ABSTRACT: A number of scholars are exploring the district context in which schools are embedded. These studies suggest the importance of the district office as a support or constraint to the work of schools and offer strategies for building relations between district and site leaders. While this is an important task, what is frequently overlooked is that organizational improvement efforts are often socially constructed. Therefore, an analysis of social networks and trust between district and site leaders may provide additional insights into supports and constraints related to improvement. This case study uses social network and trust data to explore the underlying best practice relations between leaders in a mid-size underperforming urban school district. Results suggest weak network ties, low levels of trust, and a predictive relationship between trust and the reciprocal exchange of best practices related to improvement.

In the past decade, there has been an increasing national push for higher levels of performance and accountability. These efforts have been codified and emphasized in federal policies and programs, such as No Child Left Behind and, most recently, the American Recovery and Reinvestment Act of 2009, which devoted $4.35 billion to educational reform and innovation. The Race to the Top competition (part of the American Recovery and Reinvestment Act) relies heavily on local school districts to implement essential pieces of reform agendas. However, there is a relatively limited empirical base for understanding how these reform efforts diffuse throughout urban districts with a history of underperformance. Moreover, there is an assumption that these urban systems have

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the expertise, instructional capacity, and necessary social networks to successfully enact reform efforts.

Better understanding urban districtwide change has the potential to dramatically improve America’s educational outcomes. Currently, 50% of America’s high school dropouts come from just 12% of America’s high schools, located in an even smaller number of districts (Balfanz & Legters, 2004), many of which are urban systems. In the 2007–2008 school year, 30,000 schools failed to make adequate yearly progress (Hoff, 2009), and this list continues to grow, suggesting an urgent need for action. Educational leaders in these underperforming systems have been increasingly tasked and held responsible for developing and implementing reforms (Mintrop & Trujillo, 2005, 2007). Their efforts have typically focused on implementing formal structures, processes, and accountability levers to improve performance (Daly, 2009; Finnigan & Stewart, 2009) and have often resulted in inconsistent improvement (Mintrop & Sunderman, 2009).

Recent research suggests that attention to the relational linkages through which reform flows may be critical to understanding school improvement (Coburn & Russell, 2008; Daly, 2010; Daly & Finnigan, 2010, 2011; Daly, Moolenaar, Bolivar, & Burke, 2010; Finnigan & Daly, 2010; Johnson & Chrispeels, 2010; Penuel, Riel, Krause, & Frank, 2009). While the education community has begun to focus on the types of collaborative structures within schools (Harris & Chrispeels, 2006; McLaughlin & Talbert, 1993; Newmann & Wehlage, 1995; Stoll & Louis, 2007), improved relations across leaders in a school district may also be necessary to support complex districtwide improvement (Copland & Knapp, 2006; Daly & Finnigan, 2011; Finnigan & Daly, 2010).

This study builds on recent scholarship regarding social capital theory in the support of organizational change (Balkundi & Kilduff, 2005; Bartol & Zhang, 2007; Daly, 2010; Kilduff & Krackhardt, 2008; Mehra, Dixon, Brass, & Robertson, 2006). This inquiry uses two major dimensions of social capital to analyze the reform process within districts: structural, which refers to the ties, density, reciprocity, and overall properties of a social network, and relational, which refers to the quality of ties, described in terms of the norms, values, and expectancies shared by group members (Bourdieu, 1986; Halpern, 2005; Portes, 1998).

The structural elements of social capital in this study are examined through systematic exploration of the ties and overall network structure among leaders at different levels of the system. The relational component of social capital is examined through assessing the trust among district leaders, as trust has been identified as one of the most important affective norms characterizing a community (Nahapiet & Ghoshal, 1998). Previous
research has suggested that trust is critical in learning (Rotter, 1967), as it supports individuals to engage in risk taking and innovative behaviors associated with efforts at reform in a “safe” learning environment (Bryk & Schneider, 2002; Kensler, Caskie, Barber, & White, in press; Louis, Marks, & Kruse, 1996; Moolenaar, Daly, & Sleeegers 2011; Penuel, Fishman, Yamaguchi, & Gallagher, 2007). Social networks and trust as described are important elements in social capital theory (Fukuyama, 1995; Nahapiet & Ghoshal, 1998; Putnam, 1993), yet empirical evidence, particularly in district settings, is limited on the interrelations among social networks, trust, and urban educational leadership.

In exploring the gap around the interaction between relationships and trust in an underperforming urban district, we (1) analyze the social networks of leaders in this district in terms of sharing best practices from research, including the extent of reciprocal relationships; (2) examine the perceptions of relational trust for school and central office leaders; and (3) explore the association between reciprocal relations around best practices and trust. An in-depth exploration of the social capital between urban district leaders in the form of relationships and trust may enable better understanding of the limitations of districtwide organizational change under No Child Left Behind and Race to the Top. Moreover, although both forms of social capital (structural and relational) have been associated with positive reform efforts, our exploratory study integrates the two through a unique methodology and data presentation, thereby contributing to this area of research.

In building the foundation for the study, we provide a review of the current status and challenges facing underperforming schools and districts. We then explore the critical role of district offices in supporting reform and connect those efforts to the largely unexplored importance of networks and trust across district leaders that may facilitate or constrain the implementation of reform. In bringing together these literatures, we argue that district improvement efforts require closer attention to social capital in the forms of relationships and trust among and between school and central office administrators as they undergo district turnaround in response to No Child Left Behind.

CONTEXT

Improving underperforming schools is complex and difficult work that requires attention to the broader system in which schools reside. Underperforming schools tend to be turbulent, with high staff turnover, multiple
and changing reforms, and an intensification of pressure to improve (Mintrop, 2004), as well as challenges related to leadership (Daly, 2009; Finnigan & Stewart, 2009), teacher quality (Sunderman, Kim, & Orfield, 2005), and teacher motivation (Finnigan & Gross, 2007). Many scholars have begun examining the school site as the unit of reform to exploring the ties between central offices and sites in supporting change (Hightower, Knapp, Marsh, & McLaughlin, 2002; Honig, 2006; Honig & Coburn, 2008; Hubbard, Mehan, & Stein, 2006; Marsh, 2002; McLaughlin & Talbert, 2003; Rorrer, Skrla, & Scheurich, 2008; Togneri & Anderson, 2003), suggesting the importance of a systemwide approach to improvement (Marsh et al., 2005).

Evidence from schools that have improved suggests that school staff that are more trusting and interactive and work in collaborative cultures may be better able to successfully negotiate sanctions and increase student performance (Bryk & Schneider, 2002; Mintrop, 2004; Mintrop & Trujillo, 2007; O’Day, 2004). Furthermore, researchers have suggested that explicit, shared theories of action; mutual “sense making”; and clear, consistent communication and interaction in the form of relationships around improvement efforts between central office administrators and site leaders result in greater systemic coherence and goal attainment (Agullard & Goughnour, 2006). However, Malen and colleagues (2002) and Mintrop and Trujillo (2007) found that increasing federal sanctions may negatively affect the professional environment, thereby limiting collaboration, professional interaction, and the exchange of practices. If these relations are absent, successful efforts at reform appear unlikely (Leithwood, Louis, Anderson, & Wahlstrom, 2004).

