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Principal Leadership and School Performance: An Integration of Transformational and Instructional Leadership

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Focusing on school leadership relations between principals and teachers, this study examines the potential of their active collaboration around instructional matters to enhance the quality of teaching and student performance. The analysis is grounded in two conceptions of leadership—transformational and instructional. The sample comprises 24 nationally selected restructured schools—8 elementary, 8 middle, and 8 high schools. In keeping with the multilevel structure of the data, the primary analytic technique is hierarchical linear modeling (HLM). The study finds that transformational leadership is a necessary but insufficient condition for instructional leadership. When transformational and shared instructional leadership coexist in an integrated form of leadership, the influence on school performance, measured by the quality of its pedagogy and the achievement of its students, is substantial.

Keywords: *school performance; school leadership; shared instructional leadership*

Schools depend on leadership throughout the organization to shape productive futures through a process of self-renewal (Senge et al., 1999, 2000). To enlarge the leadership capacity of schools attempting to improve their academic performance, some principals involve teachers in sustained dialogue and decision making about educational matters. While remaining central

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agents for change, these principals recognize teachers as equal partners in this process, acknowledging their professionalism and capitalizing on their knowledge and skills (Darling-Hammond, 1988; Rowan, 1990).

Focusing on school leadership relations between principals and teachers, this study examines the potential of their active collaboration around instructional matters to enhance the quality of teaching and student performance. The analysis is grounded in a comparison of two conceptions of leadership—transformational and instructional. Functioning as leaders, principals can serve to transform school cultures or to maintain them (Firestone & Louis, 1999; Leithwood & Jantzi, 1999). Transformational leadership, put briefly, provides intellectual direction and aims at innovating within the organization, while empowering and supporting teachers as partners in decision making (Conley & Goldman, 1994; Leithwood, 1994). Instructional leadership, as we reconceptualize it, replaces a hierarchical and procedural notion with a model of "*shared* instructional leadership."

Shared instructional leadership involves the active collaboration of principal and teachers on curriculum, instruction, and assessment. Within this model, the principal seeks out the ideas, insights, and expertise of teachers in these areas and works with teachers for school improvement. The principal and teachers share responsibility for staff development, curricular development, and supervision of instructional tasks. Thus, the principal is not the sole instructional leader but the "leader of instructional leaders" (Glickman, 1989, p. 6).

We investigate these conceptions of leadership and their relationship to school performance, measured as pedagogical quality and student achievement, within a sample of 24 nationally selected restructuring elementary, middle, and high schools (Newmann & Associates, 1996). At the time of the study, all of these schools were decentralized and practiced a form of site-based management. In almost all of the schools, teachers reportedly exercised substantial influence on school practice in matters of curriculum, instruction, and assessment (Marks & Louis, 1997). However, because administrators and teachers varied in their commitment to mutual collaboration and continuous improvement through learning, we are able to study the relationship of transformational and shared instructional leadership to the quality of teaching and learning.

BACKGROUND

Two primary images of school principalship have prevailed in recent decades—instructional leadership and transformational leadership (Hallinger,

1992). Instructional leadership, developed during the effective schools movement of the 1980s, viewed the principal as the primary source of educational expertise. Aimed at standardizing the practice of effective teaching, the principal's role was to maintain high expectations for teachers and students, supervise classroom instruction, coordinate the school's curriculum, and monitor student progress (Barth, 1986). For principals who lacked the skills to accomplish these tasks, coaching and on-site assistance were in short supply. Instructional leadership in practice fell far short of the ideal (Cuban, 1984; Murphy & Hallinger, 1987).

Moreover, the hierarchical orientation of instructional leadership conflicted with the democratic and participative organization of schools that emerged in the late 1980s with school restructuring and the movement to empower teachers as professional educators (Marks & Louis, 1997). Because critics had attributed to the educational bureaucracy schools' failure to educate effectively (Carnegie Forum on Education and the Economy, 1986), a fundamental restructuring initiative entailed decentralizing to schools authority over such matters as budgets, hiring, curriculum, and instruction. When principals adopted this model fully, they shared management decisions with teachers and other constituents (Malen, Ogawa, & Kranz, 1990).

Because teachers possessed critical information about their students and how they learn, teachers needed discretionary authority to make their own curricular and instructional decisions (Hallinger, 1992; Sykes, 1990). The latitude to make such decisions would improve both teachers' work life and student achievement (Darling-Hammond & Goodwin, 1993; Maeroff, 1988; Schlechty, 1990). Moreover, educational reform had a greater chance of success when teachers were involved (Blase & Kirby, 2000; Conley & Goldman, 1994). Functioning in leadership capacities (e.g., site council chairs, staff developers, or lead teachers), teachers could shape the goals and cultures of their schools while retaining their ties to the classroom (Conley & Goldman, 1994). In so doing, teachers gained greater legitimacy as leaders (Little, 1988; Smylie & Denny, 1990).

