could be that those principals who are good at promoting teacher leadership are also good at cultivating trust. Controlling for baseline levels of trust partially ameliorates this issue as a confounding variable. However, due to the constraints of the data, we were not able to control for initial teacher-principal trust, which might differ from baseline trust. A second limitation stems from using a secondary data set. The MET dataset does not include school level measures (e.g., school size or demographics). Thus analyses could not take these key factors into account, despite prior research suggesting their importance (Bryk et al., 2010; Lee & Loeb, 2000). Future studies should consider these key school-level conditions. Teacher leadership may influence teacher-principal trust differently depending on school size or the presence of a high-poverty student population. A third limitation is that the data do not lend themselves to an understanding of the mechanisms of how teacher leadership and teacher-principal trust are related. Observational data and qualitative interviews could have helped us understand what principals are doing to manage teacher leadership. Despite these limitations, this study provides valuable information about teacher working conditions associated with teacher-principal trust, a vital ingredient for positive school change (Bryk et al., 2010).

Implications and Next Steps

Principals have many responsibilities (Council of Chief State School Officers, 2008; Sebastian & Allensworth, 2012). However, principals do not always feel they have sufficient authority and resources to successfully do their job and work long hours to fill that gap (DiPaola & Tschannen-Moran, 2003). Due to the demands on principals' time, it is unrealistic that they will be able to simultaneously improve *every* teacher working condition. The results of our study indicate that higher ratings of teacher leadership related to higher levels of teacher-principal trust the following year, even after accounting for baseline trust. This suggests that principals inundated with a multitude of tasks could direct their energy towards enhancing the quality of teacher leadership within their school.

This empirical evidence points to a need for the development and testing of programs designed to enhance teacher leadership. For such programs, it is important that the links between activities and enhanced teacher leadership are explicit. In the design of these programs, the link between participating in the program and enhanced teacher-principal trust should be tested. *Leading Together* (LT), which focuses on enhancing collaboration and building adult community, is an example of such a program that recently completed its pilot stage of development. The pilot study suggested that when LT was implemented successfully, it both improved the collective efficacy of teachers (Paxton, Leis, & Rimm-Kaufman, *under review*) and teacher-teacher and teacher-principal trust within the school (Leis, Rimm-Kaufman, Paxton, & Sandilos, *under review*).

Due to the demands of the principalship, principals cannot focus solely on enhancing the quality of teacher leadership in their school (Hoy & Miskel, 2008; Sebastian & Allensworth, 2012). However, since teacher-principal trust acts as a lubricant for improving other teacher

working conditions that enhance student outcomes (Bryk et al., 2010), it is important for

principals to put a sincere effort into building trust with teachers. This large empirical study

suggests that one way principals can build trust with teachers is by first focusing on facilitating

high quality teacher leadership.

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Table 1

Teacher Working Conditions Items and Factor Loadings

	Item	Factor Loading
Community Support and Involvement		
CSI2	This school maintains clear, two-way communication with the community	.782
CSI3	This school does a good job of encouraging parent/guardian involvement	.773
CSI5	Parents/guardians know what is going on in this school	.772
CSI8	The community we serve is supportive of this school	.704
CSI6	Parents/guardians support teachers, contributing to their success with students	.691
CSI7	Community members support teachers, contributing to their success with students	.683
CSI1	Parents/guardians are influential decision-makers in this school	.640
CSI4	Teachers provide parents/guardians with useful information about student learning	.584
Facilities and Resources		
FR5	Teachers have sufficient access to a broad range of professional support personnel.	.666
FR1	Teachers have sufficient access to appropriate instructional materials.	.657
FR4	Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.	.648
FR8	The physical environment of classrooms in this school supports teaching and learning.	.625
FR7	Teachers have adequate space to work productively.	.592
FR3	Teachers have access to reliable communication technology, including phones, faxes and email.	.588
FR2	Teachers have sufficient access to instructional technology, including computers, printers, software and Internet access.	.580
FR6	The school environment is clean and well maintained.	.525
FR9	The reliability and speed of Internet connections in this school are sufficient to support instructional practices.	.481

