



Collaboration and the need for trust

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308

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Abstract *Reform efforts increasingly promote collaboration – admonishing principals to include both teachers and parents in democratic decision processes and encouraging teachers to work toward greater collaboration with their colleagues. The hypotheses that the level of collaboration was related to the level of trust was supported in bivariate correlational analyses. There was a significant link between collaboration with the principal and trust in the principal, collaboration with colleagues and trust in colleagues, and collaboration with parents and trust in parents. Canonical correlation reinforced the importance of trust in predicting the overall level of collaboration within a school. Among the set of trust variables, trust in clients was most influential in predicting the set of collaboration variables. Collaboration with parents was the most potent of the collaboration variables in this analysis. These findings argue for the importance of trust in nurturing collaborative relationships.*

Introduction

Collaboration is increasingly extolled as an important feature in the management of excellent schools. Plans to restructure schools are developed to foster greater use of democratic processes (Glickman, 1993; Pounder, 1998). School administrators are encouraged to include teachers and parents in their decision making for key organizational decisions (Conley *et al.*, 1988; Hoy and Tarter, 1995). Teachers, as well, are increasingly being admonished to move away from traditional norms of isolation and autonomy and to move toward greater collaboration (Marks and Louis, 1997; Louis and Kruse, 1995). And yet, for all of the talk of its virtues, progress has been painfully slow in changing the structure and culture of schools to support collaboration (Malen *et al.*, 1990). This paper posits that a significant factor in constructing a climate that supports collaboration is building an atmosphere of trust.

Participation without influence

Despite the enthusiasm at a theoretical level, the results of attempts to implement collaborative decision making have been disappointing (Bartunek and Keys, 1979; Malen *et al.*, 1990). Shared decision making may be undertaken for different reasons. Examining the goals of decision makers may help explain the kinds of results that have been achieved. In schools, shared decision making has typically been undertaken in order to increase the satisfaction, loyalty, and decision acceptance of teachers and parents (Bacharach *et al.*, 1988; Duke *et al.*, 1980; Goldring and Shapira, 1993; Griffith, 1996). However, teachers and parents complain that they have not been given any real influence over the outcome of decisions (Bartunek and Keys, 1979; Bacharach *et al.*, 1988; Conway, 1984; Duke *et al.*, 1980). This might be called contrived collaboration. The

general lack of effectiveness of participation reported in the literature may derive from the fact that teachers and parents have not felt that their participation was genuine. They were not exercising control over decisions that were relevant and important to them (Bartunek and Keys, 1979). Researchers have speculated that when the influence relationships in a school remain unchanged, the benefits of collaborative processes will go largely unrealized:

There is little evidence that school-based management alters influence relationships, renews school organizations, or develops qualities of academically effective schools . . . School-based management generates involvement in decision making, but it does not appear to substantially alter the policymaking influence of site participants generally, the relative influence of principals and teachers or the relative influence of professionals and patrons (Malen *et al.*, 1990, p. 304).

Principals seem to be reluctant to extend genuine influence to teachers and parents, perhaps assuming that they do not have the expertise to make valuable contributions or because they do not trust them to make decisions in the best interest of the school. Teachers may be resentful of the investment of time asked of them when they perceive that their actual influence is limited (Bartunek and Keys, 1979; Duke *et al.*, 1981). Teacher respondents in a nationwide survey indicated that previous participation had afforded them little real influence and hence they had grown skeptical about future participation. Nonetheless, teachers asserted that they should be more involved in school and district decision making, especially with respect to issues directly affecting their immediate teaching responsibilities (Bacharach *et al.*, 1988).

Recent calls for collaboration seem to be pressing for a more genuine sharing of decision-making authority, where principals and teachers make decisions jointly. Higher quality decisions are the goal of this more genuine form of collaboration. Teachers and parents are viewed as having valuable knowledge and insights to contribute to decisions and consequently are given actual influence over the outcome of decisions. Not only are better quality decisions possible, but greater motivation and commitment on the part of teachers is often the result.

Principals collaborating with teachers

Principals in excellent schools value the perceptions and insights of their teachers and make skillful use of these resources in solving the problems facing the schools (Leithwood and Steinbach, 1995). Expert principals know how to construct processes in which important decisions are made through collaboration. Collaborative decision making is a process with potential benefits of higher quality decisions and greater ownership and implementation of decisions, but it also can be costly in terms of time and energy, with no guarantee that potential benefits will be realized. Principals are more likely to reap the benefits of participation when the process is carefully structured to include teachers in decisions that matter to them, and when their knowledge and expertise leads to real changes in the outcome. When an administrator only

pretends to be interested in their input, teachers are likely to become disillusioned with involvement.

Clearly, it would be unmanageable and counter-productive to try, include every teacher in every decision faced by a school. Hoy and Tarter (1992a, 1992b, 1995) have developed a model to guide administrators in issues of who to include in decision making. It is based on the proposition that there are some decisions that subordinates will accept without question because they are indifferent to them (Barnard, 1938). These decisions are said to be in their zone of acceptance (Simon, 1947). Subordinates do not need to be involved in decisions of this kind, and in fact may resent giving up time for participation they perceive as unnecessary or meaningless. Other decisions, however, subordinates want to be involved with because they have a personal stake in the outcome of the decision and they have expertise to contribute to the solution (Hoy and Tarter, 1995).

In a school setting, when decisions fall outside teachers' zone of acceptance, involving them in decision making will increase the likelihood that the decision will be accepted. If teachers have a stake in a decision but no real expertise to add, then the principal may include them, but structure the process as an apprenticeship so that teachers can see the appropriate expertise modeled and begin to construct a conceptual map of the factors involved. If a teacher has expertise but no stake in a particular decision, he or she can be asked to share that expertise as a consultant, but full involvement in the final decision is not necessary (Hoy and Tarter, 1995).