To accomplish the reforms central to school restructuring, scholars of education espoused a model of transformational leadership. Transformational leadership focuses on problem finding, problem solving, and collaboration with stakeholders with the goal of improving organizational performance (Hallinger, 1992). To develop the collective capacity of the organization and its members to achieve these results, transformational leadership seeks to raise participants' level of commitment (Burns, 1978), to encourage them in reaching their fullest potential (Bass & Avolio, 1993), and to support them in transcending their own self-interest for a larger good (Bass & Avolio, 1993;

Leithwood, Tomlinson, & Genge, 1996; Sagor & Barnett, 1994; Silins, Muford, Zarins, & Bishop, 2000).

Transformational leadership affirmed the centrality of the principal's reform role, particularly in introducing innovation and shaping organizational culture (Conley & Goldman, 1994; Leithwood, 1994). While concentrating on renewing the organization and its personnel, however, transformational leadership lacked an explicit focus on curriculum and instruction (Hallinger & Leithwood, 1998). Transformational and shared instructional leadership are complementary, in our view, but neither conceptualization embraces the other. When they operate in tandem, however, the leadership approaches are integrated. Few studies have examined these relationships empirically, the objective of this study.

THEORETICAL FRAMEWORK

Instructional Leadership Conventionally Understood

Instructional leadership, narrowly defined, focuses on leadership functions directly related to teaching and learning (Murphy, 1988). In a broader view, instructional leadership also refers to all other functions that contribute to student learning, including managerial behaviors (Donmoyer & Wagstaff, 1990; Murphy, 1988). Such an action orientation theoretically encompasses everything a principal does during the day to support the achievement of students and the ability of teachers to teach (Sebring & Bryk, 2000).

In a review of the literature on instructional leadership, Murphy (1990) noted that principals in productive schools—that is, schools where the quality of teaching and learning were strong—demonstrated instructional leadership both directly and indirectly. Although these principals practiced a conventional rather than a shared form of instructional leadership, they emphasized four sets of activities with implications for instruction: (a) developing the school mission and goals; (b) coordinating, monitoring, and evaluating curriculum, instruction, and assessment; (c) promoting a climate for learning; and (d) creating a supportive work environment (Murphy, 1990). Focused on learning, they infused management decisions and regular school routines with educational meaning (Dwyer, 1984).

In the context of teacher professionalization, however, critics regarded the existing models of instructional leadership as paternalistic, archaic, and dependent on docile followers (Burlingame, 1987; Poplin, 1992; Sheppard, 1996). If teachers are committed and competent, they argued, traditional forms of instructional leadership are not appropriate (Sergiovanni, 1991).

Rather, principals should be concerned with facilitating teachers' exercise of initiative and responsibility in instructional matters (Glanz & Neville, 1997; Senge et al., 2000). Such an approach is consistent with educational reforms in the professionalization of teaching that equip teachers to play informed and active roles in improving schooling (Little, 1993).

Shared Instructional Leadership

Unlike the conventional notion of instructional leadership, shared instructional leadership is an inclusive concept, compatible with competent and empowered teachers. The principal invests teachers with resources and instructional support (Rosenblum, Louis, & Rossmiller, 1994) and maintains congruence and consistency of the educational program (Conley & Goldman, 1994). Teachers' participation in shared instructional leadership occurs informally as well as being manifest in formal roles (Prestine & Bowen, 1993). Teachers assume leadership responsibility when they interact with other adults in the school community around school reform efforts, encourage others to improve their professional practice, or learn together with their school colleagues (Moller & Katzenmeyer, 1996).

Several models of shared instructional leadership recast the process of instructional supervision. In these models, teachers assume responsibility for their professional growth and for instructional improvement. The principal becomes less an inspector of teacher competence and more a facilitator of teacher growth (Poole, 1995). Whereas the principal remains the educational leader of the school, teachers, who have requisite expertise or information, exercise leadership collaboratively with the principal. Collaborative inquiry supplants principal-centered supervisory practices (Reitzug, 1997). As teachers inquire together, they encourage each other toward answers for instructional problems. Leadership for instruction emerges from both the principal and the teachers. Principals and teachers discuss alternatives rather than directives or criticisms and work together as "communities of learners" in service to students (Blase & Blase, 1999). Principals contribute importantly to these communities when they promote teacher reflection and professional growth. When teachers interact with principals as they engage in these activities, the teachers report positive changes in their pedagogical practices, including using various and innovative techniques and being willing to take risks (Blase & Blase, 1999).

Principals and teachers both play a part in forging an effective leadership relationship. Principals must provide opportunities for teacher growth, but teachers are also responsible for seizing these opportunities (Blase & Kirby, 2000). Strong leadership on the part of the principal, however, often affirms

teachers' responsibility and accountability for change (Louis, 1994). The relationship is a reciprocal one, where those in formal roles step aside to let others step into leadership roles (Prestine & Bowen, 1993). This phenomenon is often subtle and might not be readily apparent except in certain critical incidents that threaten change efforts (Prestine & Bowen).

Shared instructional leadership, therefore, is not dependent on role or position. Its currency lies in the personal resources of participants and is deployed through interaction (Ogawa & Bossert, 1995). Such leadership extends throughout the organization with revised structures permitting coordinated action (Ogawa & Bossert, 1995; Pounder, Ogawa, & Adams, 1995).