Table 1 Continued

	Item	Factor Loading
Instructional Supports		
IS5	Provided supports (i.e., instructional coaching, professional learning communities, etc.) translate to improvements in instructional practices by teachers.	.656
IS6	Teachers are encouraged to try new things to improve instruction.	.641
IS7	Teachers are assigned classes that maximize their likelihood of success with students.	.591
IS4	Teachers work in professional learning communities to develop and align instructional practices	.543
IS8	Teachers have autonomy to make decisions about instructional delivery (i.e., pacing, materials and pedagogy).	.521
Professional Development		
PD8	In this school, follow up is provided from professional development.	.782
PD9	Professional development provides ongoing opportunities for teachers to work with colleagues to refine teaching practices.	.778
PD11	Professional development enhances teachers' ability to implement instructional strategies that meet diverse student learning needs.	.759
PD10	Professional development is evaluated and results are communicated to teachers.	.735
PD5	Professional development is differentiated to meet the individual needs of teachers.	.735
PD12	Professional development enhances teachers' abilities to improve student learning.	.731
PD6	Professional development deepens teachers' content knowledge.	.710
PD4	Professional learning opportunities are aligned with the school's improvement plan.	.704
PD7	Teachers are encouraged to reflect on their own practice.	.675
PD1	Sufficient resources are available for professional development in my school.	.666
PD2	An appropriate amount of time is provided for professional development.	.638
PD3	Professional development offerings are data driven.	.593

Table 1 Continued

	Item	Factor Loading
Manageable Demands on Time		
MDT3	Teachers are allowed to focus on educating students with minimal interruptions.	.677
MDT7	Teachers are protected from duties that interfere with their essential role of educating students.	.674
MDT5	Efforts are made to minimize the amount of routine paperwork teachers are required to do.	.651
MDT4	The non-instructional time provided for teachers in my school is sufficient.	.585
MDT6	Teachers have sufficient instructional time to meet the needs of all students.	.562
MDT2	Teachers have time available to collaborate with colleagues.	.533
MDT1	Class sizes are reasonable such that teachers have the time available to meet the needs of all students.	.514
Student Conduct Management		
SCM4	School administrators consistently enforce rules for student conduct.	.781
SCM2	Students at this school follow rules of conduct.	.763
SCM5	School administrators support teachers' efforts to maintain discipline in the classroom.	.757
SCM1	Students at this school understand expectations for their conduct.	.700
SCM7	The faculty work in a school environment that is safe.	.697
SCM3	Policies and procedures about student conduct are clearly understood by the faculty.	.654
Teacher Leadership		
TL5	The faculty has an effective process for making group decisions to solve problems.	.825
TL6	How much do you agree or disagree with the following statement about teacher leadership in your school. In this school we take steps to solve problems.	.809
TL7	Teachers are effective leaders in this school.	.793
TL3	Teachers are relied upon to make decisions about educational issues.	.747
TL1	Teachers are recognized as educational experts.	.743
TL2	Teachers are trusted to make sound professional decisions about instruction.	.729
TL4	Teachers are encouraged to participate in school leadership roles.	.689

Table 2

Teacher-Principal Trust Items and Factor Loadings

Variable Name	Item	Factor Loading
TPT37	My principal shows good judgment when making decisions	.915
TPT47	I can usually trust my principal to do what is good for me	.884
TPT48	My principal is honest and truthful about job-related issues	.880
TPT24	My principal treats people fairly	.864
TPT23	Given my principal's track record, I see no reason to doubt his or her competence	.857
TPT15	I can rely on my principal to help me when I run into difficulties	.841
TPT5	My principal makes decisions in the best interests of the school	.822
TPT6	My principal approaches his/her job with professionalism and dedication	.811
TPT19	My principal and I share the same basic values	.805
TPT43	My principal applies the same rules for all teachers.	.781
TPT26	My principal wants to be known as someone who keeps promises and commitments	.732

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[i] Both surveys can be accessed in full through the MET website: http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/34345.

Table 3

Summary Statistics and Correlations

Variable	2	3	4	5	6	7	8	9	Min.	Max.	M	SD	N
1. Baseline Trust	.48	.47	.56	.46	.54	.61	.69	.41	1	5	3.34	1.28	1483
2. Community Support		.50	.46	.40	.48	.63	.55	.26	1	5	3.63	.84	1487
3. Facilities and Resources			.50	.56	.54	.56	.58	.32	1	5	3.74	.78	1488
4. Instructional Support				.56	.67	.52	.65	.37	1	5	3.64	.79	1487
5. Manageable Demands on Time					.50	.51	.55	.33	1	5	3.21	.84	1488
6. Professional Development						.52	.62	.34	1	5	3.62	.80	1488
7. Student Conduct Management							.64	.36	1	5	3.55	.96	1457
8. Teacher Leadership								.43	1	5	3.69	.91	1479
9. Teacher-Principal Trust									1	5	3.66	.92	814

Note. All correlations are significant at the $p < .01$ level (2-tailed). Baseline Trust was used as a covariate in all analyses. Variables 2 – 8 are the distinct teacher working conditions variables.