According to this model, when teachers have both a stake and expertise in a decision domain they should have extensive involvement in decision making. Whether teachers should share in full decision-making authority, however, depends on whether or not the principal trusts that they are committed to organizational goals. If organizational goals are not shared throughout the faculty then a principal will want to involve teachers but maintain final decision-making authority lest decisions be coopted by self-interest. Constructing a shared problem-solving process may give the teachers the opportunity to be guided through a process in which organizational goals are made explicit. When possible solutions are evaluated in light of overarching goals and key values it may result in a greater sharing of those values and goals. If teachers can be trusted in their commitment to organizational goals, then Hoy and Tarter (1995) suggest a situation of full collaboration exists and principals should share their decision authority with other participants. In order to extend not just token participation but genuine decision-making authority to teachers, principals must trust teachers' intentions and their capabilities.

Teachers collaborating with teachers

Teaching is not easy work. The changing needs of society, changing expectations for schools, and the changing sets of needs brought each day by each group of students make teaching a demanding task. The complexity of

considerations that must be taken into account in the myriad decisions teachers face every day requires that there be a deep understanding of their purposes and how such purposes may be accomplished (Leithwood and Steinbach, 1995). The productivity and adaptability of schools can be enhanced by creating structures that facilitate collaboration among teachers.

Teachers have few opportunities to engage in substantive dialogue and exchange of information with other teachers even though, as Conley *et al.* (1988, p. 266) point out, "their pedagogical knowledge, skills, and information about students are arguably a school system's most valuable resource". In order for teachers to rise successfully to the challenge of adapting their teaching practices to meet the changing expectations of various reform initiatives, they must have opportunities to participate in dialogue with other teachers to support and challenge one another. These collaborative communities provide opportunities for teachers to reflect deeply and critically on their own teaching practice, on the content they teach, and on the experiences and backgrounds of the learners in their classrooms (Putnam and Borko, 1997).

Working with other teachers within a context of mutual respect, but a context that also encourages a productive level of debate, challenge, and conflict, has the potential to invigorate teaching with increased intellectual stimulation. It can help teachers impose meaning and organization on incoming information in light of their existing knowledge and beliefs (Putnam and Borko, 1997), and help forge values that are increasingly explicit and shared. Engaging with one another in this way can support the risk taking and struggle entailed in transforming practice. For teachers to break down norms of isolation and to sacrifice some of the autonomy they value so highly in order to reap the potential benefits of greater collaboration they must trust their colleagues.

Parent and school collaboration

Traditional bureaucratic models of schools have stressed the separate responsibilities of schools and families and emphasized the inherent incomparability, competition, and conflict between families and schools. More recent views have assumed more shared responsibilities of schools and families. These views have emphasized the coordination, cooperation, and complementarity of schools and families and encouraged communication and collaboration (Epstein, 1986, 1987a). Epstein described five types of parent involvement in schools. First are the basic obligations of parents to provide for their children's general wellbeing and readiness for school. Second is the basic obligation of schools to communicate with parents about school activities and requirements, as well as information about individual student progress. The third type occurs when schools make a place for parents to volunteer in school and to attend performances and workshops at the school. The fourth involves parents in learning activities in the home. The fifth type of involvement is including parents in decision-making roles in the governance of the schools (Epstein, 1987b, 1991). Epstein and Dauber (1991) demonstrated that all five

types of involvement were moderately correlated in a sample of urban elementary and middle schools (with correlations ranging from 0.30 to 0.57). While Epstein (1987b, 1991) argued that a comprehensive school program ought to include all five types of parent involvement, it is the fifth type, involving parents in school-level decision making, that has drawn the most controversy.

As the purposes of schooling are coming under debate and are less commonly held than they were in decades past, parents are increasingly demanding a voice in how schools conduct their business. The move to include parents in school governance is a boundary-spanning strategy, a way to include an important constituency or group of stakeholders with the hope of gaining increased support and satisfaction, as well as an opportunity to improve schools' responsiveness to their communities (Conway, 1984; Goldring and Shapira, 1993; Griffith, 1996a). It was also hoped that involving parents in their children's education would lead to greater student achievement. The past three decades have witnessed increased calls for parents to have a voice in decision making concerning public schools beyond that provided by citizen control of school boards.

Parent advisory councils have been one response to demands for greater parental influence. Parent advisory councils have been mandated as part of many educational reforms, beginning in the 1960s (e.g. Head Start and Chapter 1). Early reports on the efficacy of parent advisory councils found disappointing results. Jennings (1979) noted that, after nearly two decades of attempts to involve parents in school decision making through school councils, there was little beyond frustration and failure to show for these efforts. Jennings placed blame not only on school administrators' unwillingness to give up power but on teachers' resistance to giving over newly won protections in job security. Another reason for the failure were organizational problems in the councils themselves, such as high turnover rates and poor attendance at meetings. And although, in his review of the literature, Conway (1984) could find no consistent evidence that the involvement of parents and community members led to greater student achievement or even greater satisfaction with the schools, he predicted that the move to have parents involved in school-level decision making would continue. He wrote:

At the present time, it appears that citizen direct participation in educational decision making is likely to continue, but the rationale for it will be based necessarily more on political reasons, such as demonstrated in mandates for participation, as opposed to criteria from empirical inquiry, such as increased satisfaction or maximized decisions as a result of external PDM [participatory decision making] (Conway, 1984, p. 23).

Recent reform initiatives, especially in urban districts, have borne out Conway's prediction, reaffirming faith in oversight councils for schools, with authority over such issues as budget, staffing, and hiring and firing the principal. Somewhat more encouraging evidence of the efficacy of such councils has begun to accumulate. Parent influence over school-level decisions has been related to higher parent satisfaction with schools, at least among

parents of high socioeconomic status (SES). Empowerment was not related to satisfaction among lower SES parents (Goldring and Shapria, 1993). Evidence of increased student learning has been found where parents exercise some measure of sway in school governance (Griffith, 1996b; Hoy *et al.*, 1996).