Districtwide improvement of underperforming systems therefore requires a shift in the way that change strategies are conceptualized and enacted within a district. This shift entails a move from focusing on individual schools as the unit of reform to conceptualizing change as inclusive of the entire system. The balance of this work suggests the need for a more interconnected systems approach to organizational change and the movement of information and knowledge (Fullan, 2005; Hargreaves & Fink, 2006; McLaughlin & Talbert, 2003), requiring that district and site leaders “think systemically about schools and their development and see educational organizations in terms of their interdependent parts” (Smylie, Wenzel, & Fendt, 2003, p. 155). Studies of successful districts that applied systemic approaches to change suggest a range of strategies that schools and districts can take in building stronger intraorganizational ties (Honig, 2004; Johnson & Chrispeels, 2010; Togneri & Anderson, 2003), including creating structures for increased exchanges between central offices and sites (McLaughlin & Talbert, 2003) and developing learning partnerships (Copland & Knapp, 2006).
In addition, research outside of education suggests that systemwide improvement is closely linked to the quality of relationships within and across the organization (McGrath & Krackhardt, 2003; Tenkasi & Chesmore, 2003), as the structure of social relations supports or constrains opportunities for information transfer and the development of new knowledge among individuals, levels, and units (Ahuja, 2000; Tsai & Ghoshal, 1998). Frequent trusting ties among leaders are important to a coordinated reform effort, as they support the transfer of tacit, nonroutine, and complex knowledge, allowing for joint problem solving and systemwide solutions (Hansen, 1999; Reagans & McEvily, 2003; Uzzi, 1997). In effect, while a reform may prescribe particular ways of responding, it is ultimately the structure and quality of social ties among individuals, as reflected in trust, that may determine the shape, diffusion, and success of any change strategy (Spillane, Reiser, & Gomez, 2006).

THEORETICAL FRAMEWORK

In the next section, we deepen our discussion around the two key elements of social capital—social networks and trust—which form the foundation of our conceptual framework. Each area is briefly described as a way to set up the study.

SOCIAL CAPITAL AND SOCIAL NETWORKS

A number of theorists have written on social capital, with all focusing on different aspects of the concept (see, e.g., Bourdieu, 1986; Burt, 1992; Coleman, 1988; Lin, 2001; Putnam, 1993). However, Lin (2001) points out that the common denominator across these theorists is the understanding that social capital consists of “the resources embedded in social relations and social structure which can be mobilized when an actor wishes to increase the likelihood of success in purposive action” (p. 24). Social capital is concerned with the resources that exist in social relations among individuals (sometimes referred to as ties), as opposed to the resources of a specific individual. It is the structure and quality of those ties that ultimately determine opportunities for social capital transactions and access to resources (Burt, 1992; Coleman, 1988, 1990; Granovetter, 1973, 1982; Lin, 2001; Putnam, 1993, 1995).

Two aspects of social capital—networks and trust—frequently appear in the social capital literature (e.g., Bourdieu 1986; Coleman 1990; Halpern, 2005; Nahapiet & Ghoshal, 1998). The first element, networks, primarily
focuses on how an actor is embedded in social relations, which forms a patterned structure of relationships (Nahapiet & Ghoshal, 1998). Social embeddedness refers to the hierarchical, or nested, nature of a social structure. In a social network, individuals are embedded within dyadic relationships, which are embedded in larger subgroups of three, four, or more actors that eventually form a social network. Social embeddedness also implies that changes at a single level (e.g., the dyadic level) have consequences for a higher-order level (e.g., the whole network) and, in turn, the larger structure of the network influences an individuals’ ability to access resources (Scott, 2000). As such, the significance of a dyadic relation extends beyond the two actors into a system of relationships (Burt, 2000; Degenne & Forsé, 1999).

The role of networks has been implicated as both supports and constraints in the process of organizational change, learning, and improvement (Balkundi & Kilduff, 2005; Bartol & Zhang, 2007; Daly, 2010; Kilduff & Krackhardt, 2008; Leana & Van Buren, 1999; Mehra et al., 2006; Nahapiet & Ghoshal, 1998; Penuel et al., 2009; Weinbaum, Cole, Weiss, & Supovitz, 2008). This literature suggests that the structure of social networks can support organizational goals by facilitating the flow of information among individuals and overcoming problems of coordination (Adler & Kwon, 2002; Lazega & Pattison, 2001; Lin, 2001; Tsai & Ghoshal, 1998; Walker, Kogut, & Shan, 1997). Research further suggests that strong reciprocated relationships within and across a network have been associated with initiating and sustaining change efforts (McGrath & Krackhardt, 2003; Tenkasi & Chesmore, 2003).

Strong networks of communication have also proven to contribute to the functioning of organizations (Katzenbach & Smith, 1993; Lawler, 1992) by building an organization’s capacity for exchanging resources (Kogut & Zander, 1996). Organizations with dense network structures within and between organizational units generally achieve levels of performance higher than do those with sparse connections (Reagans & Zuckerman, 2001). However, those same densely connected networks may also inhibit performance due to the stability of ties, which may limit the introduction of novel information (Szulanski, 1996), reduce flexible organizational response, and primarily move redundant information (Burt, 1992; Hannan & Freeman, 1984). Many scholars have identified densely connected networks as a critical source of organizational advantage (e.g., Adler & Kwon, 2002; Leana & Van Buren, 1999; Nahapiet & Ghoshal, 1998; Walker et al., 1997), as those social interactions provide opportunities to build trust and, as such, significantly add to an organization’s ability to innovate through supporting risk-tolerant climates (Tsai & Ghoshal, 1998).
SOCIAL CAPITAL AND TRUST

The second element of social capital, trust, has been identified as one of the most important affective norms characterizing a community (Nahapiet & Ghoshal, 1998). Fukuyama (1995) argued that social trust is critical for an organization’s well-being and its ability to stay competitive, as high-trust environments make systems more innovative and reduce transaction costs. In an ever-changing system, the most powerful kind of social capital is often not the ability to work under formal authority in established structures but the capacity to create new associations and innovative organizational linkages.

Trust in educational settings is an important component of improvement (Tschannen-Moran, 2004). Tschannen-Moran and Hoy (2000) suggest that “trust is pivotal in the effort to improve education. And yet, trust seems ever more difficult to achieve and maintain” (p. 550). Trust is a critical aspect of productive social relations and is an interactive process, with each party discerning trustworthiness of the other (Bryk & Schneider, 2002; Tschannen-Moran, 2004). Trust is based on interpersonal interdependence (Rousseau, Sitkin, Burt, & Camerer, 1998) and is embedded in relationships (Hoy & Tschannen-Moran, 2003). Given these core ideas, trust has been conceptualized as a multifaceted construct that can be defined as an individual’s or a group’s willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open (Cummings & Bromiley, 1996; Hoy & Tschannen-Moran, 2003).

In organizations, trust is important, as it tends to build on itself, with the occurrence of more frequent trusting interactions between individuals, leading to more reciprocated relations and potentially creating a sense of collective trust (Forsyth, Adams, & Hoy, 2011; Tschannen-Moran, 2004). According to Tschannen-Moran and Hoy (2000), “creating an organizational culture of cooperation rather than competition is likely to have a significant impact on the trusting and trustworthy behavior of participants” (p. 573). Whereas Fukuyama (1995) pointed to the high transaction costs and a proliferation of rules and regulations of low-trust environments, Bryk and Schneider (2002) suggest that “trust is important for organizations that operate in turbulent external environments that depend heavily on information sharing for success” (p. 33), which is certainly the case in underperforming urban districts. Trust is particularly important in organizations in which there are “critical task interdependencies” (Gargiulo & Benassi, 1999, p. 299), and where different levels of the organization—in our study, schools and central office—must regularly exchange information and receive input and guidance in
coordinating action. However, there is a dearth of research on the existence of trust between district and site leaders (Daly & Chrispeels, 2008).