Table 4

Standardized Path Estimates for the Final Model

| Path	β	SE	*p*
Baseline Trust ➜Teacher-Principal Trust	.17	.06	.002
Community Support ➜Teacher-Principal Trust	-.05	.05	.354
Facilities and Resources ➜Teacher-Principal Trust	.04	.06	.439
Instructional Support ➜Teacher-Principal Trust	.11	.06	.068
Manageable Demands on Time ➜Teacher-Principal Trust	.08	.05	.114
Professional Development ➜Teacher-Principal Trust	.03	.05	.468
Student Conduct Management ➜Teacher-Principal Trust	.08	.06	.129
Teacher Leadership ➜Teacher-Principal Trust	.15	.07	.026
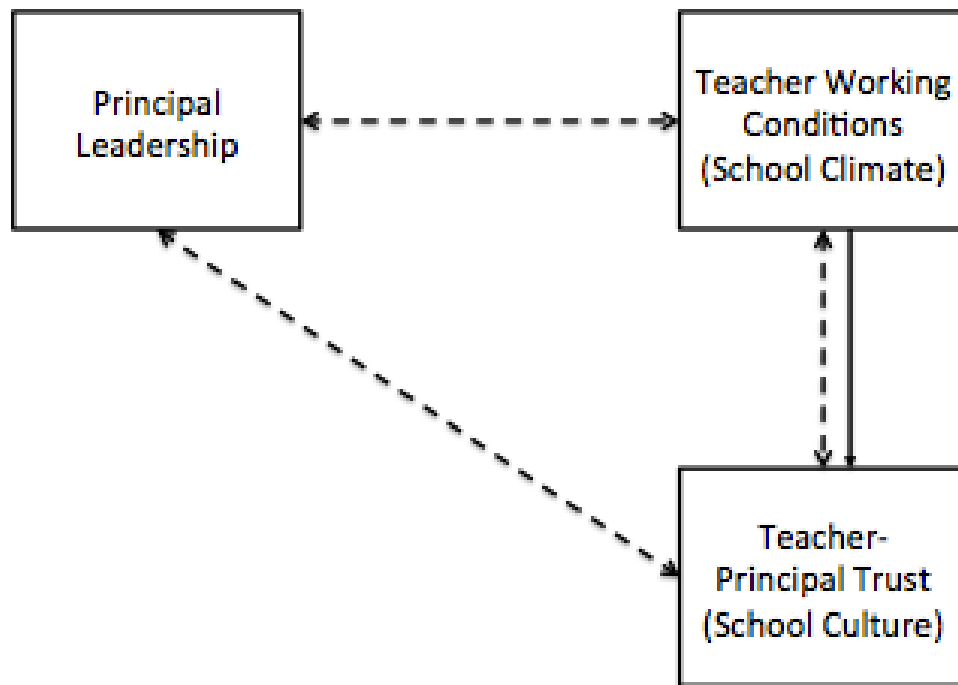
Figure 1. Theoretical framework linking teacher working conditions and teacher principal trust.

Principal leadership is the driver of both school climate (e.g., teacher working conditions) and

school culture (e.g., teacher-principal trust). The dashed lines represent the theoretical

bidirectional associations between the different constructs. The solid line represents the direction

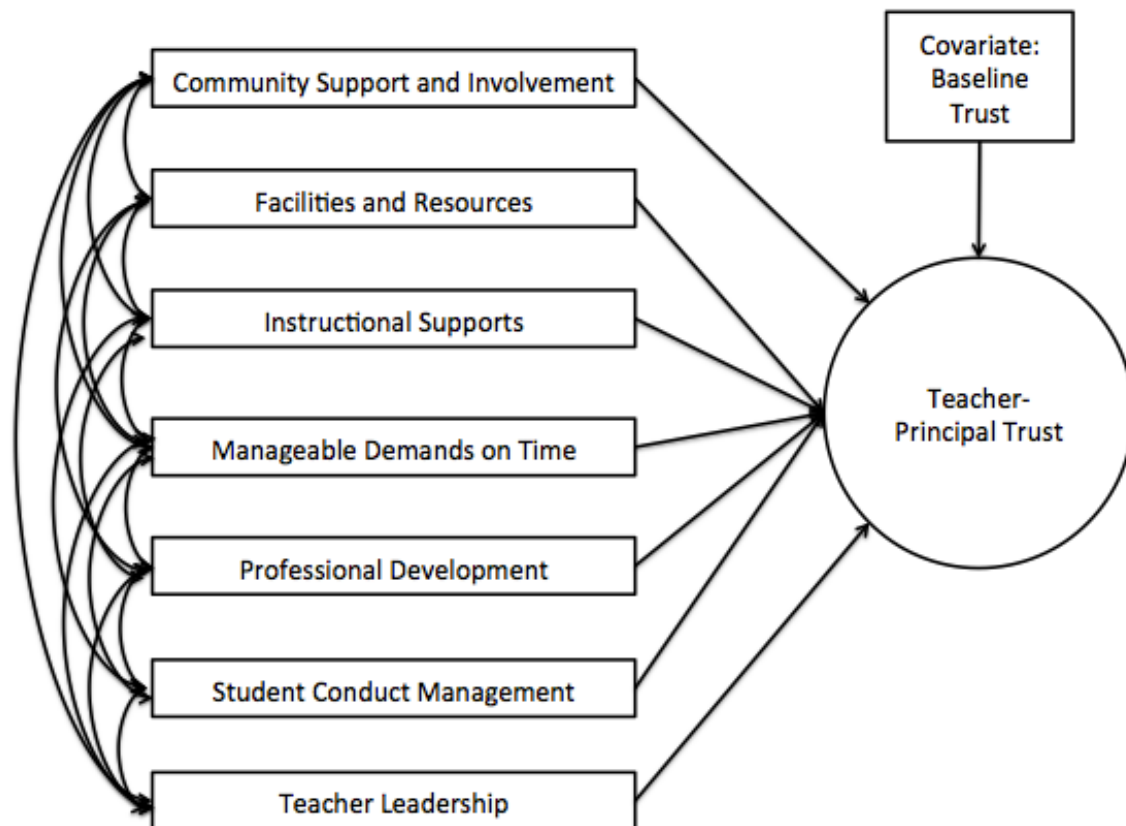of the association tested in this study.