Many of the same issues surrounding teacher involvement in school-level decision making arise where parents are concerned. Is the involvement in decision making something administrators give to parents in order to "buy" greater support, satisfaction, and acceptance of decisions? Or do administrators see parents as a potential resource that brings information, insight, and a useful perspective to the table in the search for solutions to problems and opportunities facing the school? Where school personnel do not trust parents, it is more likely that efforts at collaboration will be contrived rather than genuine.

Trust in organizations

A climate of trust bestows a variety of benefits to the organizations that can foster it. Trust contributes to organizational effectiveness in a variety of ways. The quality of communication has been linked to the effectiveness, and trust is necessary for open communication in an organization (O'Reilly and Roberts, 1977). People with a high degree of trust are likely to disclose more accurate, relevant, and complete data about problems, as well as their thoughts, feelings or ideas (Wrightsmen, 1974; Zand, 1971). In addition, organizational citizenship, the willingness of employees to go beyond the minimum requirements of their job descriptions, has been linked to trust in the leader (Podsakoff *et al.*, 1990). In organizations with a high level of trust, participants are more comfortable and are able to invest their energies in contributing to organizational goals rather than self-protection.

On the other hand, distrust can impair organizational effectiveness. Distrust is likely to have a deleterious effect on communication. When interacting with a distrusted person, especially a person who holds more power within an organizational hierarchy, an employee may feel compelled to be evasive or to distort attitudes or information in order to protect his or her interests (Mellinger, 1956; Roberts and O'Reilly, 1974). When broken promises led to lost trust, one study found that distrust was significantly related to a deterioration in the employee's performance and to intentions to leave the employer (Robinson, 1996). One mechanism organizations use as a substitute for trust and as a response to broken trust is the institution of rules and regulations. But a proliferation of rules can be a serious impediment to organizational effectiveness. Rules and regulations are likely to facilitate organizational functioning only when the requirements of a task are well enough understood to be specified clearly and concisely. They are likely to engender distrust and resentment in situations where workers need a certain amount of discretion in order to function effectively (Fox, 1974; Govier, 1992; Sitkin and Stickel, 1996). To be responsive to the needs of different students, teachers certainly require discretion.

There is evidence that trust contributes to organizational effectiveness in schools. Uline *et al.* (1998) revealed the link between trust and school

effectiveness by demonstrating that the expressive factors of trust and a healthy school climate made as great a contribution to school effectiveness as the more instrumental factors of standardized student test scores. In addition, teachers' trust in their principal as well as their colleagues has been linked to the effectiveness of schools (Hoy *et al.*, 1992; Tarter *et al.*, 1995). Trust in colleagues has been found to have a significant impact on student achievement in elementary schools (Hoy *et al.*, 1992; Goddard *et al.*, 2000). The climate of the school can be one that cultivates trust or that makes trust difficult to foster. Openness in the climate of a school and healthy interpersonal relationships tend to foster a climate of trust (Hoy *et al.*, 1996; Hoffman *et al.*, 1994; Tarter *et al.*, 1989, 1995). Healthy interpersonal relationships have been related to decision participation in schools (Sabo *et al.*, 1996).

Building trust requires attention to the five facets of trust. A person who desires to be regarded as trustworthy will need to demonstrate benevolence, reliability, competence, honesty, and openness. The nature of the interdependence between principals, teachers, students, and parents is such that each of these facets has been shown to make a significant contribution to judgments of trust (Hoy and Tschannen-Moran, 1999). One prescription for trustworthiness suggests a person should be "as predictable as possible, speak carefully, especially when making commitments, treat promises seriously, and never be deceptive" (Govier, 1992, p. 61). Authenticity of behavior has been related to trust. An acceptance of responsibility for one's actions and avoiding distorting the truth in order to shift blame to another characterizes authenticity. The authenticity of the principal's behavior (Henderson and Hoy, 1983) was related to faculty trust in the principal (Hoy and Kupersmith, 1985), while authenticity of teacher behavior has been linked to trust in colleagues (Tschannen-Moran and Hoy, 1998). Early in relationships, organizational participants tend to pay close attention to trust-relevant information about others (Burt and Knez, 1996; Gabarro, 1978; Kramer, 1996; Lewicki and Bunker, 1996). Swinth (1967) asserted that the establishment of trust required a commitment period in which each participant forego an opportunity to exploit the other for their own advantage.

Fostering an atmosphere of trust pays significant dividends for schools. Improved effectiveness, communication, organizational citizenship and student achievement are worthy ends. An additional benefit may be the ability to create more genuine forms of collaboration between the principal and teachers, between teacher colleagues, and between parents and the school.

Collaboration and trust

Although collaborative processes are increasingly called for as part of reform efforts in schools, these processes will not come about in an authentic form if the people involved do not trust one another. Principals who do not trust their teachers will not share authority and responsibility. Teachers who do not trust one another will not give over a measure of their autonomy in order to collaborate with others. School personnel who do not trust parents will guard

against giving them a real voice in decisions affecting the school. Inversely, as principals, teachers, and parents have opportunities for greater genuine participation, this may fuel a spiral of trust that generates more trust.