Transformational Leadership

Transformational leadership has been the subject of systematic inquiry in nonschool organizations for several decades. Supplying conceptual grounding for transformational leadership, Burns (1978) focused on the relationship between the leader and the "followers." When the relationship focuses on the continuing pursuit of higher purposes, change for the better occurs both in the purposes and resources of those involved and in the relationship itself. Whereas the transformational leader plays a pivotal role in precipitating change, followers and leaders are bound together in the transformation process.

The importance of developing followers to their fullest potential extended the concept of transformational leadership (Bass, 1985; Bass & Avolio, 1993). Transformational leaders motivate followers by raising their consciousness about the importance of organizational goals and by inspiring them to transcend their own self-interest for the sake of the organization. In their relationships with followers, this theory posits, transformational leaders exhibit at least one of these leadership factors: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

Leithwood and colleagues have described and assessed the effectiveness of transformational leadership in schools (Leithwood, 1994, 1995; Leithwood, Dart, Jantzi, & Steinbach, 1993; Leithwood et al., 1996; Leithwood & Jantzi, 1990; Leithwood, Jantzi, & Fernandez, 1994; Leithwood, Jantzi, & Steinbach, 1999). They have distinguished nine functions of transformational leadership clustering in three areas—those that are (a) mission centered (developing a widely shared vision for the school, building consensus about school goals and priorities), (b) performance centered (holding high performance expectations, providing individualized support, supplying intellectual stimulation), and (c) culture centered (modeling organizational values, strengthening productive school culture, building collaborative cultures, and creating structures for participation in school decisions).

By seeking to foster collaboration and to activate a process of continuous inquiry into teaching and learning, transformational leaders attempt to shape a positive organizational culture and contribute to organizational effectiveness (Fullan, 1991; Leithwood et al., 1996). But even in collaborative cultures where principals' transformational efforts encourage teachers to contribute leadership and expertise in teaching and learning, principals have a central and explicit role in instruction (Sebring & Bryk, 2000; Sheppard, 1996). When principals who are transformational leaders accept their instructional role and exercise it in collaboration with teachers, they practice an integrated form of leadership.

The Leadership Models and School Performance: Research Findings

Investigating three domains of principal instructional leadership, Heck, Larsen, and Marcoulides (1990) demonstrated both direct and indirect effects on student achievement for their measures of principal influence operating through school governance, instructional organization, and school climate. Specifically, an inclusive approach to governance worked to promote an effective system of instructional organization and a school climate supportive of teaching and learning. Their study found direct effects on achievement for instructional organization and climate and indirect effects for governance through its positive influence on these two domains. Efforts that build a sense of teamwork in the school proved particularly important, such as clarifying, coordinating, and communicating a unified educational mission to teachers, students, and community. Important instructional leadership variables that influence achievement are not those tied to close supervision of instruction (Hallinger & Murphy, 1985; Heck et al., 1990). To date, studies of instructional leadership have not evaluated its relationship to pedagogical quality.

To improve organizational performance (Hallinger, 1992), transformational school leaders focus on the individual and collective understandings, skills, and commitments of teachers. Transformational leaders may challenge teachers to examine their assumptions about their work and to rethink instructional processes; they may establish expectations for quality pedagogy and support teachers' professional growth (Leithwood, Jantzi, & Steinbach, 1998; Leithwood, Leonard, & Sharratt, 1998). To our knowledge, no study has investigated these relationships empirically. Moreover, although transformational principals can enhance student engagement in learning, studies have not shown any direct effects on student achievement (Leithwood, 1994; Silins et al., 2000).

Linking Transformational and Shared Instructional Leadership: Theory of Action

Although the importance transformational leadership places on vision building can create a fundamental and enduring sense of purpose in the organization, the model lacks an explicit focus on teaching and learning. Instructional leadership, emphasizing the technical core of instruction, curriculum, and assessment, provides direction and affects the day-to-day activities of teachers and students in the school. The action orientation of shared instructional leadership moves a school staff forward to accomplish each goal and, in so doing, to enact the vision. Transformational leadership builds organizational capacity whereas instructional leadership builds individual and collective competence. Instructional leadership is shared, in that specific leadership functions are carried out by many people working in collaboration (Firestone, 1996).

The theory of action underlying this model holds that the efficacious principal works simultaneously at transformational and instructional tasks. As a transformational leader, the principal seeks to elicit higher levels of commitment from all school personnel and to develop organizational capacity for school improvement. As an instructional leader, the principal collaborates with teachers to accomplish organizational goals for teaching and learning. Whereas these leadership dimensions are analytically distinct, they may cohere in practice in an integrated model of leadership. Integrated leadership, then, reflects the transformational influence of the principal and the shared leadership actions of the principal and teachers.

Hypothesis and Research Questions

Building on the premise outlined above, we hypothesize that while transformational leadership is necessary for reform-oriented school improvement, it is insufficient to achieve high-quality teaching and learning. Shared instructional leadership, its essential complement, describes the dynamic collaboration between the principal and teachers on curricular, instructional, and assessment matters to further the core technology of schools—teaching and learning.