Figure 2. Path analysis model used to test the associations between teacher working conditions and teacher-principal trust.

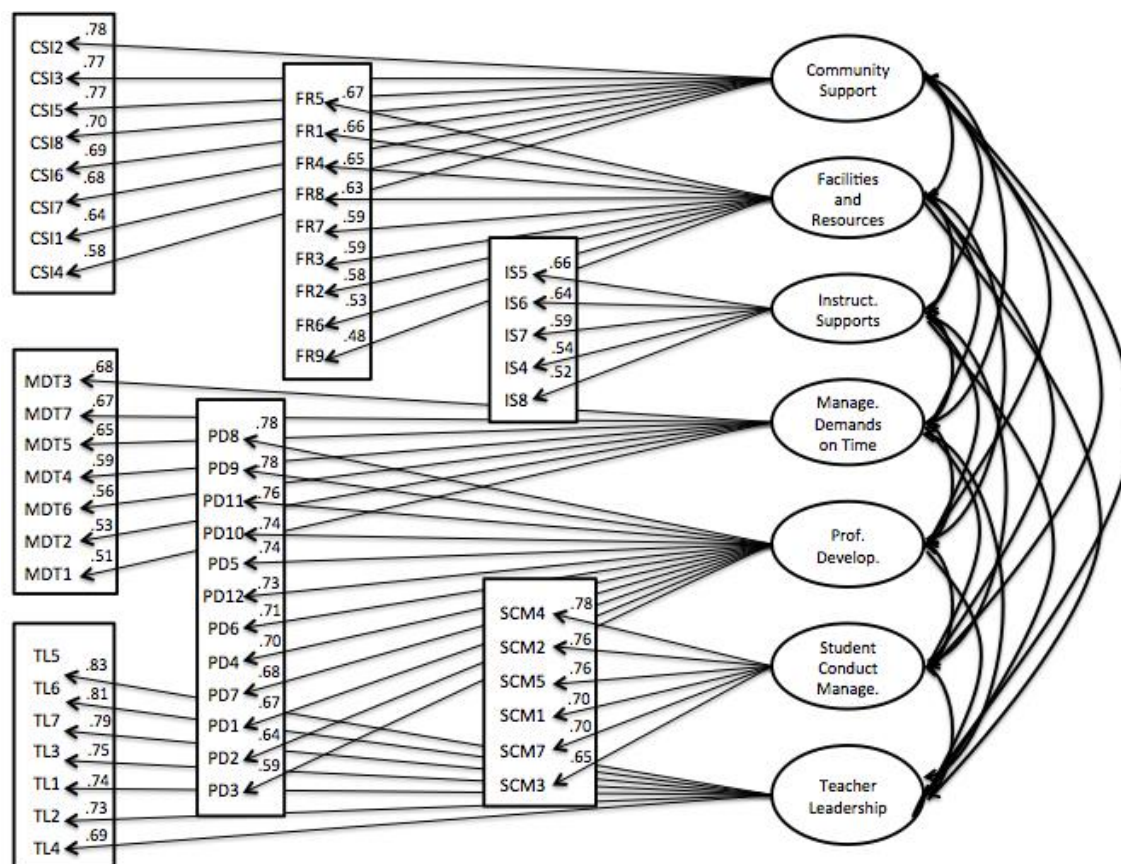*Figure 3.* Confirmatory factor analysis (CFA) of Teacher Working Conditions variables.