Collaboration and trust are reciprocal processes; they depend upon and foster one another. Collaboration takes place between autonomous partners who choose whether or not to participate, therefore, it is unlikely that collaboration will develop without at least a measure of trust. Collaboration involves the investment of time and energy, as well as the sharing of resources, responsibility and rewards, and this is difficult without trust (Mattessich and Monsey, 1992). This sharing creates a situation of interdependence that participants will be motivated to avoid unless they trust their collaborative partners. Greater collaboration then holds the possibility of fostering greater trust as partners have experience with one another over time and have opportunities to witness the benevolence, reliability, competence, honesty and openness of their partners. Putnam (1993) referred to this accumulation of collective trust as "social capital" and treated it as a very real asset that accrued to communities that had such trust. Unlike traditional capital, this capital actually accumulates with use and is diminished with disuse. Mishra (1996) argued that trust is of fundamental concern when organizations are facing a crisis because it makes possible collaboration and undistorted communication that are needed to make an adaptive response to the uncertainty of the situation.

Empirical evidence of the link between collaboration and trust is scant but provocative. Trust was found to mediate a manager's willingness to use participative management practices in a business context. Where trust was absent, managers were less likely to include organizational participants in significant decisions and to benefit from their insights and perspectives (Rosen and Jerdee, 1977). The level of trust has also been found to play a role in effectiveness of a working group. Zand (1971) found that when a group worked on a problem, there were two concerns – one was the problem itself, the second was how the members related to each other about the problem. In low trust groups, interpersonal relationships interfered with and distorted perceptions of the problem, while high trust groups solved problems more effectively. Finally, when workers are satisfied with their level of involvement in decision making, it may lead to greater trust in those in leadership roles. Among a college faculty, trust in leaders was positively related to satisfaction with decision participation (Driscoll, 1978). It is anticipated that these same dynamics will be found within schools. Consequently, understanding more about the role of trust in collaborative processes will improve our chances of implementing successful collaborations in schools.

Purpose of the study

The current study seeks to build upon the empirical evidence linking collaboration and trust and apply it to the context of schools. It is based on the premise that a significant factor in constructing a collaborative climate is

building an atmosphere of trust. If the link between collaboration and trust that has been found in other organizations also holds in schools, it is not only of theoretical interest to researchers but of practical importance to practitioners as well. School personnel that seek to be responsive to reform initiatives calling for greater collaboration will need to attend to the dynamics of trust in their buildings and districts. Administrators who understand this link may do more to build trusting relationships with their faculty in order to make collaboration more genuine and more effective. Teachers who desire to create a more collaborative climate within their schools may need to examine the level of trust in their buildings, to look for ways to foster trust or to repair trust that has been damaged. When attempts at collaboration with parents break down, administrators and faculties may need to examine issues of trust. Some authors recommend taking time at the beginning of any collaboration to build trust (Mattessich and Monsey, 1992; McGowan, 1990). Empirical evidence linking trust and collaboration may help reinforce the importance of that advice.

Methodology

The focus of this study was on the relationship between collaboration and trust in schools. The school was the unit of analysis; therefore, teachers were asked for their perceptions of the level of collaboration and trust in the school, not their own involvement with collaboration or personal feelings of trust. Using an instrument developed for this study, collaboration was measured using three constituent groups and two levels of decision making – collaboration between the principal and teachers on school-level decisions, collaboration with parents on school-level decisions, and collaboration with teacher colleagues on classroom-level decisions. Faculty trust was measured in reference to three corresponding groups – trust in the principal, in colleagues, and in clients (students and parents). Results of a pilot study conducted in the development of the collaboration questionnaire are reported below. The trust measure was tested in a similar manner (Hoy and Tschannen-Moran, 1999; Tschannen-Moran, 1998), and the results of the validation study are reported below. Data were collected in elementary schools in one large urban district to hold constant issues of district-level management practices and minimize the differential effects of context.

The instruments

A pilot study was undertaken to test and refine the collaboration and trust questionnaires. The questionnaires were tested first by submitting them to a panel of experts and field tested with a small group of teachers. Factor analysis was then used with a larger sample of teachers to determine the usefulness and appropriateness of the items. Items were eliminated or reworded based on the results of these various tests. The validity of the measures were further tested by correlating the results of the pilot instruments to other constructs that were hypothesized to be either positively or negatively correlated with collaboration and trust.

Collaboration survey. Collaboration has been a difficult construct to define and measure. Although teachers may be allowed greater participation in decision-making processes within schools, they complain that they have not had a real voice in the decisions that affected them, that they have invested time and energy in participatory decision-making processes only to have the decisions made by principals or other organizational participants at higher levels in the hierarchy (Bartunek and Keys, 1979; Bacharach *et al.*, 1988; Duke *et al.*, 1980). In this study, both involvement and influence were assessed – principals were asked to rate the level of involvement and teachers were asked to rate their perceptions of their own influence and that of parents, in an attempt to discern a subtle but significant difference in decision-making practices within schools. Collaboration was defined as the extent to which teachers perceived themselves and parents to be not only involved but to exercise influence over school and classroom-level decisions. Three collaborative processes in schools were explored: collaboration between the principal and teachers on school-level decisions, collaboration with parents on school-level decisions, and collaboration between teachers on classroom-level decisions. School-level decisions included decision domains such as budgets, hiring, scheduling, and policies. Classroom-level decisions included issues such as curriculum, activities, and discipline. A six-point Likert response set from strongly disagree (coded as 1) to strongly agree (coded as 6) was used. Sample questions and decision domains include:

- (1) *Collaboration with the principal.* To what extent do teachers have influence over the outcome of these types of decisions?
 - selecting personnel;
 - determining how to allocate space.
- (2) *Collaboration with teacher colleagues.* To what extent do teacher committees have influence over decisions of this kind?
 - determining professional development needs and goals;
 - evaluating curriculum and programs.
- (3) *Collaboration with parents.* To what extent do parents have influence over the outcome of these types of decisions?
 - determining areas in need of improvement;
 - determining how to allocate resources.