Trust, as a social capital resource, has been associated with cooperation (Deutsch, 1958; Tschannen-Moran, 2001; Hoy & Tschannen-Moran, 2003), group cohesiveness (Zand, 1971, 1997), motivation (Finnigan, 2010), and the ability to flexibly respond to accountability pressures (Daly, 2009). Scholars have reported the positive association of trust in educational organizations, including the increased likelihood of seeking out new ideas (Bryk & Schneider, 2002; Tschannen-Moran, 2004). When individuals feel able to take risks with one another and expose vulnerabilities, they are better able to seek support and feedback, voice problems, innovate, and connect to others across the organization (Bryk & Schneider, 2002; Edmondson, 2004; Moolenaar et al., 2010; Tschannen-Moran, 2004). High levels of trust have also been associated with a variety of efforts that require collaboration, learning, complex information sharing and problem solving, shared decision making, and coordinated action (Bryk & Schneider, 2002; Bryk, Sebring, Allensworth, & Luppescu, 2010; Cosner, 2009; Edmondson, 2004; Moolenaar et al., in press; Lin, 2001; Tschannen-Moran, 2004; Tschannen-Moran & Hoy, 2000). Moreover, trust has been suggested to be important for the development of open collaborative cultures, which may increase the quality of organizational outcomes (Goddard, Tschannen-Moran, & Hoy, 2001; Hoy, 2002; Hoy & Sabo, 1998; Tschannen-Moran, 2004). Therefore, creating and supporting a climate of trust between organizational members may increase opportunities for exchanging information critical to improvement and support behaviors that encourage others to explore innovative practices (Costa et al., 2001).

SOCIAL NETWORKS AND TRUST

In this study, we are examining two core elements of social capital—networks and trust—as well as the degree to which reciprocity and trust, an important feature of improvement, are related. Literature cited previously suggests that positive experiences from prior social interactions may foster trust by reducing uncertainty about the engagement and involvement of the other party. This predictability of relations gained through reciprocal interactions decrease the vulnerability among individuals as well as potentially increase the depth of exchange due to a willingness to engage in risk taking (Albrecht & Bach, 1997; Larson, 1992; Uzzi, 1997). In support of this claim, research suggests that individuals tend to seek reciprocal as opposed to asymmetric relations, as those ties provide mutual benefit to the relationship, in effect creating a reinforcing effect (Daly & Finnigan,
Reciprocated relations are therefore important in providing opportunities to build and deepen the norms of trust necessary for the exchange of reform-related resources.

Reciprocity and trust are also implicated in research related to communities of practice (Lave & Wenger, 1991). Reciprocated relations provide opportunities for individuals to interact and learn together, and they have been suggested to be important in educational systems oriented toward learning (Honig, 2008; Wenger, 1998). These trusting and reciprocated relations can provide opportunity to modify and deepen patterns of interaction as well as develop increased repertoires of behaviors, which may be thought of as a process of learning necessary for improving practice (Honig & Ikemoto, 2008; Lave & Wenger, 1991). On balance, this literature suggests that actors who perceive trusting relations with one another may also have reciprocated relations. Although the relationship between reciprocity and trust has been reported as being important for learning and the exchange of knowledge, to date this relationship has not been explored with a population of urban district leaders enacting efforts at improvement.

Our exploratory study builds on prior research related to district reform under accountability and makes a unique contribution by analyzing the social capital through social networks and trust between and among central office and site leaders in La Confianza (pseudonym), a continually low-performing midsize urban district. Given the increasing number of underperforming districts, there is an urgency to understand the complex relations between central office and site leaders and determine how the social networks and trust between these leaders may facilitate or inhibit efforts at meeting organizational goals.

STUDY DESIGN

As we outline in the theoretical framework, this exploratory work attempts to connect two important theorized elements in the reform context: social relationships and trust. Although each has been associated with positive reform outcomes, integrating the two as examined through our study is one of the main goals and potential contributions of this exploratory work. Moreover, we offer not only unique data and methods but also empirical support for the importance of attending to both forms of social capital.

In engaging this work, we drew on a case study approach to more deeply examine the structural social capital (defined by the number and structure of relationships among district leaders) and relational social
capital (conceptualized as trust) in a district undergoing improvement. In examining structural capital, we used a social network survey to explore the general pattern of relationships among leaders around best practices from research (BPFR), as well as the presence of reciprocated relations in the La Confianza School District. We assessed relational social capital through the use of a modified version of the Hoy and Tschannen-Moran (2003) trust scale. An exploratory case study approach is most appropriate when there is a level of complexity that requires an in-depth understanding of the phenomenon of interest (Yin, 2003).

La Confianza serves approximately 33,000 students and is approximately 88% non-White, with 88% of students receiving free and reduced-price lunches. The district has a 4-year graduation rate of 48% and is currently identified as a district in need of improvement under No Child Left Behind. Within the district, over 35% of the schools are identified as underperforming based on state and federal accountability guidelines. La Confianza is an important case, as it typifies many of the urban districts across the country that serve primarily students of color from low socioeconomic communities, have a pattern of underperformance, and are engaged in districtwide improvement efforts to move off of state and federal sanctions.

We collected network and trust data through an online survey. The data, collected during the summer of 2009, resulted in an 87% response rate, thereby meeting the threshold for social network analysis (Scott, 2000). A total of 114 respondents completed the survey, among which 32% were male and 68% were female (see Table 1). As for respondents’ work positions, 59 were central office administrators while 55 were site principals.

<table>
<thead>
<tr>
<th>Gender</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>32</td>
</tr>
<tr>
<td>Female</td>
<td>68</td>
</tr>
<tr>
<td>School level</td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>29</td>
</tr>
<tr>
<td>Secondary</td>
<td>14</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
<tr>
<td>District office</td>
<td>52</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years in/at</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>La Confianza</td>
<td>18.31 (9.7)</td>
</tr>
<tr>
<td>Administration</td>
<td>9.95 (6.2)</td>
</tr>
<tr>
<td>Current site</td>
<td>6.25 (5.6)</td>
</tr>
</tbody>
</table>

Note. N = 114.
The average leader had spent 18 years in La Confianza, had 10 years of experience in administration, and had been at their current site for 6 years.

SOCIAL NETWORK MEASURE

To assess structural social capital in La Confianza, we developed an online survey that included social network and demographic questions. In developing and validating our social network questions, we drew on the literature regarding district improvement processes and practices (see, e.g., Chrispeels, 2004; Coburn & Russell, 2008; Honig, 2006; Spillane, 2000; Supovitz, 2006; Togneri & Anderson, 2003) and previous network studies (Cross & Parker, 2004; Cross, Borgatti, & Parker, 2002; Daly & Finnigan, 2011; Finnigan & Daly, 2010; Hite, Williams, & Baugh, 2005). We piloted our relational questions with practicing administrators to better hone the items. Although we asked about a number of relationships, in this study we focus on the exchange of BPFR related to improvement. Specifically, respondents were asked to quantitatively assess their relationships with other administrators (school and central office) on a 4-point interaction scale ranging from 1 (within the past two months) to 4 (1–2 times a week). The best practice network data were taken from the prompt “Please select the administrators in the La Confianza network from who you seek best practices from research for improvement... and at what frequency?”

Our study involved those in formal leadership positions in the district, including the superintendent, assistant superintendents, directors, and supervisors from the central office and principals at the school sites. For this study, we focused only on administrators, rather than teachers, in an effort to understand the central office–site leadership networks, given the research that identifies the importance of these linkages (Copland & Knapp, 2006; Hightower et al., 2002; Honig, 2006; Honig & Coburn, 2008; McLaughlin & Talbert, 2003; Rorrer et al., 2008; Togneri & Anderson, 2003). We used a bounded/saturated approach (Lin, 1999; Scott, 2000), meaning that we included all the members of the La Confianza leadership team (central office and site administrators) because this strategy, coupled with high response rates, provides a more complete picture and more valid results (Lin, 1999; Scott, 2000). We provided respondents with a list of 130 leadership team members for each network area.