Individual items are listed in Table 1. Items were not allowed to crossload, but items within

variables were allowed to correlate. Correlations between variables are given in Table 3.
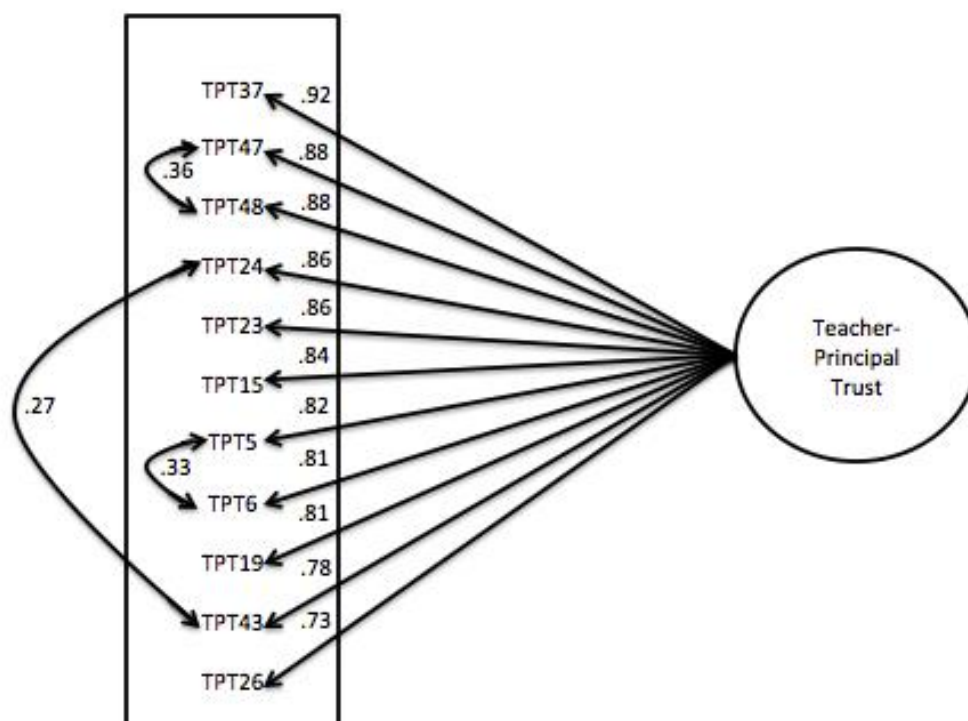
Figure 4. Confirmatory factor analysis (CFA) of teacher-principal trust variable.

Individual items are listed in Table 2.

APPENDIX A

MEASURES USED IN STUDY 1

Consortium on Chicago School Research. (2011). Public use data set. My Voice, My School
     Survey 2011. Chicago: Consortium on Chicago School Research.

Teacher-Principal Trust: 6 items (2 separate scales)

1. I trust the principal/director at his or her word (a)

2. I have confidence in the expertise of the principal/director (a)

3. I feel supported by the principal/director to try new ideas (a)

4. It's OK for staff members to discuss feelings, worries, and frustration with the
     principal/director (a)

5. The principal/ director supports my work (a)

6. To what extent do you feel respected by the principal/director at your school? (b)

     (a) Four-point scale: strongly disagree, disagree, agree, strongly agree

     (b) Four-point scale: not at all, a little, some, to a great extent

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The interviews do not have a source. Qualitative measures were created by Angela Henneberger
and Sara Rimm-Kaufman in June 2012 and edited by the Social Development Lab in May, 2013

Administrator and School Leader Final Interview Questions

1. Why did your school originally choose to participate in LT?

2. What do you think is the purpose of LT?

3. What goals for your school shifted or changed because of your experience with Leading
Together? (i.e., I was planning on X, but now I plan Y.)

4. What specific Leading Together activities has your school used? Please describe how the
activities were received by the group and what happened.

5. Are there elements of Leading Together that you think do not work for the adult community at your school? If so, what are they and why do they not work?

6. How much time does your school spend on LT, as in - How often does your LT team meet and, as a staff, how often do you spend time on Leading Together activities?

7. Can you describe the experience of working with members of your Leading Together team? And - Have you experienced changes in your school leadership group? If so, what changes did you notice? Are there other experiences about the group that you noticed?

8. Have you experienced changes in your relationship with other members of the adult community at your school? If so, please describe these changes.

9. Have the trust relationships changed between you and the other LT team members? Between you and other members of the staff? Between you and the principal?

10.   a) Do you think LT is enhancing or detracting from efforts to support student social and emotional learning at your school? If so, how?
        b) Do you think LT is enhancing or detracting from efforts to support students' academic learning at your school? If so, how?