Participation. The level of participation in a school was measured by information supplied by the principal. Principals were asked to report whether teachers and parents participated through a formal committee structure in the same set of school-level decision domains as above, and whether teacher committees were involved in the various classroom-level decision domains. Involvement in each decision domain was assessed as a dichotomous variable and scores were summed within each subscale to provide an index of

involvement. The number of decision domains in which participation was indicated became the participation score.

Trust survey. Trust was defined as one party's willingness to be vulnerable to another party based on the confidence that the latter party is:

- benevolent;
- reliable;
- competent;
- honest; and
- open.

Trust in schools has been studied using the Trust Scales (Hoy and Kupersmith, 1985) that explore faculty trust in the principal and faculty trust in colleagues. The trust survey developed in this study built on that 14-item instrument, expanding it to explore additional dimensions of trust as well as to include faculty trust in parents and students. The resulting survey, after refining through factor analysis, contained 35 items (Hoy and Tschannen-Moran, 1999; Tschannen-Moran, 1998). The format of the Trust Scales was maintained, with a six-point Likert response set from strongly disagree (coded as 1) to strongly agree (coded as 6). Sample items from each of the three levels of trust being measured include:

- The principal is unresponsive to teachers' concerns (reverse scored).
- Teachers in this school are reliable.
- Teachers in this school trust the parents to support them.

Items were developed that assessed each of the five proposed facets of trust as well as global statements of trust or distrust to determine whether these various dimensions could be said to belong to a judgment about trust.

Field test and content validity. The content validity of the collaboration instrument was tested by submitting it to review by a panel of six experts to determine if the decision domains reasonably covered the kinds of decisions made in schools and whether asking about both participation and influence seemed a promising approach to assess whether participation was collaborative. All members of the panel of experts agreed that it was a reasonable approach. The trust instrument was similarly tested. A field test was conducted to test the clarity of instructions, appropriateness of the response set, length, and face validity of the items. Six experienced teachers were asked to respond to the instruments and items were modified based on their recommendations.

Reliability and factor analysis. A sample of 50 teachers from six states were asked to respond to a 39-item collaboration instrument to test its validity and reliability. The collaboration survey was submitted to a factor analysis, using principal components analysis with Varimax orthogonal rotation, to insure that all items in the measure were strongly related to the other items and were valid

measures of the construct. In general, the factor loadings were strong and consistent with expectations. Items that loaded on more than one factor at 0.40 or above, or that loaded lower than 0.40 on any one factor, were eliminated. As a result of the pilot study, six school-level decision domains in the collaboration with the principal subscale were discarded, as were five classroom-level decision domains from the collaboration with colleagues subscale because of the lack of a clear differentiation between school-level and classroom-level decisions. All items referring to collaboration with parents were retained, resulting in a 28-item collaboration measure. The reliabilities for the three subsections of the collaboration survey were considered good. Collaboration with the principal on school-level decisions was 0.87, collaboration with teacher colleagues on classroom-level decisions was 0.88, and collaboration with parents on school-level decisions had a reliability of 0.94. Factor analysis of the collaboration survey provided strong support for the instrument. The survey was subjected to a second factor analysis as part of the full study. Results are reported in the next section.

Discriminant validity. Participants in the pilot study were asked to respond not only to the collaboration and trust surveys but also to three additional instruments to test the discriminant validity of the measure (Kerlinger, 1986). A survey of powerlessness (Zielinski and Hoy, 1983) was used to test the collaboration survey because it was hypothesized that those without influence would feel powerless. Six items, of the 20-item index of powerlessness, were used. The measure of collaboration was significantly negatively related to powerlessness for collaboration with the principal ($r = -0.43, p < 0.01$), with colleagues ($r = -0.54, p < 0.01$), and with parents ($r = -0.40, p < 0.01$). This was an acceptable indication that collaboration, as measured by this new instrument, was conceptually related but distinct from powerlessness.

Discriminant validity for trust was measured using a survey of work alienation because alienation was presumed to be conceptually distinct from trust. "Work alienation is defined in terms of the extent to which individuals fail to experience intrinsic pride or meaning in their work" (Forsyth and Hoy, 1978, p. 85). Results indicated that work alienation was significantly negatively related to trust in colleagues ($r = -0.31, p < 0.05$) and trust in clients ($r = -0.31, p < 0.05$). The negative sign of the correlations indicated that the higher the level of trust in colleagues and in clients, the lower was the overall work alienation. Work alienation was not significantly related to trust in the Principal. Although it was expected that work alienation would be related to all three aspects of trust, that it was related to two of the three and in the expected direction was considered acceptable.

Both the collaboration and trust measures were expected to be positively correlated with the school decisions subsection of Bandura's teacher self-efficacy scale. Self-efficacy is defined as "a cognitive process of self-attribution in which people construct beliefs about one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1977). Efficacy to influence the outcomes of events is conceptually similar to

participation in a decision-making structure, so collaboration and efficacy were expected to statistically converge. Teachers' sense of efficacy was related to collaboration with the principal ($r = 0.36, p < 0.05$), with colleagues ($r = 0.53, p < 0.01$), and with parents ($r = 0.26, p < 0.05$). In a high trust environment it was expected that teachers would develop a greater sense of efficacy. Teachers' sense of efficacy was significantly and positively related to trust in the principal ($r = 0.46, p < 0.01$), trust in colleagues ($r = 0.30, p < 0.05$), and trust in clients ($r = 0.47, p < 0.01$). Based on these preliminary findings, it was concluded that these two new measures were reasonably valid measures of trust and collaboration.

The pilot study was undertaken to refine these newly developed instruments. The content analysis assured that the items reasonably covered the domains being measured. The field test and statistical analysis helped to clarify the instruments by eliminating items that loaded on more than one factor or that were ambiguous to participants. The pilot study produced evidence of the validity and reliability of the measures. This process of testing resulted in more concise and clearer measures.