TRUST SCALE

We assessed relational social capital through a modified trust scale from the “trust in colleagues” survey published by Hoy and Tschanzen-Moran (2003). The items were scored on a 4-point scale, ranging from 1 (strongly disagree) to 4 (strongly agree). The scale comprised 16 items that were
adapted to fit the La Confianza context as well as to examine specific roles in the district. For example, we asked questions about the central office and site separately, such as “Central Office Staff in La Confianza help and support each other” and “Principals in La Confianza help and support each other.” In addition, we asked perceptions about general administrator trust, including “When administrators in La Confianza tell you something you can believe it” (see Table 2 for specific items).

Principal component factor analysis with varimax rotation revealed four distinct factors with eigenvalues over 1 explaining 69% of the total variance: General Administrator Trust, which refers to trust-related facets about administrators in La Confianza in general; Central Office–Site Relations, referring to the quality of the trust relations between the central office and site administrators; Principal Trust, which examines the trust relations among principals; and Central Office Trust, referring to the perception of trust among central office administrators. Each item loaded on the expected subscale, with factor loadings in the subconstructs ranging from .52 to .90 and with reliabilities for the subscales ranging from .70 to .91 (see Table 2).

DATA ANALYSIS

Social network. We conducted a series of network measures using the UCINET software (Borgatti, Everett, & Freeman, 2002) to better understand the structure of the BPFR network. Given the extensive literature on the importance of tie intensity in networks, the fact that respondents are more accurate at identifying ongoing patterns than determining occasional interactions (Carley & Krackhardt, 1999; Wasserman & Faust, 1994), and the fact that we were interested in stable structural patterns (Krackhardt, 2001), we dichotomized the data to include only the most frequent ties between actors. To be considered a frequent tie, individuals would have to have sought best practices once every 2 weeks to a couple of times a week (3 and 4 on the rating scale).

We first ran a graphic representation of the best practice network using Netdraw (Borgatti, 2002), which provides a visual image of the network and illuminates overall structural patterns. We then ran a density measure to determine the percentage of frequent ties within the BPFR network in total. The density of a network is the number of social ties between actors divided by the number of total possible connections, and it can be thought of as how tightly knit a network is. A dense network, meaning one with a high percentage of relationships, is thought to be able to move resources more quickly than a network with more sparse ties (Scott, 2000). We also examined the fragmentation index of the networks, which assesses the degree to which the network is disconnected. The fragmentation index is the ratio of the number of disconnected pairs to the possible number of
<table>
<thead>
<tr>
<th>Survey Item</th>
<th>General Trust (r = .92)</th>
<th>Central Office–Site Trust (r = .75)</th>
<th>Principal Trust (r = .71)</th>
<th>Central Office Trust (r = .70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even in difficult situations, administrators in this La Confianza can depend on each other.</td>
<td>.891</td>
<td>.122</td>
<td>.227</td>
<td>.098</td>
</tr>
<tr>
<td>Administrators in this district typically look out for each other.</td>
<td>.862</td>
<td>.212</td>
<td>.136</td>
<td>.099</td>
</tr>
<tr>
<td>Administrators in this district have faith in the integrity of their colleagues.</td>
<td>.849</td>
<td>- .018</td>
<td>.240</td>
<td>.281</td>
</tr>
<tr>
<td>When administrators in this district tell you something you can believe it.</td>
<td>.549</td>
<td>-.025</td>
<td>.305</td>
<td>.187</td>
</tr>
<tr>
<td>Central office and school site administrators in La Confianza care about each other.</td>
<td>.269</td>
<td>.800</td>
<td>-.023</td>
<td>.102</td>
</tr>
<tr>
<td>Central office administrators in La Confianza do their jobs well.</td>
<td>-.208</td>
<td>.735</td>
<td>.351</td>
<td>.222</td>
</tr>
<tr>
<td>Principals in La Confianza do not respect central office administrators.</td>
<td>.353</td>
<td>.721</td>
<td>.065</td>
<td>-.004</td>
</tr>
<tr>
<td>(reverse)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central office and school site administrators in La Confianza help and support each other.</td>
<td>.421</td>
<td>.688</td>
<td>.134</td>
<td>-.088</td>
</tr>
<tr>
<td>Central office administrators in La Confianza do not respect the principals.</td>
<td>-.329</td>
<td>.680</td>
<td>.040</td>
<td>.144</td>
</tr>
<tr>
<td>(reverse)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principals in La Confianza help and support each other.</td>
<td>.116</td>
<td>-.042</td>
<td>.751</td>
<td>-.026</td>
</tr>
<tr>
<td>Principals in La Confianza are competent in their jobs.</td>
<td>.244</td>
<td>.083</td>
<td>.722</td>
<td>-.057</td>
</tr>
<tr>
<td>Our district is able to marshal community support when needed.</td>
<td>.148</td>
<td>.295</td>
<td>.696</td>
<td>-.007</td>
</tr>
<tr>
<td>Principals in La Confianza trust the superintendent.</td>
<td>.204</td>
<td>.010</td>
<td>.618</td>
<td>.472</td>
</tr>
<tr>
<td>Central office administrators in La Confianza trust the superintendent.</td>
<td>.170</td>
<td>-.131</td>
<td>.089</td>
<td>.811</td>
</tr>
<tr>
<td>Central office administrators in La Confianza are suspicious of each other.</td>
<td>.117</td>
<td>.359</td>
<td>-.054</td>
<td>.703</td>
</tr>
<tr>
<td>(reverse)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central office administrators in La Confianza help and support each other.</td>
<td>.121</td>
<td>.551</td>
<td>-.062</td>
<td>.679</td>
</tr>
</tbody>
</table>

Note. N = 114.
fully connected pairs within a network (Wasserman & Faust, 1994). We also block-partitioned the data into central office and site-level administrators to compare the density of best practice exchange between these subgroups as well as between the principals of underperforming schools and other site leaders.

We also measured the centrality of each actor to determine the total amount of ties an actor initiates and receives in the BPFR network, which is referred to as outdegree and indegree, respectively. Centrality has been thought of as an index of activity (Freeman, 1979). Highly central actors in a network have increased access to resources and a high potential to create new linkages that may enhance social capital and build organizational capabilities (Stuart, 1998; Tsai, 2000). Those who are less central to the organization receive less information and often do not have the opportunities to gain from the resources and information held by those in more central positions. Moreover, these less central individuals are more likely to receive only the resources deemed necessary by those in a more centralized position (Burt, 2000), thus potentially restricting their perspective of the overall organization. More-central organizational members disproportionately and more quickly amass resources, thus allowing them to influence the network by determining where the resources flow (Raider & Krackhardt, 2001).

Given our interest in the relations between district and site administrators, we conducted an external/internal ratio analysis, often referred to as an E-I index, which indicates the extent to which the overall organization is characterized by interunit strong ties, as opposed to intraunit strong ties (Krackhardt & Stern, 1988). The scale ranges from −1 (completely internal, intraunit ties) to +1 (completely external, interunit ties). This network measure assesses the relationship between external and internal ties based on a specific actor attribute (in this case, work location, meaning either central office or site) by comparing the numbers of ties within groups (either central office or site) and between groups (central office and site). High E-I indices (more externally focused) have been associated with large-scale successful organizational change (Krackhardt & Stern, 1988; McGrath & Krackhardt, 2003) and greater unit cooperation (Nelson, 1989), while low E-I scores potentially limit how well an organization negotiates external pressures (McGrath & Krackhardt, 2003).