11. Do you think that participating in LT was valuable for your school? Do you think it was valuable for you?

12. Do you think that the adults in your school view each other as being more or less effective in their work over the past two years? Do you think that LT has influenced those feelings of effectiveness?

13. There are a lot of different factors that influence the students at your school. For instance, some families instill a love for learning in their children and others do not. Some communities provide a lot of support for children whereas others do not. Considering the challenges and benefits that you encounter, do you think it is easier or harder to improve student outcomes compared to two years ago?

14. Did you like participating in LT? Would you recommend it to a friend or colleague? Why or why not?

15. Do you have any suggestions for improving the LT program? Are there any other additional comments about LT that you would like to share?

Site Teacher Final Interview Questions

1.   Please describe your schools' priorities.

2.   What activities do you see on a day-to-day basis that reflect those priorities?

3.   Tell me about the sense of adult community in your school, for example - do the adults at your school respect one another? Show personal regard for one another? Assume that each other are competent?

4.   What would you say about the integrity of the adults at your school?

5. Do you think that the adults in your school view each other as being more or less effective in their work over the past two years? Do you think that LT has influenced those feelings of effectiveness?

6. There are a lot of different factors that influence the students at your school. For instance, some families instill a love for learning in their children and others do not. Some communities provide a lot of support for children whereas others do not. Considering the challenges and benefits that you encounter, do you think it is easier or harder to improve student outcomes compared to two years ago?

7.   Relational trust refers to the relationships within your school. Tell me about the strength of the relational trust among adults in your school.

8.   Tell me about communication between the adults at your school. For example, how do adults talk and listen to one another? What does communication look like?

9.   Mindfulness practices are activities that individuals use for personal reflection. Does the adult community use any mindfulness practices within your school? If so, tell me about it.

(If they ask for clarification about mindfulness, say that it's, "Taking a moment to reflect on your personal processes, contemplation, renewal, those sorts of things.")

10.   a) Do you feel like there have been changes in the adult community in the last two years? If so, can you give examples of how the adult community has changed?
      b) Do you feel like your relationship with your principal has changed in the last two years? If so, can you give examples of how this relationship has changed?
      c) Do you feel like your relationship with the Leading Together team members has changed in the last two years? If so, can you give examples of how this relationship has changed?

11. Why did your school originally choose to participate in LT?

12. What do you think is the purpose of LT?

13. How often, as a staff, do you spend time on Leading Together activities?

14. What do you think were the most important exercises or activities that contributed to your learning?

15. Do you think that participating in LT was valuable for your school? Do you think it was valuable for you?

16. Did you like LT? Would you recommend it to a friend or colleague? Why or why not?

APPENDIX B

MEASURES USED IN STUDY 2

Consortium on Chicago School Research. (2011). Public use data set. My Voice, My School
          Survey 2011. Chicago: Consortium on Chicago School Research.

Teacher-Principal Trust: 6 items (2 separate scales)

1. I trust the principal/director at his or her word (a)

2. I have confidence in the expertise of the principal/director (a)

3. I feel supported by the principal/director to try new ideas (a)

4. It's OK for staff members to discuss feelings, worries, and frustration with the
          principal/director (a)

5. The principal/ director supports my work (a)

6. To what extent do you feel respected by the principal/director at your school? (d)

Teacher-Teacher Trust: 4 items

1. Teachers in this school trust each other (a)

2. It's OK in this school to discuss feelings, worries, and frustrations with other teachers (a)

3. Teachers respect other teachers who take the lead in school improvement efforts (a)

4. Teachers at this school respect those colleagues who are expert at their craft (a)

          (a) Four-point scale: strongly disagree, disagree, agree, strongly agree

          (b) Four-point scale: not at all, a little, some, to a great extent

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The interviews do not have a source. Qualitative measures were created by Angela Henneberger
and Sara Rimm-Kaufman in June 2012 and edited by the Social Development Lab in May, 2013

Administrator and School Leader Final Interview Questions

1. Why did your school originally choose to participate in LT?

2. What do you think is the purpose of LT?

3. What goals for your school shifted or changed because of your experience with Leading Together? (i.e., I was planning on X, but now I plan Y.)

4. What specific Leading Together activities has your school used? Please describe how the activities were received by the group and what happened.

5. Are there elements of Leading Together that you think do not work for the adult community at your school? If so, what are they and why do they not work?

6. How much time does your school spend on LT, as in - How often does your LT team meet and, as a staff, how often do you spend time on Leading Together activities?

7. Can you describe the experience of working with members of your Leading Together team? And - Have you experienced changes in your school leadership group? If so, what changes did you notice? Are there other experiences about the group that you noticed?