Thus, we inquire into the relationship of transformational and shared instructional leadership to the pedagogical practice of teachers and to student performance on authentic measures of achievement. Recognizing that schools provide a context for teaching and learning that is shaped by the ages or grade levels of the students enrolled and, as well, by compositional or demographic factors, we pose three research questions:

1. What is the relationship between transformational and shared instructional leadership in restructuring elementary, middle, and high schools?
2. How do schools with varying approaches to leadership differ according to their demographics, organization, and performance?
3. What is the effect of transformational and shared instructional leadership on school performance as measured by the quality of pedagogy and the achievement of students?

METHOD

Sample and Data

To study school restructuring in the United States, the Center on Organization and Restructuring of Schools undertook a national search for public schools that had made substantial progress in their reform efforts. Out of a nationally nominated pool of 300 schools, the center selected 24 elementary, middle, and high schools, 8 at each grade level, to participate in its School Restructuring Study (SRS). Despite the selection criteria for nomination and inclusion in the study, the schools in the SRS sample varied substantially in their goals, their capacity for reform, and their success in restructuring. (See Berends & King, 1992, and Newmann & Associates, 1996, for additional details on sample selection and for profiles of the SRS schools.) Representing 16 states and 22 school districts, most of the SRS schools are urban, enrolling substantial proportions of economically disadvantaged and minority students.

Compared with public schools nationally, schools in this sample are larger (enrolling, on average, 777 students compared with a national average of 522 students). In the sample elementary and middle schools, NAEP achievement levels in reading and mathematics are at or above the national average. In the high schools, NAEP achievement is below the national average (a result that may be attributable to the high school sample—mostly 9th- and 10th-grade students taking a NAEP test normed for 12th-grade students). (See also Marks and Louis, 1997.)

Our study employs several of the quantitative and qualitative instruments that were part of the SRS design. Teachers responded to a survey querying them about their instructional practices, professional activities, and perceptions of their school and its organization. Over 80% (910) of them turned in surveys, completing 95% of the items. During each participating school's study year, teams of three researchers spent a week in the fall and a week in the spring on site. As part of the data collection process during each visit, the researchers conducted interviews with 25-30 staff members at each school as

well as with school and district administrators. Researchers also observed governance and professional meetings at each school, and they collected and analyzed written documentation pertaining to the school's restructuring efforts.

The instruction and assessment practices of 144 core-class teachers (3 mathematics and 3 social studies teachers from each school) received special scrutiny. Trained to evaluate instruction according to standards of intellectual quality, the researchers rated the instruction in each core class at least four times, with two researchers observing at least half the classes. The interrater reliability for the joint observations was .78. To evaluate the quality of assessment, the SRS asked all core teachers to provide two written assessment tasks that were representative of how they typically assessed learning. Subject matter specialists from the center and trained teacher practitioners rated the assessment tasks on standards of intellectual quality. Teams of two raters scored the tasks independently, resolving any differences in their judgments through discussion until they arrived at a consensus score.

The center also collected from the teachers the work that students completed in response to the assessment tasks, totaling over 5,000 assignments. Trained researchers and practitioners rated the student work according to standards for authentic achievement. At least one third of these papers were evaluated by teams of two raters. The interrater reliabilties were .77 for social studies, .70 for mathematics. (For more information about the instruments and procedures for observing teachers, collecting and rating assessment tasks and student work, see Newmann, Secada, & Wehlage, 1995, Newmann, Marks, & Gamoran, 1996, and Newmann & Associates, 1996.)

Dependent Measures

Pedagogical quality. The measure of pedagogical quality is constructed as an index that sums teachers' scores on two components of pedagogy: classroom instruction and assessment tasks. *Classroom instruction* scores are the summed ratings for observed instruction on four standards of authenticity: (a) higher order thinking (students manipulate information and ideas, rather than merely reproduce them), (b) substantive conversation (students enter into discussion about subject matter with their teacher and/or with peers, thus enhancing their understanding of concepts and ideas), (c) depth of knowledge (students focus on disciplinary ideas or concepts to produce an understanding of complex relationships), and (d) connections to the world beyond the classroom (students work on issues and problems to apply their knowledge). The measure of classroom instruction is standardized ($M = 0, SD = 1$).

Its reliability (i.e., internal consistency) as indicated by Cronbach's alpha (α) is .85.

Assessment task. Assessment task scores are the summed ratings on seven standards for authentic assessment: (a) organization of information (asks students to organize, synthesize, interpret, explain, or evaluate complex information), (b) consideration of alternatives (asks students to consider alternative solutions, strategies, perspectives, or points of view), (c) disciplinary content (asks students to show an understanding of disciplinary ideas, theories, or perspectives), (d) disciplinary process (asks students to use the methodological approach of the discipline), (e) elaborated written communication (asks students to express their understanding, explanations, or conclusions through extended writing), (f) problem connected to the real world (asks students to address an issue, problem, or concept external to the school), and (g) audience beyond school (asks students to communicate with an audience other than their teacher and class- or schoolmates). The measure of assessment tasks is standardized ($M = 0$, $SD = 1$) (Cronbach's $\alpha = .79$). The pedagogical quality composite measure is standardized ($M = 0, SD = 1, \alpha = .79$).