Conducting the study

The study made use of the collaboration and trust measures described above to gather data on a sample of elementary schools within one large urban district in a Midwestern state. The sample, data collection, and analysis techniques are described below.

The sample. The population for this study was the elementary schools within one large urban school district. Fifty of the 91 elementary schools in the district were randomly selected for participation in the study. Ninety percent of the schools contacted agreed to participate, resulting in a sample of 45 schools. The principal at each school was asked to complete a survey on the degree of decision participation in various decision domains. At the same time, surveys of teachers' perceptions of the degree of influence over the same decision domains were gathered. A total of 898 useable surveys were completed by teachers (a response rate of over 99 percent). A mean of 21 teachers per school responded to the instruments, with a minimum of 13 and a maximum of 37. Seventy-nine percent of the teachers were European-American and 19 percent were African-American. Two-thirds of the teachers were female. There were an average of 404 students per school, with a mean of 66 percent receiving free and reduced priced lunches (with a range from 24 percent to 100 percent). Fifty-five percent of the students were African-American and 42 percent were of European descent. Of the principals of the schools studied, 64 percent were European-American and 33 percent African-American.

Data collection. Data were collected at a regularly scheduled faculty meeting. A member of the research team explained the purpose of the study, assured the confidentiality of all participants, and requested that the teachers complete the surveys. Half the teachers present responded to the collaboration questionnaire and half completed the questionnaire on trust, in order to assure

methodological independence of the responses. No attempt was made to gather data from faculty who were not present at the meetings.

Data analysis. The focus of this study was on the collective – the patterns, practices, and processes of interpersonal relationships among schools; thus the school was the unit of analysis. First, a factor analysis was conducted to insure that each of the items loaded as expected. Next, descriptive statistics were examined to insure sufficient variability for subsequent analyses. Third, the interrelationships between participation and collaboration, as well as the interrelationships between the three levels of collaboration, were explored to see if patterns emerged in the level of collaboration within schools. For example, where there was high collaboration with teachers did that also tend toward greater collaboration with parents, or were those collaborative processes fairly distinct? A correlational analysis of the relationships between each level of collaboration and the corresponding level of trust tested the hypotheses that these were positively related. Specifically, it was predicted that collaboration with the principal on school-level decisions would be positively related to trust in the principal, that collaboration with colleagues on classroom-level decisions would be related to trust in colleagues, and that collaboration with parents would be related to trust in clients.

Finally, canonical correlation was conducted to compare the set of trust variables to the set of collaboration variables, weighing the relative weights of each of the trust and collaboration dimensions when all six variables were included. The results of these various analyses were anticipated to provide a greater understanding of the relationships between trust and collaboration within and among various school constituencies.

Results

Results of four sets of analyses are reported below – factor analysis, descriptive statistics, correlational analysis, and canonical correlation. Each provides new insight into the relationship between the constructs of trust and collaboration.

Factor analysis and reliabilities

Kerlinger (1973) argued that factor analysis is perhaps the most powerful method of construct validation. Factor analysis supported the construct validity of this measure of collaboration. Items that tapped collaboration with the principal on school-level decisions had factor loadings that ranged from 0.56 to 0.90 with a reliability of 0.93. Items that assessed collaboration with colleagues over classroom-level decisions had factor loadings which ranged from 0.66 to 0.90 with a reliability of 0.97. And collaboration with parents had factor loadings from 0.74 to 0.86, with a reliability of 0.95 (see Table I). The factor structure for the collaboration survey was very similar to that found in the pilot study, demonstrating the stability of the factor structure. These results provided evidence that the collaboration survey was a reasonably reliable and stable instrument.

Decision domain	Three factor solution		
	F1	F2	F3
<i>Collaboration with the principal (alpha = 0.93)</i>			
To what extent do teachers have influence over the outcome of these decisions?			
6. Selecting personnel	0.19	0.21	0.90
5. Determining criteria for selecting personnel	0.21	0.33	0.86
7. Assigning and reassigning personnel	0.27	0.21	0.86
8. Evaluating personnel	0.38	0.09	0.71
4. Determining personnel needs	0.52	0.23	0.69
9. Determining how to allocate space	0.38	0.36	0.62
10. Designing building modifications	0.48	0.17	0.56
<i>Collaboration among teacher colleagues (alpha = 0.97)</i>			
To what extent do teacher committees influence decisions of this kind?			
24. Planning professional development activities	0.90	0.25	0.20
28. Resolving student behavior problems	0.84	0.31	0.15
23. Determining professional development needs and goals	0.84	0.26	0.30
25. Selecting instructional methods and activities	0.83	0.15	0.32
22. Determining student placement	0.83	0.13	0.20
27. Resolving student learning problems	0.83	0.25	0.32
26. Evaluating curriculum and programs	0.81	0.21	0.39
29. Developing procedures for reporting student progress to parents	0.74	0.07	0.42
21. Determining consequences for rule breaking	0.69	0.44	0.17
20. Determining school rules	0.66	0.46	0.17
<i>Collaboration with parents (Alpha = 0.95)</i>			
To what extent do parents have influence over the outcome of these decisions?			
19. Approving extracurricular activities	0.11	0.86	0.17
11. Determining areas in need of improvement	0.20	0.84	0.26
12. Planning school improvement	0.16	0.85	0.18
15. Fostering community relations	0.27	0.83	0.13
14. Determining how to allocate resources (e.g. the school budget)	0.06	0.83	0.22
16. Resolving problems with community groups	0.23	0.83	0.16
13. Determining curriculum priorities	0.28	0.81	0.17
18. Determining how to comply with mandates, legislation, etc.	0.31	0.76	0.20
17. Determining school rules and regulations	0.23	0.74	0.06

Note: (N = 45)

Table I.
Collaboration item
analysis

Descriptive statistics

Descriptive statistics revealed some interesting patterns. In general, the teachers who responded to the survey tended to disagree that either they or the parents had influence over school-level decisions (means = 2.7 and 2.8, respectively). On the other hand, teachers tended to agree slightly that they collaborated with other teachers on classroom-level decisions (mean = 4.1). Teachers reported a moderate level of trust in their principal and in colleagues (mean = 4.7 and 4.7, respectively), although the standard deviation of 0.80

indicated widely differing opinions of the principals. Trust in students and trust in parents converged statistically and so were analyzed as one construct, trust in clients. Teachers as a group demonstrated ambivalence when it came to these constituents – the mean for trust in clients was 3.7, almost the mid-point of the scale (see Table II).