8. Have you experienced changes in your relationship with other members of the adult community at your school? If so, please describe these changes.

9. Have the trust relationships changed between you and the other LT team members? Between you and other members of the staff? Between you and the principal?

10.   a) Do you think LT is enhancing or detracting from efforts to support student social and emotional learning at your school? If so, how?
         b) Do you think LT is enhancing or detracting from efforts to support students' academic learning at your school? If so, how?

11. Do you think that participating in LT was valuable for your school? Do you think it was valuable for you?

12. Do you think that the adults in your school view each other as being more or less effective in their work over the past two years? Do you think that LT has influenced those feelings of effectiveness?

13. There are a lot of different factors that influence the students at your school. For instance, some families instill a love for learning in their children and others do not. Some communities provide a lot of support for children whereas others do not. Considering the challenges and benefits that you encounter, do you think it is easier or harder to improve student outcomes compared to two years ago?

14. Did you like participating in LT? Would you recommend it to a friend or colleague? Why or why not?

15. Do you have any suggestions for improving the LT program? Are there any other additional comments about LT that you would like to share?

Site Teacher Final Interview Questions

1.   Please describe your schools' priorities.

2.   What activities do you see on a day-to-day basis that reflect those priorities?

3.   Tell me about the sense of adult community in your school, for example - do the adults at your school respect one another? Show personal regard for one another? Assume that each other are competent?

4.   What would you say about the integrity of the adults at your school?

5. Do you think that the adults in your school view each other as being more or less effective in their work over the past two years? Do you think that LT has influenced those feelings of effectiveness?

6. There are a lot of different factors that influence the students at your school. For instance, some families instill a love for learning in their children and others do not. Some communities provide a lot of support for children whereas others do not. Considering the challenges and benefits that you encounter, do you think it is easier or harder to improve student outcomes compared to two years ago?

7.   Relational trust refers to the relationships within your school. Tell me about the strength of the relational trust among adults in your school.

8.   Tell me about communication between the adults at your school. For example, how do adults talk and listen to one another? What does communication look like?

9.   Mindfulness practices are activities that individuals use for personal reflection. Does the adult community use any mindfulness practices within your school? If so, tell me about it.

(If they ask for clarification about mindfulness, say that it's, "Taking a moment to reflect on your personal processes, contemplation, renewal, those sorts of things.")

10.   a) Do you feel like there have been changes in the adult community in the last two years? If so, can you give examples of how the adult community has changed?
        b) Do you feel like your relationship with your principal has changed in the last two years? If so, can you give examples of how this relationship has changed?
        c) Do you feel like your relationship with the Leading Together team members has changed in the last two years? If so, can you give examples of how this relationship has changed?

11. Why did your school originally choose to participate in LT?

12. What do you think is the purpose of LT?

13. How often, as a staff, do you spend time on Leading Together activities?

14. What do you think were the most important exercises or activities that contributed to your learning?

15. Do you think that participating in LT was valuable for your school? Do you think it was valuable for you?

16. Did you like LT? Would you recommend it to a friend or colleague? Why or why not?

APPENDIX C

MEASURES USED IN STUDY 3

Items from MET Teacher Web Survey:

Variable Name	Item
TQ5	My principal makes decisions in the best interests of the school
TQ6	My principal approaches his/her job with professionalism and dedication
TQ8	My principal's behavior is predictable
TQ15	I can rely on my principal to help me when I run into difficulties
TQ19	My principal and I share the same basic values
TQ23	Given my principal's track record, I see no reason to doubt his or her competence
TQ24	My principal treats people fairly
TQ26	My principal wants to be known as someone who keeps promises and commitments
TQ37	My principal shows good judgment when making decisions
TQ43	My principal applies the same rules for all teachers.
TQ47	I can usually trust my principal to do what is good for me
TQ48	My principal is honest and truthful about job-related issues

Note. Scored on a 5-point scale*:* 1 – strongly agree, 2 – agree, 3 – neither agree nor disagree, 4 – disagree, 5 – strongly disagree. Reverse scored on a 5-point scale: 1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, 5 – strongly agree

Items from TWC Survey:

Variable Name	Item
EML21TRUSTRESP	There is an atmosphere of trust and mutual respect in this school.
PDL21IMPLEMENT	Professional development enhances teachers' ability to implement instructional strategies that meet diverse student learning needs.
PDL21COLLEAGUE	Professional development provides ongoing opportunities for teachers to work with colleagues to refine teaching practices.
PDL21ENHANCE	Professional development enhances teachers' abilities to improve student learning.
PDL21FOLLOWUP	In this school, follow up is provided from professional development.