Academic achievement. Academic achievement is a measure of authentic student performance, specifically, the sum of averaged student scores in mathematics and social studies on three standards of intellectual quality: (a) analysis, (b) disciplinary concepts, and (c) elaborated written communication. Analysis rates students' work as it reflects higher order thinking through such processes as organizing, synthesizing, interpreting, hypothesizing, and evaluating. Disciplinary concepts rates students' work as it reflects understanding and the ability to work with and manipulate disciplinary ideas, concepts, and theories. Elaborated written communication rates students' work on its clarity, coherence, quality of articulation, and richness of argument. The measure of academic achievement is standardized ($M = 0, SD = 1$, $\alpha = .72$).

Additional information on the conceptual framework of authentic intellectual quality that underlies the pedagogical quality and academic achievement measures or on their component variables and construction may be found in Newmann and Associates (1996).

Independent Measures

Leadership. Although governance rather than school administrative leadership itself was a major area of inquiry in the SRS, the researchers spent con-

TABLE 1
Demographic and Performance Characteristics by School Leadership Compared

	Low Leadership (N = 9)	*Limited Leadership (N = 6)*	*Integrated Leadership (N = 7)*
School demographics			
Number of elementary	3	2	2
Number of middle	3	2	2
Number of high	3	2	3
Size	656	977	1,008
Percentage free/reduced lunch	51.0*	31.0	24.0
Percentage African American	26.0	18.0	21.0
Percent Hispanic	29.0	11.0	17.0
NAEP achievement	–.36	.13	.36
School leadership			
Number of schools with principal surrogate	3	0	0
School performance			
Pedagogical quality	–.67	.00	.86**
Authentic achievement	–.83	.21	.85***

NOTE: NAEP = National Assessment of Educational Progress.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

siderable amounts of time with the school principals. During each of their site visits, the researchers conducted a formal interview lasting 60-90 minutes with the principal or, in the case of three schools (one at each grade level) that elected to abandon the principalship as conventionally understood, a principal surrogate, typically a designated teacher or a coordinating team (cf. Table 1). Additionally, while at each of the schools, the researchers observed the principal's interactions formally and informally with teachers, staff members, and other professionals of the school community. The researchers viewed the principals in action at such gatherings as curriculum committees, school improvement committees, administrative councils, and faculty meetings. Interviews with many teachers at each school also attested to the nature of principals' leadership. Based on these data, the SRS researchers produced the case studies and coding reports.

A systematic and thorough process ensured the validity of both these sets of documents. At the conclusion of the study years, each research team collaborated to write a case study summarizing and synthesizing the interview, observation, and documentation data collected at the school the team visited. The 24 case studies, typically about 150 single-spaced pages in length, followed an identical topic outline. As part of a rigorous peer review, other center staff members reviewed and critiqued the drafts of the case studies. Based

on the reviews, the research team revised the drafts. To facilitate systematic retrieval of case study data, the full center research team developed a standardized list of more than 100 items for coding the case study data. Two researchers from the team that had visited the school coded the case separately. The researchers resolved disagreements through discussion until they reached consensus. Codes were later converted into variables. Several were included in the component indices of shared instructional leadership. Taken together with the survey data, they provide the basis for the construction of the leadership measures. For the three schools that elected to function with a principal surrogate, respondents to the surveys and the researchers completing the coding reports applied to the surrogate items referring to the principal.

Because leadership was not a primary focus of the SRS study, as we have indicated, construct validity in the measurement of transformational and shared instructional leadership was of paramount concern. If the constructs were to measure what they purported to measure, they needed to meet two tests: (a) to reflect the conceptual basis for each of the two leadership approaches and (b) as composite measures, to be internally consistent or reliable. In the variable descriptions that follow, we describe how each of the leadership constructs meets these tests.

Transformational leadership, constructed from teacher survey items and coding reports, maps onto the transformational leadership domains of idealized influence, intellectual stimulation, individualized consideration, and inspirational motivation (Bass & Avolio, 1993) and, largely, onto the three clusters of leadership functions discussed earlier—mission centered, performance centered, and culture centered (Leithwood et al., 1999). Table 2 contains a listing of the SRS coding and survey items used in this study to measure transformational leadership compared with the dimensions of the concept specified by Bass and Avolio (1993) and Leithwood and colleagues (1999).

The SRS measure of transformational leadership includes five items. Items 1 and 2 are from the coding reports: (a) There is evidence of significant intellectual leadership from the principal or other school-based administrator and (b) principal shares power with teachers. Item 1 is dummy coded (0 = No, 1 = Yes). Item 2 is measured on a three-point scale of low, medium, and high. Items 3-5 are Likert-type scale items from the teacher survey: (c) The school administration's behavior toward the staff is supportive and encouraging, (d) the principal is interested in innovation and new ideas, and (e) the principal influenced restructuring ($\alpha = .85$). The measure is constructed as a factor and standardized for the analysis ($M = 0$, $SD = 1$).