We also measured the level of reciprocity between central office and site administrators on the best practice relation to establish the percentage of reciprocal relationships across the organization as well as for each leader. We were interested in reciprocity, as high levels of reciprocity have been associated with increased organizational performance and complex knowledge exchange (Kilduff & Tsai, 2003). Reciprocity was calculated
using a scale of 0 to 1, with 0 representing no mutual relationship present and 1 indicating that all ties were reciprocated.

Trust. We analyzed the trust data, including factor analysis and descriptive statistics, using SPSS software. Our analysis of the missing data found no systematic bias; thus, we imputed the missing data using a mean substitution method (Little & Rubin, 1989). We ran a series of correlations between the trust scales and other study variables. We tested for any differences in perceptions of trust between site and district administrators using a series of \( t \) tests, and we ran a series of correlations to explore the relationship between best practice network measures and the subscales of trust. Finally, we regressed the trust subscales on the dependent variable of reciprocated best practice relations, controlling for demographic variables, to determine the association between trust and reciprocal relations across leaders in this midsize urban district.

FINDINGS

SPARSELY CONNECTED SOCIAL NETWORK

One of the key elements of social capital is the "structure" of the network, represented by the number and quality of ties between actors. Figure 1 provides a visual representation of the exchange of best practices among district leaders in La Confianza. In this network map, each node represents a leader, with the black nodes being central office administrators and the gray representing principals. The lines between nodes represent the exchange of BPFR, with the arrow indicating the direction of the resource flow. In addition, the nodes that are in the shape of a circle within a square represent the principals of underperforming schools. The nodes are sized by "indegree," meaning that the larger nodes reflect leaders who are more often sought for best practices.

What can be readily seen from the map is the large number of best practice ties between central office administrators and the lack of ties between the central office and principals. In addition, few ties exist between principals in La Confianza, especially those in underperforming schools. Moreover, the flow of BPFR tends to be one way, with most relationships flowing out or within the central office. This results in a more centralized network, with a few district office leaders occupying central positions in the network. Although the network map provides an overview of the structure of relations, additional quantitative analysis of the underlying pattern of ties reveals a number of other important aspects of this network.
Figure 1. **Best practices from research leadership network.**

*Note.* In this social network map of best practices from research, district administrators appear as black nodes; site administrators appear as gray nodes; principals of underperforming schools are represented by circles within squares; and all nodes are sized on the basis of the number of relationships. The lines with arrows reflect the direction of the best practice exchange.

In terms of the density of relations in La Confianza, of the 17,292 possible ties between central office and site leaders in the La Confianza BPFR network, 6% \((n = 1,038)\) are currently used, with only 1% \((n = 173)\) of those overall ties representing the most frequent interaction (once every 2 weeks to a couple of times a week). Thus, only 1% of the most frequent ties around that could exist, do exist, suggesting a very sparsely connected BPFR network. Examining the ties within and between the central office and site leaders, we find that 4% of the ties within the district office are present, while only 0.07% of the ties exist between site administrators. Moreover, even fewer ties exist between the central office and site leaders (0.05%).

In more closely examining the ties between principals of underperforming institutions to the rest of the principals, we find very few relationships between principals of underperforming schools with better-performing schools (0.03%) and, for that matter, with other principals of underperforming institutions (0.01%). Overall, the fragmentation index for the network is 0.84, meaning that 84% of the nodes in this network are unable to reach each other, representing limited opportunity to exchange and leverage BPFR.
INTERNALLY FOCUSED INTERACTIONS

The findings around the density of ties suggest a more “internal” focus, meaning that ties tend to be within group (central office to central office, site to site) than across groups (central office to site). Results from the E-I index indicate a statistically significant tendency toward internal group ties (−.563, p < .05). Overall, 78% of the ties for all leaders were within group, and only 22% were across group (meaning either central office to site or site to central office). Of the 4% of ties that exist in the best practice network, 3% of those ties were internally focused, while only 1% of the best practice ties occurred across groups. Examining the E-I index for each group—central office and site—indicated that while both are internally focused, the central office is significantly more internally focused, with 86% of their existing ties with other district office administrators, compared with 54% of principal ties being with other principals.

Perhaps not surprising given their performance levels, the principals of better-performing schools almost exclusively interacted with principals of other better-performing schools, with 93% of their best practice ties being to other principals who lead similarly performing institutions. In contrast, although having significantly fewer best practice ties in general, 83% of the existing ties of principals leading underperforming schools were with principals of better-performing schools. In this sense, the ties of principals in underperforming schools were more “externally” focused, meaning that principals of underperforming schools were more likely to be linked to principals of better-performing schools for BPFR. Almost one third of the underperforming schools’ principals are “isolated,” meaning that they neither seek nor are sought for frequent BPFR.

The average actor in the BPFR network had approximately two outgoing and two incoming ties, with a range of 0 to 23 ties. Of those administrators who had more ties than the typical administrator (i.e., were above the mean), 65% were central office leaders and 35% were principals. However, only 10% of underperforming school’s principals exhibited outgoing ties above the norm. In terms of incoming best practice ties, 87% of the administrators who were above the mean were in the central office, with only 13% of principals being sought for best practices. Of the principals in low-performing schools, only one was above the mean for incoming ties. This suggests that central office administrators are more typically central in the network, both initiating and receiving ties related to best practices at a significantly higher rate than site administrators.
LACK OF RECIPROCATED TIES

Of the existing frequent best practice ties, on average 13% are reciprocated. When we analyzed the pattern of reciprocated relationships between the central office and site leaders, an interesting pattern arose. First off, the central office administrators engage in significantly more reciprocated relationships around best practices than site administrators, with 16% of the ties from central office to central office being mutual and only 4% of the site-to-site relationships being reciprocated. In addition, 14% of the ties from central office to site were reciprocated, compared with 17% of the ties from principal to central office—meaning that when the central office initiated a tie, it was less likely to be reciprocated than when a principal initiated a tie to the central office. The situation for principals of underperforming schools is more profound, with only 1% of their ties reciprocated.

In general, the structural social capital available in the La Confianza network lacks many of the ties between leaders necessary to move complex BPFR. There are statistically significant differences between the central office and sites in terms of in- and outdegree around best practice relations as well as reciprocity, with the central office administrators both seeking and being sought significantly more for best practice resources. Moreover, there are limited reciprocated relations through which more in-depth exchanges related to BPFR may occur. This is especially the case for the principals of underperforming schools, which in some cases are completely "isolated" in a structural sense. As has been discussed, social capital comprises networks and trust; as such, the previous analysis has explored the network elements, while the following section explores trust.