Correlations

Correlational analysis using Pearson Product Moment Correlations explored three sets of relationships – the relationship between the level of participation and of collaboration (involvement versus influence in decisions), the interrelationships between the three levels of collaboration in a school (principal, parents and colleagues), and the relationships between trust and collaboration.

Participation. Developing an instrument that would discern the differences between contrived and genuine collaboration, between involvement and influence, was no small challenge. Principals were asked to rate the level of involvement in a school, while teachers were asked to rate their perceived level of influence. The principals' rating of the level of involvement in decision making, indicated by the number of decision domains in which the principal indicated participation, was not significantly related to the level of perceived influence by the teachers, indicated by an overall measure of collaboration consisting of the mean of the three collaboration scores ($r = 0.23$). Whether or not teacher or parent committees existed in which various decision domains were taken up, the teachers did not perceive that either they or the parents had any real influence over the decisions. This supports the complaints in previous literature that most participatory decision structures in schools are contrived (Bartunek and Keys, 1979; Bacharach *et al.*, 1988; Duke *et al.*, 1980). The Hoy and Tarter (1995) model of shared decision making suggests that principals must trust their faculty before they will be willing to engage in a democratic process in which they share authority and have the same vote as every other member of the committee. When trust is absent, Hoy and Tarter's model recommends that

Variable	Minimum	Maximum	Mean	Standard deviation
Collaboration with principal	1.44	4.37	2.68	0.61
Collaboration with colleagues	2.70	5.33	4.05	0.59
Collaboration with parents	1.97	3.77	2.83	0.47
Trust in principal	2.10	5.83	4.71	0.80
Trust in colleagues	3.21	5.79	4.71	0.54
Trust in clients	2.76	4.88	3.69	0.57

Notes: $N = 45$
(1 = Strongly disagree, 6 = Strongly agree)

Table II.
Descriptive statistics

principals maintain final decision authority. That is, it seems, the pattern most prevalent in the schools in this study.

Intercorrelations of levels of collaboration. The three levels of collaboration were moderately related to one another, indicating that a school high in one kind of collaboration would tend to be high in the others. Collaboration with the principal was related to collaboration with teacher colleagues ($r = 0.68$, $p < 0.01$) and collaboration with parents ($r = 0.52$, $p < 0.01$). Collaboration with teacher colleagues was related to collaboration with parents ($r = 0.54$, $p < 0.01$) (see Table III). Where principals collaborated with teachers they were also likely to collaborate with parents, and in these schools teachers were also likely to collaborate with one another.

Correlations between collaboration and trust. The hypotheses that trust would be related to collaboration were tested in correlational analyses (see Table III). As predicted, collaboration with the principal was positively and significantly related to trust in the principal ($r = 0.32$, $p < 0.05$); the more a principal collaborated with faculty the more likely the faculty was to trust the principal. Collaboration with the principal was also related to trust in clients ($r = 0.42$, $p < 0.01$). The hypothesis that collaboration with colleagues would be related to trust in colleagues was supported ($r = 0.30$, $p < 0.05$). Collaboration with colleagues was also significantly related to trust in the principal ($r = 0.64$, $p < 0.01$) and collaboration with parents ($r = 0.48$, $p < 0.01$). Faculty are apparently more likely to collaborate with one another in an atmosphere of trust. Collaboration with parents was strongly and positively correlated with trust in clients ($r = 0.79$, $p < 0.01$). Collaboration with parents was also related to trust in the principal ($r = 0.54$, $p < 0.01$), and trust in colleagues ($r = 0.45$, $p < 0.01$). Parents were more likely to be included in school-level decision making in schools with high levels of trust in the principal, teachers and clients. Overall, there was strong empirical support for the link between collaboration and trust. In schools where there was a high level of trust, there was more likely to be high levels of collaboration between the principal and the faculty on school-level decisions, among the faculty on

Subscale	1	2	3	4	5	6
1. Collaboration with principal		0.683**	0.517**	0.323*	0.285	0.417**
2. Collaboration among colleagues			0.543**	0.640**	0.304*	0.483**
3. Collaboration with parents				0.447**	0.443**	0.788**
4. Trust in the principal					0.452**	0.416**
5. Trust in colleagues						0.412**
6. Trust in clients						

Notes: $N = 45$. * $p < 0.05$; ** $p < 0.01$

Table III.
Intercorrelations
between collaboration
and trust

classroom-level decisions, and collaboration with parents on school-level decisions.

Canonical correlation

Canonical correlation is a procedure for investigating the relationship between two sets of variables. It was used to explore the extent to which the level of collaboration in a school, as measured by the set of three collaboration subscales, could be explained or predicted by the level of trust, as measured in three subscales. The descriptive statistics for the six subscales were displayed in Table II, demonstrating that there was sufficient variability to proceed. Intercorrelations between each of the subscales were reported in Table III.

Results show a strong relationship between the set of trust variables and the set of collaboration variables. Of the three canonical roots calculated, only canonical root 1 was significant. Interpreting canonical root 1, the canonical correlation coefficient was 0.67. The redundancy indicated that 40 percent of the variance in the dependent variable set of collaboration indicators could be explained by the set of trust variables (see Table IV).