Shared instructional leadership, constructed from the coding reports, captures raters' assessment of principal instructional leadership, teacher

TABLE 2
Transformational Leadership: SRS Indicators and Theoretical Elements Compared

SRS	*Bass & Avolio (1993)*	*Leithwood, Jantzi, & Steinbach (1999)*
There is evidence of significant intellectual leadership from the principal or other school-based administrators.	Intellectual stimulation	Holds high expectations Provides intellectual stimulation Models organizational values
The school administration's behavior toward the staff is supportive and encouraging.	Individualized consideration	Provides individualized support Builds collaborative culture
The principal is interested in innovation and new ideas.	Inspirational motivation	Strengthens productive school culture
The principal influenced restructuring.	Inspirational motivation Intellectual stimulation	Develops widely shared vision
The principal shares power with teachers.	Idealized influence	Creates structures for participation in decisions Builds consensus about school goals

NOTE: SRS = School Restructuring Study.

instructional leadership, and the extent that principal and teachers interacted on matters of instruction, curriculum, and assessment. Tapping the elements of shared instructional leadership discussed earlier (e.g., Blase & Blase, 1999; Ogawa & Bossert, 1995; Prestine & Bowen, 1993), these items reflect principal focus on instruction, teachers exercising instructional leadership roles beyond the classroom, and the mutual engagement of principal and teachers as leaders in the core areas of instruction, curriculum, and assessment.

The nine component items all come from the coding. Items 1-3 are dummy coded (0 = No, 1 = yes): (a) There is evidence of significant instructional leadership in the school, (b) significant instructional leadership comes from a principal or other school-based administrator, and (c) significant instructional leadership comes from a teacher or group of teachers. Items 4-9 are ratings on a 3-point scale of low, medium, and high: (d) the actual influence of teachers over curriculum, (e) the actual influence of teachers over instruction, (f) the actual influence of teachers over student assessment, (g) the actual influence of principals over curriculum, (h) the actual influence of principals over instruction, and (i) the actual influence of principals over student assessment. The measure is constructed as an index summing the items ($\alpha = .77$) and standardized ($M = 0$, $SD = 1$).

School demographics. Grade-level indicator variables for elementary, middle, and high school—if Yes, coded 1, all others, 0; school size, number of students enrolled; school socioeconomic status (SES), the proportion of students receiving federal lunch subsidy; percentage African American, proportion of African American students; percentage Hispanic, proportion of Hispanic students; average NAEP achievement, aggregated student score on a baseline test of basic knowledge and skills in mathematics and reading/writing.

Control variables. When pedagogical quality is the dependent variable, the control variables include classroom compositional measures: percentage female, proportion of girls enrolled in the class; percentage African American, proportion of African American students enrolled in class; percentage Hispanic, proportion of Hispanic students enrolled in class; average SES, student score on the SES scale (tapping parental education and household possessions) aggregated to the classroom level; average NAEP achievement, individual student scores on the baseline test aggregated to the classroom level.

When student achievement is the dependent variable, the controls account for student background characteristics: Female, student gender dummy variable, Yes coded 1, No coded 0; African American race, Yes coded 1, No coded 0; Hispanic ethnicity, Yes coded 1, No coded 0; SES—student SES; NAEP achievement, student baseline test score.

Analytic Approach

To examine the relationship between shared instructional leadership and transformational leadership in the schools, we use a scatterplot analysis (Research Question 1). The scatterplot displays the distribution of schools according to their comparative ranking on these two leadership dimensions. The transformational leadership and shared instructional leadership measures are standardized so that the average score for a school in the study sample is 0 and the standard deviation is 1. We overlay a quadrant on the scatterplot, with the axes placed at 0 on each leadership measure. In this way, we situate schools relative to the other study schools as either low or high on both shared instructional leadership and transformational leadership or low on one dimension and high on the other.

Based on this distribution, we construct a categorical variable to parallel the schools' quadrant positions, for instance, low on both forms of leadership, high on both forms, low on one form and high on the other. Using one-way analysis of variance (ANOVA), we compare means for the schools on their

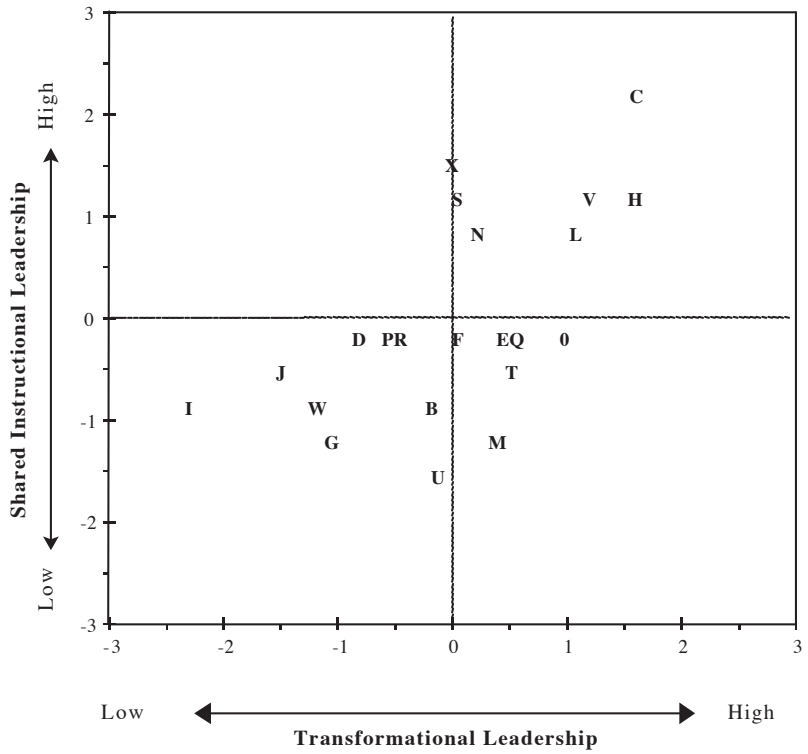
demographic, organizational, and performance characteristics according to the categorical measure of school leadership (Research Question 2).