LOW LEVELS OF TRUST

In considering relational social capital, the data in La Confianza suggest that there is an overall relatively low level of trust within the district, with central office and principals having different perceptions of the level of trust in some of the overall scales (see Table 3). In terms of general trust between administrators, the principals indicated perceived higher levels of trust (2.74) in comparison to their central office colleagues (2.51). This difference held even for specific items within the scale. Central office and site leaders had very similar perceptions around the trust between central office and site. However, there were some within-scale differences. For example, central office administrators indicated more agreement with the reverse-scored item related to a perception of respect toward the principals. Central office administrators indicated more agreement (3.02) regarding a lack of respect toward principals than site administrators (2.61). While the direction of the perception may not be surprising, the fact the
<table>
<thead>
<tr>
<th>Trust Scale: Item</th>
<th>Overall (n = 114)</th>
<th>Central Office (n = 59)</th>
<th>Principal (n = 55)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Trust</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Even in difficult situations, administrators in this La Confianza can depend on each other.</td>
<td>2.62 (0.55)</td>
<td>2.51 (0.60)</td>
<td>2.74 (0.48)</td>
</tr>
<tr>
<td>Administrators in this district typically look out for each other.</td>
<td>2.66 (0.62)</td>
<td>2.56 (0.68)</td>
<td>2.76 (0.54)</td>
</tr>
<tr>
<td>Administrators in this district have faith in the integrity of their colleagues.</td>
<td>2.59 (0.66)</td>
<td>2.49 (0.72)</td>
<td>2.71 (0.57)</td>
</tr>
<tr>
<td>When administrators in this district tell you something you can believe it.</td>
<td>2.57 (0.65)</td>
<td>2.45 (0.68)</td>
<td>2.71 (0.58)</td>
</tr>
<tr>
<td><strong>Central Office–Site Trust</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central office and school site administrators in La Confianza care about each other.</td>
<td>2.65 (0.47)</td>
<td>2.66 (0.52)</td>
<td>2.65 (0.44)</td>
</tr>
<tr>
<td>Central office administrators in La Confianza do their jobs well.</td>
<td>2.70 (0.57)</td>
<td>2.73 (0.60)</td>
<td>2.68 (0.53)</td>
</tr>
<tr>
<td>Principals in La Confianza do not respect central office administrators. (reverse)</td>
<td>2.74 (0.53)</td>
<td>2.78 (0.53)</td>
<td>2.70 (0.52)</td>
</tr>
<tr>
<td>Central office and school site administrators in La Confianza help and support each other.</td>
<td>2.66 (0.67)</td>
<td>2.56 (0.73)</td>
<td>2.76 (0.59)</td>
</tr>
<tr>
<td>Central office administrators in La Confianza do not respect the principals. (reverse)</td>
<td>2.53 (0.60)</td>
<td>2.54 (0.65)</td>
<td>2.53 (0.56)</td>
</tr>
<tr>
<td><strong>Principal Trust</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principals in La Confianza help and support each other.</td>
<td>3.04 (0.58)</td>
<td>2.82 (0.57)</td>
<td>3.22 (0.53)</td>
</tr>
<tr>
<td>Principals in La Confianza are competent in their jobs.</td>
<td>2.92 (0.56)</td>
<td>2.67 (0.54)</td>
<td>3.16 (0.49)</td>
</tr>
<tr>
<td>Our district is able to marshal community support when needed.</td>
<td>2.63 (0.61)</td>
<td>2.61 (0.64)</td>
<td>2.65 (0.58)</td>
</tr>
<tr>
<td>Principals in La Confianza trust the superintendent.</td>
<td>2.50 (0.71)</td>
<td>2.29 (0.67)</td>
<td>2.69 (0.71)</td>
</tr>
<tr>
<td><strong>Central Office Trust</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central office administrators in La Confianza trust the superintendent.</td>
<td>2.44 (0.56)</td>
<td>2.53 (0.47)</td>
<td>2.36 (0.63)</td>
</tr>
<tr>
<td>Central office administrators in La Confianza are suspicious of each other. (reverse)</td>
<td>2.49 (0.65)</td>
<td>2.50 (0.69)</td>
<td>2.47 (0.75)</td>
</tr>
<tr>
<td>Central office administrators in La Confianza help and support each other.</td>
<td>2.26 (0.77)</td>
<td>2.30 (0.78)</td>
<td>2.23 (0.77)</td>
</tr>
<tr>
<td><strong>Note.</strong> N = 114.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
central office administrators on average agreed to a lack of respect toward principals may inhibit productive exchanges related to best practices.

In a similar vein to the previous finding around respect, there was a difference in perceptions related to principal trust, with central office administrators rating overall principal trust lower than principals (2.57 and 2.93, respectively). Within this scale, central office administrators rated the competence of principals (2.67) and principal trust in the superintendent (2.29) lower than the site administrators’ appraisal of their competence (3.16) and trust toward the superintendent (2.69). Once again, this different and overall low level of trust may constrain productive work toward improvement. In the overall central office trust scale, principals perceived lower levels of perceived trust between central office administrators (2.36) than their district office colleagues (2.53).

In testing for any statistical differences between the perception of trust between central office and site administrators, we first ran descriptive statistics of perceptions of trust by group (central office versus site) and then a series of t tests (see Tables 3 and 4). Results suggest statistically significant differences between central office and site administrators’ perspectives around general trust in La Confianza ($t = -1.925, p < .05$), with central office administrators perceiving less overall administrative trust than their principal colleagues. Moreover, central office administrators reported statistically significantly lower levels of principal trust ($t = -3.398, p < .01$). This last finding is particularly important, as this scale reflects perceptions related to principal competence and the principals’ ability to work and support one another. Although not statistically significant, central office administrators perceived higher trust around central office administrators than site administrators. Interestingly, both central office and principals had similar perceptions of the trust between the central office and site leaders. We also examined if any differences in perceptions related to trust existed between principals in underperforming and performing schools but found no statistically significant differences.

Table 4. Results of Trust Scales for Central Office Compared With Site Administrators

<table>
<thead>
<tr>
<th>Scale</th>
<th>$t$</th>
<th>$p$ (2-tailed)</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Trust</td>
<td>-1.925</td>
<td>.050</td>
<td>-.23230</td>
</tr>
<tr>
<td>Central Office–Site Trust</td>
<td>0.059</td>
<td>.953</td>
<td>.00641</td>
</tr>
<tr>
<td>Principal Trust</td>
<td>-3.398</td>
<td>.001</td>
<td>-.35625</td>
</tr>
<tr>
<td>Central Office Trust</td>
<td>1.312</td>
<td>.194</td>
<td>.16806</td>
</tr>
</tbody>
</table>

Note. N = 114.
To explore the relationship and interaction between structural and relational social capital around BPFR, we first ran correlations between reciprocity and relational measures as well as demographics (see Table 5). Results indicate weak correlations between principal and central office trust (.23) and a moderate correlation (.57) between general administrator and principal trust. As expected, there were some moderate correlations between the variables related to the years in administration, in La Confianza, and at the site. There was also a moderate correlation (.42) between central office trust and reciprocity around best practices, providing some early indication of the relationship between these two study variables. Overall, the level of correlation between study variables does not suggest concern related to multicollinearity.

We conducted a series of exploratory multivariate analyses. As a first step, individual stepwise regressions were conducted by entering two blocks of variables—demographic variables and four trust scales. Any variable that did not significantly contribute to predicting reciprocated best practice relations was removed in subsequent analyses. "Years in administration" was the only significant demographic predictor variable of reciprocated best practice relations. As for the trust variables, only central office trust proved significant, and as such, the remaining scales were not included in subsequent models.

From these two exploratory regression analyses, the following variables were entered in the final model: years in administration and central office trust as predictors of reciprocated best practice relations. Collinearity tests and variance inflation factor results for the regressions indicate that multicollinearity was not a concern in any of the models. Additionally, normal probability plots showed that the dependent variable was normally distributed. Residual plots also suggested no major deviations from normality or homoscedasticity. One demographic variable (years in administration) and one trust scale (central office trust) made independent contributions in explaining reciprocated best practice relationships. The first significant variable—years in administration, which measures total number of years as a school leader—was negatively associated with trust ($B = -.221, p< .05$). This finding indicates that the more years a leader was in administration, the fewer reciprocated best practice relations, perhaps suggesting an "established" level of best practice knowledge. The second significant predictor—central office trust—had a positive effect, which indicates that higher perceptions of trusting relationships between central office administrators and relations with the superintendent were associated with more reciprocated best practice relations ($B = .419, p< .00$). These findings are reported in Table 6, with Table 7 listing the excluded variables.
Table 5. Correlation Table for Study Variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General trust</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Central office–site trust</td>
<td>.509*</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Principal trust</td>
<td>.574*</td>
<td>.392*</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Central office trust</td>
<td>.388*</td>
<td>.375*</td>
<td>.230'</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Years in administration</td>
<td>.003</td>
<td>.069</td>
<td>.131</td>
<td>-.022</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Years in La Confianza</td>
<td>.040</td>
<td>.074</td>
<td>.013</td>
<td>.072</td>
<td>.319*</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Years at site</td>
<td>-.056</td>
<td>.038</td>
<td>-.065</td>
<td>-.019</td>
<td>.444*</td>
<td>.332*</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>8. School level</td>
<td>-.257'</td>
<td>.000</td>
<td>-.365*</td>
<td>.096</td>
<td>-.208'</td>
<td>-.268*</td>
<td>.020</td>
<td>—</td>
</tr>
<tr>
<td>9. Best practices reciprocity</td>
<td>.086</td>
<td>.240'</td>
<td>-.115</td>
<td>.424*</td>
<td>-.230</td>
<td>.082</td>
<td>.009</td>
<td>.139</td>
</tr>
</tbody>
</table>

Note. $N = 114$.