PDL21EVAL	Professional development is evaluated and results are communicated to teachers.
PDL21ALIGNSIP	Professional learning opportunities are aligned with the school's improvement plan.
PDL21DEEPEFFECT	Professional development deepens teachers' content knowledge.
PDL21DIFFERENT	Professional development is differentiated to meet the individual needs of teachers.
PDL21DATADRIVEN	Professional development offerings are data driven.
PDL21TIME	An appropriate amount of time is provided for professional development.
PDL21SUFFRES	Sufficient resources are available for professional development in my school.
PDL21REFLECT	Teachers are encouraged to reflect on their own practice.
EML21DECMAKE	Teachers are relied upon to make decisions about educational issues.
EML21TRUSTSOUND	Teachers are trusted to make sound professional decisions about instruction.
EML21EXPERTS	Teachers are recognized as educational experts.
EML21SOLVE	How much do you agree or disagree with the following statement about teacher leadership in your school. In this school we take steps to solve problems.
EML21PROCESS	The faculty has an effective process for making group decisions to solve problems.
EML21EFFLEADER	Teachers are effective leaders in this school.
EML21TCHLEADER	Teachers are encouraged to participate in school leadership roles.
FRL21COMM	Teachers have access to reliable communication technology, including phones, faxes and email.
FRL21INSTRTECH	Teachers have sufficient access to instructional technology, including computers, printers, software and Internet access.
FRL21ENVIRON	The physical environment of classrooms in this school supports teaching and learning.
FRL21SPACE	Teachers have adequate space to work productively.
FRL21OEQIP	Teachers have sufficient access to office equipment and supplies such as copy machines, paper, pens, etc.
FRL21APPMATERIAL	Teachers have sufficient access to appropriate instructional materials.
FRL21PROPERSON	Teachers have sufficient access to a broad range of professional support personnel.
FRL21RELINTERNET	The reliability and speed of Internet connections in this school are sufficient to support instructional practices.
FRL21CLEAN	The school environment is clean and well maintained.
SCL21LDRCONSIST	School administrators consistently enforce rules for student conduct.

SCL21EFFORTS	School administrators support teachers' efforts to maintain discipline in the classroom.
SCL21POLICYPROC	Policies and procedures about student conduct are clearly understood by the faculty.
SCL21EXPCONDUCT	Students at this school understand expectations for their conduct.
SCL21STUFOLLOW	Students at this school follow rules of conduct.
SCL21SAFE	The faculty work in a school environment that is safe.
SCL21TCHCONSIST	Teachers consistently enforce rules for student conduct.
CSL21KNOW	Parents/guardians know what is going on in this school.
CSL21ENCINVOLVE	This school does a good job of encouraging parent/guardian involvement.
CSL21SUPPORT	The community we serve is supportive of this school.
CSL21COMMUNIC	This school maintains clear, two-way communication with the community.
CSL21COMMSUCCESS	Community members support teachers, contributing to their success with students.
CSL21STUSUCCESS	Parents/guardians support teachers, contributing to their success with students.
CSL21INFOLEARN	Teachers provide parents/guardians with useful information about student learning.
CSL21INFLUENCE	Parents/guardians are influential decision-makers in this school.
IPL21SUPPORTS	Provided supports (i.e., instructional coaching, professional learning communities, etc.) translate to improvements in instructional practices by teachers.
IPL21PLCINSTR	Teachers work in professional learning communities to develop and align instructional practices
IPL21TRYNEW	Teachers are encouraged to try new things to improve instruction.
IPL21DATAINFORM	Teachers use assessment data to inform their instruction.
IPL21MAXSUCCESS	Teachers are assigned classes that maximize their likelihood of success with students.
IPL21AUTONOMY	Teachers have autonomy to make decisions about instructional delivery (i.e., pacing, materials and pedagogy).
IPL21LOCALDATA	Local assessment data are available in time to impact instructional practices.
IPL21STATEDATA	State assessment data are available in time to impact instructional practices.
TML21FOCUS	Teachers are allowed to focus on educating students with minimal interruptions.
TML21NONINSTIME	The non-instructional time provided for teachers in my school is sufficient.
TML21ROLE	Teachers are protected from duties that interfere with their essential role of educating students.

TML21PAPERWORK	Efforts are made to minimize the amount of routine paperwork teachers are required to do.
TML21MEETNEEDS	Teachers have sufficient instructional time to meet the needs of all students.
TML21COLLAB	Teachers have time available to collaborate with colleagues.
TML21CLSIZE	Class sizes are reasonable such that teachers have the time available to meet the needs of all students.

Note. All items were originally scored on a 5-point scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree, 5=don't know. Re-scored on 5-point scale: 1=strongly disagree, 2=disagree, 3=don't know, 4=agree, 5=strongly agree.