Because of the multilevel nature of the data (teachers in schools, classrooms in schools, and students in classrooms in schools), we use hierarchical linear modeling (HLM) in both its 2-level and 3-level applications to investigate the effect of school approach to leadership on the two dependent variables—pedagogical quality and student achievement (Research Question 3). The first step in the HLM analysis is to formulate an unconditional model, one with no predictors at the individual or group levels (Bryk & Raudenbush, 1992). The unconditional model yields the data needed to estimate the intraclass correlation or the proportion of the variance in the particular outcome that is between groups. In this study, we are interested in the effect of leadership as a school-level predictor in accounting for that variance, while controlling at the individual level for teacher or student characteristics that could affect the outcome independently of the contribution of leadership. Because we have described the technical details of these analyses elsewhere, we will not repeat them here (See, for example, Marks & Louis, 1999.)

RESULTS

Our first analysis addresses the relationship between transformational leadership and shared instructional leadership in the sample schools. According to their position on the scatterplot, the schools cluster into three of the four quadrants (Figure 1). Nine schools, three at each grade level, scored low on both forms of leadership; six schools, two at each grade level, scored high on transformational leadership, low on shared instructional leadership; seven schools—two elementary, two middle, and three high schools—scored high on both transformational and shared instructional leadership. (Two schools were dropped from the analyses because of missing data on the leadership measures.)

The empty quadrant at the upper left of the scatterplot, representing low transformational and high shared instructional leadership, suggests that transformational leadership with the behaviors it implies are a necessary, although insufficient, condition for shared instructional leadership. Put another way, if a principal demonstrates no capacity for transformational leadership—for example, articulating an intellectual vision, providing structures for participatory decision making, building consensus toward a productive school culture, and promoting collaboration, the principal will be ill-disposed to share responsibility with teachers in matters of instruction, curriculum, and assessment in a shared instructional leadership model.



Elementary Schools	Middle Schools	High Schools
B Sumpter	I Morris	Q Fremont
C Ashley	J Selway	R Wallingford
D Eldorado	L Red Lake	S Flinders
E Winema	M Shining Rock	T Huron
F Careen	N Copan	U South Glen
G Falls River	O Okanagan	V Cibola
H Lamar	P Ottawa	W Island
		X Marble Canyon

Figure 1. Transformational Leadership and Shared Instructional Leadership

The nine schools that scored low on both leadership measures did not benefit from principals' leadership influence in either a transformational or instructional sense. For the purposes of this analysis, we refer to the leadership in these schools as low (that is, below the sample mean on both measures of leadership). According to the findings of the field researchers as reported

in the case studies of the schools, where both transformational and shared instructional leadership were low, the schools were in one of three situations: (a) They deliberately operated without a principal, choosing instead an administrative team or teacher-in-charge approach, (b) they were in transition with either an interim or a new principal, or (c) they had an established but ineffective principal. Any instructional leadership present in these nine schools came from teachers.

In the six schools where principals demonstrated strong transformational but little instructional leadership, neither did teachers, in any but one school, provide evidence of instructional leadership. As these principals sought to further reform, they focused on change in areas other than instruction, such as coordinated social services, structural innovations, or development of linkages with school reform networks. They engaged teachers in these efforts but not in the areas of instruction, curriculum, and assessment. In our analysis, accordingly, we refer to the leadership in these schools as limited.

In the remaining seven schools, both transformational leadership by the principal and shared instructional leadership involving both principals and teachers were above average. The principals provided strong instructional leadership in all these schools while they facilitated leadership by the teachers, whom they regarded as professionals and full partners in furthering high-quality teaching and learning. In all but one of the schools, teachers, viewing their responsibilities as extending beyond their classrooms, also functioned as instructional leaders. We refer to the leadership in these schools as integrated.

School Characteristics and Leadership Patterns: Observed Differences

The low leadership schools, enrolling an average of just over 650 students, tended to be smaller than the other schools by 300-350 students (Table 1). They enrolled the largest proportion of poor students—51%, whereas the integrated leadership schools enrolled the smallest—24% ($p \leq .05$). About one fourth the enrollment at the low leadership schools is African American, compared with 21% at the integrated leadership schools and 18% at the limited leadership schools. The proportion of Hispanic students—close to 30% at the low leadership schools—is 17% at the integrated leadership schools and 11% at the schools where leadership is limited. Student baseline achievement measured by NAEP performance averaged –0.36 *SD* at the low leadership schools, 0.13 *SD* at the limited leadership schools, and 0.36 *SD* at the integrated leadership schools. All three schools, noted earlier, as operating with a principal surrogate are low leadership schools.