*p < .05. **p < .01.
Table 6. Regression Results Predicting Reciprocated Best Practices

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.146</td>
<td>.077</td>
</tr>
<tr>
<td>Central office trust</td>
<td>.110</td>
<td>.029</td>
</tr>
<tr>
<td>Years in administration</td>
<td>-.005</td>
<td>.003</td>
</tr>
</tbody>
</table>


The results indicate that the more leaders perceived trusting relations among and between central office administrators, the more frequent exchanges around best practices tended to be reciprocated. However, more years in administration predicted fewer reciprocated relations around best practices. Taken together, this suggests that the relations among and between central office administrators and between those leaders and the superintendents have a significant association with reciprocated relations around BPFR.

DISCUSSION

In this exploratory study, we have examined the core elements of relationships that include structural and relational social capital. The structural elements of social capital are concerned with social relations and the types of ties (reciprocated) leaders have between one another. These ties, as has been suggested, are important in the movement of knowledge, information, and collaboration that can support reform. Relational social capital, as measured by trust in this study, is also an important partner in understanding the quality of relationships between leaders. Although many studies have suggested the necessity of relationships based in trust, few studies have measured and interacted both elements of social capital

Table 7. Excluded Variables in Regression Model

<table>
<thead>
<tr>
<th>Excluded</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years in La Confianza</td>
<td>.137</td>
<td>1.182</td>
<td>.242</td>
</tr>
<tr>
<td>Years at site</td>
<td>.143</td>
<td>1.173</td>
<td>.245</td>
</tr>
<tr>
<td>School level</td>
<td>.056</td>
<td>0.490</td>
<td>.626</td>
</tr>
<tr>
<td>General trust</td>
<td>-.089</td>
<td>-0.745</td>
<td>.459</td>
</tr>
<tr>
<td>Central office–site trust</td>
<td>.115</td>
<td>0.971</td>
<td>.335</td>
</tr>
<tr>
<td>Principal trust</td>
<td>-.197</td>
<td>-1.753</td>
<td>.084</td>
</tr>
</tbody>
</table>
using a unique data set and combination of methods. Our exploratory work provides a substantive contribution to this area by suggesting the importance of both social networks and trust for urban leaders. In addition, our work provides a methodological contribution through examining the social network structure of the best practice relationship through social network analysis.

In this study, we examined the social capital between district and site administrators in the form of social relationships and trust to better understand efforts at improvement. Our findings suggest that there are limited frequent relationships through which BPFR flow and even fewer interactions around principals leading underperforming schools. The few best practice ties that do exist between district and site administrators tend to not be reciprocated and, as such, may inhibit the exchange of complex information for improvement. Moreover, the ties that do exist tend to be within specific organizational levels (central office or site) and, as such, create a more centralized network structure around best practices with central office administrators both seeking and receiving more ties.

Findings from our analysis of trust suggest that there are significant differences in the perceptions between district and site administrators especially in the area of principal competence and ability to work together. Last, our work suggests that administrators' perception of a central office to be trusting of one another and the superintendent predicts reciprocated relations around best practices, while more years in administration predicts fewer reciprocated exchanges around best practices. This suggests the importance of the role of relations within the central office as a resource for the mutual exchange of BPFR.

This research implies several important ideas in terms of leadership and improvement, which are elaborated on in the following sections. First, our work supports and connects the limited previous research suggesting the importance of trust as a key precondition for supporting the development of reciprocated relations and, as such, suggests the importance of supporting reciprocated networks and trust for learning and improvement for urban leaders. Second, our work indicates significant differences in perceptions related to trust between central office and site administrators and, given the importance of trust, suggests the importance of creating districtwide alignment around trust. Third, the study suggests the benefit of moving relationships from compliance to building the capacity for improvement.

SUPPORTING RECIPROCATED NETWORKS AND TRUST FOR LEARNING AND IMPROVEMENT

Frequent ties that form dense networks have the potential to move complex resources that may support organizational goals such as improvement
(Nahapiet & Ghoshal, 1998; Tsai, 2002). Our results suggest that, instead, La Confianza had sparse and internally focused connections, which may provide insight into the continual underperformance of the district. In support of this idea, research on organizations has suggested that the ability of a particular group to absorb information is directly related to its output of resources to other groups (Balkundi & Harrison, 2006). This input–output relationship creates a reciprocal process that is facilitated by ties within and between subgroups. However, in La Confianza, the lack of reciprocated best practice ties between district and site administrators may inhibit the absorption of research-based knowledge. Therefore, investing in a subgroup’s (central office or principal) ability to take in knowledge from other subgroups may lead to that group outputting additional new information into the larger organization and may support larger goals at improvement. However, given the low levels of trust between these levels of the system, this type of cross-group relationships may be difficult to enact. While we found low trust overall in this district, our data suggest that when trust was present, it was critical in predicting reciprocated best practice relationships. This suggests that ties imbued with trust are important in supporting reciprocated relations that can support the deepening of exchanges toward improvement (Hite et al., 2005; Honig & Ikemoto 2008; Moolenaar, 2010). This idea, supported in research related to communities of practice, suggests that opportunities to interact and learn together in reciprocated communities of relations are important in systems oriented toward learning (Honig, 2008; Wenger, 1998). While the relations that provide opportunity to modify and deepen patterns of interaction, which may be thought of as a process of learning (Lave & Wenger, 1991), were rare in La Confianza, there were pockets of higher trust and reciprocated relations. Examining the conditions that supported the development of these high-trust, reciprocated relationships around best practices within La Confianza may provide insight that can be diffused across the district. Building on the existing strengths in La Confianza through rigorously examining previous success may also support the efficacy of the leaders to engage efforts at improvement (Daly & Chrispeels, 2008).

CREATING DISTRICTWIDE ALIGNMENT AROUND TRUST

Bryk and Schneider (2002) assert that trust is a shared interaction based on some equal expectations and that this process can “impact an entire organization in terms of decision-making, social support for innovation, and expanded moral authority” (p. 22). When a mismatch exists between perceptions around culture and climate, there is an increased likelihood of conflict and feelings of distrust. This disparity in perception, as exists in La Confianza around trust, may inhibit processes of organizational learning.
and improvement. As such, creating the social ties grounded in trust and better aligning perceptions across the district is important. In realigning the culture, district leaders in La Confianza, given their position in the hierarchy, may consider taking an active role in creating, modeling, and supporting open communication, mutual regard, and opportunities to develop the social ties through which best practices and other relational resources can flow (Tschanzen-Moran, 2004). Approaching the development of both structural and relational social capital in the system may be important in the district being able to take the next step forward in improvement.