The structure coefficients indicated that the independent canonical variate 1 carried information about each of the three variables in the independent variable set. The structure coefficients indicated that trust in clients was correlated 0.95 with the variate score for trust, while trust in the principal was correlated at 0.70 and trust in colleagues at 0.43. Similarly, the structure coefficients for the set of collaboration variables indicated that the dependent variate carried information from each of these three variables. The structure coefficients for collaboration indicated that collaboration with parents was strongly related to the collaboration variate score, at 0.96. Collaboration with

	Canonical variate 1		
	Standardized canonical coefficients (weights)	Structure coefficients	
For independent variable set			
Trust in the principal	0.36	0.70	
Trust in colleagues	0.01	0.43	
Trust in clients	0.79	0.95	
PV			0.53
R ² _c			0.67
For dependent variable set			
Collaboration with the principal	-0.11	0.57	
Collaboration with colleagues	0.38	0.75	
Collaboration with parents	0.81	0.96	
PV			0.60
Rd			0.40

Table IV.
Canonical correlation of
trust and collaboration
- summary of
canonical correlation
analysis

colleagues and with the principal were also strongly related, with correlations of 0.75 and 0.57, respectively. All of the structure coefficients were positive, indicating that the higher the value of the variable, the higher the variate score.

The standardized canonical coefficients indicated the relative importance of each of the independent and dependent variables in determining the value of the variate for a particular school. In the set of trust variables, trust in clients made the strongest contribution to the explanation of Collaboration, with a standardized weight of 0.79. Trust in the principal had a weight of 0.36. The standardized weight for trust in colleagues was least important at 0.01. The standardized canonical coefficients for collaboration indicated that collaboration with parents made the strongest contribution to the relationship with the set of trust variables, with a standardized weight of 0.81. Collaboration with colleagues made the next strongest contribution with a weight of 0.38. Collaboration with the principal, with a standardized weight of -0.11 , contributed little.

Discussion

This study explored the relationship between trust and collaboration in school settings. For this purpose two survey instruments, a trust survey and a collaboration survey, were developed and tested. A pilot study of the two instruments provided reasonable evidence of validity and reliability. The instruments were then used on a sample of 45 schools in one urban public school district. Factor analysis demonstrated strong factor loadings and high reliabilities.

The hypotheses that guided this study predicted that the level of trust in a school would be related to the level of collaboration. Specifically, each of the three referents of collaboration – principal, colleagues and parents – would be related to the corresponding level of trust. In each case, the hypothesis that the level of collaboration was related to the level of trust was supported in the bivariate correlational analyses. The positive relationship found provides evidence that the proposition of a reciprocal relationship between collaboration and trust is plausible. These findings argue for the importance of trust in nurturing collaborative relationships.

Canonical correlation proved to be a useful tool in analyzing the sets of variables under consideration in this study. The analysis resulted in strong squared canonical correlation for variate 1, indicating strong explanatory power. The redundancy indicated that a substantial proportion of the variance in the set of collaboration variables could be explained by the set of trust variables. Canonical correlation reinforced the importance of trust in predicting the overall level of collaboration within a school. Among the set of trust variables, trust in clients was most influential in predicting the set of collaboration variables. Faculty trust in the principal also contributed to the explanation of the level of collaboration in a school. Collaboration with parents was the most potent of the collaboration variables in this analysis, but

collaboration with colleagues also made a contribution. Collaboration with the principal had little influence.

Schools where there was a high level of trust could be predicted to be schools where there would be a high level of collaboration. Particularly when there was a high level of trust in parents and students, there was more likely to be a high level of collaboration with parents and among the faculty. When students could be counted on to respect the systems and structures of school, and when parents could be trusted to engage constructively with teachers, a greater climate of openness in decision making was also evident. When there was greater confidence in the benevolence, competence, reliability, and honesty of parents, there was less defensiveness on the part of the principal and the faculty, and a greater willingness to share authority. It seems that with a greater sense of shared purposes, there was more room at the decision-making table.

Although the results of this study make clear the importance of trust in building collaboration, it seems that the relationships between trust and collaboration in schools are more complex than the simple (bivariate) correlational hypotheses predicted. When the students and parents in a school are not trusted, it tends to inhibit the level of collaboration that goes on in a school. When students and parents are trusted it becomes much more likely that the principal will collaborate with teachers and with parents on school-level decisions and that teachers will collaborate with one another on classroom-level decisions.

Conclusion

As schools struggle to reinvent themselves to respond to the needs of a changing world, collaboration provides an important mechanism for schools to work toward excellence. The problems facing schools are larger than any one person or group can solve alone, and finding solutions will require cooperation and collaboration. Collaboration holds the possibility of higher quality decisions. As principals collaborate with teachers, they make use of the knowledge and expertise of those organizational participants most often in touch with the primary constituents of the school – the students (Conley, Schmittle, and Shedd, 1988; Leithwood and Steinbach, 1995). Collaboration holds promise for organizational learning as teachers share with one another in a context in which existing beliefs and knowledge can be challenged and transformed (Tschannen-Moran *et al.*, 2000). Collaboration can generate the social capital necessary for excellent schools as both parents and teachers participate in problem-solving processes where they have the opportunity for greater contact and understanding (Putnam, 1993).

In order for schools to reap the benefits of greater collaboration, trust will be required. This study has demonstrated the important link between collaboration and trust. In schools where there was greater trust, there tended to be a greater level of collaboration. When trust was absent, people were reluctant to work closely together, and collaboration was more difficult. If we

hope to facilitate collaboration in schools, we would do well to work toward a greater understanding of trust – how trust develops, what supports trust, and how to repair trust that has been damaged. Collaboration in an atmosphere of trust holds promise for transforming schools into vibrant learning communities.

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Collaboration
and the
need for trust