Systems that undergo change must learn new ways of both interacting and practicing. Coffin and Leithwood (2000), who examined the situated learning of principals, found that not only were the relationships between principals and central office administrators important for completing their roles, but trusting interpersonal relations also augmented principal professional learning. The opposite also held; relations with district administrators who were distant or aloof inhibited principal learning. The quality of the relationship with principals was diminished when district-level administrators acted in ways that were in direct contrast to espoused positions. This violation of trust called into question the authenticity of leaders’ honesty and competence. Therefore, a lack of trusting coherence between site and district, as was evidenced in our study, not only has a negative impact on effectiveness (Davis, 1998) but also inhibits professional learning (Coffin & Leithwood, 2000), which makes change in an organization difficult. Collectively, these findings and the results from our work suggest that investing in relationships and supporting a high-trust environment has a host of positive potential effects.

MOVING RELATIONSHIPS FROM COMPLIANCE TO BUILDING THE CAPACITY FOR IMPROVEMENT

Fukuyama (1995), in examining economies of scale, offers that a nation’s well-being and its ability to stay competitive are inured by a single pervasive social characteristic: the level of trust inherent in its society. Trust provides for “spontaneous associations,” novel and innovative organizational linkages. In an ever-changing system, the most powerful kind of social capital is often not the ability to work under formal authority in established structures but the capacity to create new associations (p. 27). Fukuyama argues that high-trust environments make systems more innovative and reduce transaction costs. Considered in a different vein, if educational systems lack trust, then there must be an increase in rules, regulations, and sanctions to coerce interaction and performance. This has the potential effect
of increasing bureaucracy, inhibiting risk taking, and perhaps ultimately reducing innovation, which is exactly what may be necessary to improve underperforming systems. When individuals feel able to take risks with one another and expose vulnerabilities, they are better able to seek support, raise questions, innovate, and connect to others across the organization and move beyond mere compliant responses (Bryk & Schneider, 2002; Edmondson, 2004; Moolenaar et al., 2010; Tschanne-Moran, 2004). So not only does the lack of trust in La Confianza potentially inhibit the organization’s current ability to learn, but it may also suppress future opportunities for risk taking and innovation necessary for improvement.

In situations where relationships and trust coexist and leaders have the opportunity to create meaning and support sense making, leaders are more likely to innovate and be responsive to organizational goals (Daly, 2009; Datnow, Lansky, Stringfield, & Teddlie, 2006; Finnigan & Stewart, 2009). This suggests that the degree to which relationships can move beyond monitoring and regulatory oriented interactions, which are often more transactional in nature, to those based in trust and mutual exchange may provide opportunity to build the capacity of leaders to engage improvement efforts (Bryk & Schneider, 2002; Forsyth et al., 2011). Creating opportunities for the development of shared theories of action (Agullard & Goughnour, 2006), transparent communication (Hubbard et al., 2006), partnerships based in learning (Honig, 2004), and shared decision making and leadership (Leithwood et al., 2004) may provide the avenues through which professional capacity for leading improvement can be assessed, developed, and diffused throughout the system. Furthermore, greater attention to the quality of what is being shared around improvement efforts is important, as educators will often rely more on anecdotal evidence or practitioner experience than evidence from research (Coburn, Honig, & Stein, 2007).

**IMPLICATIONS FOR THE DEVELOPMENT OF LEADERS**

Although our work focused on leaders who are currently working in the district office or site, there are potential implications for traditional and alternative leadership development programs for aspiring and current leaders. No Child Left Behind has had profound impact on schools, especially those that educate the most underserved populations in our country. Federal accountability policies and subsequent state legislation place leaders at the intersection of policy and practice. It is the tension between these often contradictory forces that make the job of leading districts and schools in the 21st century complex. How do leaders engender trust and
the development of social ties when policies and instructional practices may suggest different paths? In what ways might leaders respond to an increasing demand for technical approaches to problems that require more complex and integrated solutions? Leadership development programs both outside and within districts have the unique opportunity to create the space for reflection and dialogue for leaders to explore these tensions and how they may be brought into balance. The potent combination of leadership development for aspiring and current leaders may provide opportunities for deepening the discourse around policy and improvement.

In his ongoing study of what it takes to "turn around" failing schools, Joseph Murphy emphasizes the critical role of strong leaders as transformational, entrepreneurial, and agents of change (Murphy & Meyers, 2008). Transforming the culture within underperforming schools will require leaders that can both withstand the challenges of accountability policy and work to integrate relationships, trust, and the mutual exchange of knowledge. Therefore, districts and schools, especially those facing increasing sanction from accountability policies, will require leaders who can transform existing cultures through collaboration and engagement (Nicolaidou & Ainscow, 2005). Today's school leaders must be willing to create and sustain organizational, cultural, and social conditions in which change can occur. Leadership development programs targeted at aspiring and current leaders are well positioned to support and guide leaders in understanding and developing the skill sets necessary to better serve all students through collaboration, communication, and transformation of leadership practice from schools as systems of failure to systems of support.

DELIMITERS AND AREAS FOR FUTURE RESEARCH

This is one of the first studies to focus its attention on the interactions between district office and site leaders and intentionally explore the social networks between these leaders as well as the relationship between trust and the reciprocated exchange of best practices. As studies around trust often refer to "reciprocated" relations as reflecting similar levels of perceived trust (Forsyth & Adams, 2004), our work actually measures whether or not individuals mutually select one another around best practice. This level of analysis provides additional insight into our understanding of the interaction between reciprocated relations and trust. Although based on only one case study, this unique work illuminates concepts such as reciprocation and trust and offers a set of methods for microactor-level analysis based on both social relations and ties. As such, our study sets the stage for further exploration of the relationships between social ties and
trust, as well as linkages between these and organizational outcomes such as performance. Additional studies from varied samples or the replication of this work in multiple contexts would extend this line of inquiry even further.

While our exploratory study contributes substantively and methodologically to this area of research, some limitations must be noted. First, it is a case study of one district, which limits the generalizability of findings. Second, we rely on self-reports of interactions and trust. Third, we relied on frequency of interaction as indicators of intensity of relationship and do not have a network that assesses the “strength” of the tie. Fourth, the direction of the predictive relationship between trust and reciprocity may be an issue of debate. A circular relationship between trust and social interactions may exist in those instances in which trust provides opportunities for ties to develop, be nurtured, or terminate but in which trust also shapes the conditions for those interactions to occur (Coburn & Russell, 2008). However, in this early exploration on the relationship between networks and trust, we argue—in a similar vein to Bryk and Schneider (2002)—that trust, as an inevitable precondition for the formation of relationships through which BPFR may flow, precedes the formation of reciprocated relations by providing the “safe space” for relations to develop, grow, and deepen. Finally, by focusing only on school administrators as opposed to other leaders in the organization, we may have underrepresented the connections between schools and central office staff as other central office staff and school staff may be in more frequent communication with each other compared with the administrators at the central office and school site included in our study. Despite these limitations, our analysis provides an important contribution to our understanding of school–central office relationships and the factors limiting organizational change under accountability.

CONCLUSION

The space between principals and district office administrators is one ripe for exploration and leverage. Our study provides a unique methodological approach to understanding the theorized relationship between relations and trust and their combined potential in supporting important exchanges. Our results suggest that there are opportunities for supporting the structural and relational social capital for improvement. Fullan (2003) captures the essence of our work: “Leading schools—as in any great organization—requires leaders with the courage and capacity to build new cultures based on trusting relationships and a culture of disciplined inquiry and action”
To support the development of social capital, we must attend to the relationships through which critical research-based resources can flow, and while doing so, we must also focus on the trust between leaders, which seems to form the foundation upon which improvement and change can occur. One without the other limits the potential of systems to move forward and improve.

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NOTE

1. Both authors contributed equally to this article.

REFERENCES


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Hoff, D. J. (2009). Schools struggling to meet key goal on accountability number failing to make AYP rises 28 percent. Education Week, 28(16), 14-15.


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