The school performance measures reflect distinct group differences. Low leadership schools averaged –0.67 *SD* on pedagogical quality, compared with the limited leadership schools scoring at the mean and integrated leadership schools scoring well above at 0.86 *SD* ($p \leq .01$). Authentic achievement scores in the low leadership schools averaged –0.83 *SD*; in the limited leadership schools, 0.21 *SD*; and in the integrated leadership schools, 0.85 *SD* ($p \leq .001$).

Thus, the comparison of observed means for the school groups by type of leadership indicated significant and systematically patterned differences among them in the students they enroll. Low leadership tended to be found in smaller schools where students were poor, minority, and lower achieving. Integrated leadership, in contrast, typified larger schools enrolling the lowest proportions of poor, minority, and lower achieving students, whereas limited leadership schools occupied a middle ground in relation to these school and student characteristics. Recognizing these systematic differences among the SRS schools, in subsequent analyses we will adjust statistically for their potentially confounding influence.

Why the pattern of relationships we have described should exist is not altogether clear. We recognize that the pattern reflects an empirical observation, not an inevitability (see, for example, Bryk, Lee, & Holland, 1993; Education Trust, 2002). Strong school performance, as we have argued, depends on integrated leadership mobilizing the collective action of individuals to produce high-quality teaching and learning. Where leadership is low, by definition, schools lack the collaborative effort of principal and teachers around matters of curriculum, instruction, and assessment. Without such mutual engagement to challenge and excite students about learning, particularly in poor urban schools that may have become accustomed to failure, weak student performance is likely to be the norm (Haberman, 2002). We have encountered a similar occurrence in an earlier study that compared the SRS schools with a sample of elementary, middle, and high schools in a midwestern urban school district struggling to meet state-imposed accountability standards (Marks & Printy, 2002). In the lowest achieving schools, administrators were the most likely to centralize authority and control. These administrators feared that broadening decision making would threaten the control they needed to maintain to keep their schools from even greater failure.

Integrated Leadership and School Performance: Multilevel (HLM) Analyses

Based on the observed relationship between transformational and shared instructional leadership, we modified our research strategy somewhat to

TABLE 3
Psychometric Properties of the Dependent Variables

	Pedagogical Quality	*Authentic Achievement*
Intraclass correlation	25.0%	40.0%
Hierarchical linear modeling reliability	.64	.93
Cronbach's α	.79	.72

focus on integrated leadership—the coexistence at high levels of transformational and shared instructional leadership. To capture the effect of integrated leadership, we constructed an indicator variable to represent schools where shared instructional leadership and transformational leadership coexist as compared with leadership in all other schools—that is, those where transformational and instructional leadership were generally low and those where transformational leadership was high but lacked principal and teacher collaboration around curriculum, instruction, and assessment.

Psychometric properties of the school performance measures. Based on the unconditional HLM analyses, we computed intraclass correlations for the two dependent variables (Table 3). Substantial variation exists between schools on these outcomes. Twenty-five percent of the variance in pedagogical quality is between schools compared with 40% of the variance in student achievement. Table 3 also presents the HLM reliabilities for the dependent variables. The HLM reliability is a measure estimating the ratio of observed to true variance in the outcomes (Bryk & Raudenbush, 1992). The reliability for authentic achievement is .93, whereas the reliability for pedagogical quality is comparatively low, at .64. (Because HLM reliabilities are sensitive to sample size, the lower reliability probably reflects the smaller sample of teachers in this analysis, that is, the subsample of 6 teachers in each school whose classes were observed and assessment tasks evaluated.)

Pedagogical quality. The analysis focusing on the quality of pedagogy as an outcome is a two-level HLM analysis (Table 4). Because we treat teachers' pedagogy as a classroom rather than an individual characteristic, the analysis adjusts for classroom compositional characteristics, based on students' personal and academic backgrounds, that have the potential to influence pedagogy—the proportion of female and minority students, the average SES of the students, and their average NAEP achievement score. In so doing, we follow the precedent of Newmann and Associates (1996), noting that we have

TABLE 4
Integrated Leadership and Pedagogical Quality: A Two-Level Hierarchical Linear Modeling Model Controlling for Classroom Composition

	Dependent Variable Pedagogical Quality
Fixed effects	
Intercept	–.25
Integrated leadership	.59*
% female[a]	–.01
% Black[a]	.14
% Hispanic[a]	.27
Average SES[a]	.13
Average NAEP achievement[a]	.39***
Between-school variance in pedagogical quality explained: (%)	26.0

NOTE: SES = socioeconomic status; NAEP = National Assessment of Educational Progress.
a. Standardized variable ($M = 0$, $SD = 1$).
*$p \leq .05$. ***$p \leq .001$.

not found systematic variation in the quality of pedagogy that reflects differences in teachers' social and professional backgrounds.

In schools with integrated leadership, average pedagogical quality is 0.6 *SD* higher than in other schools, a difference that very likely reflects the shared engagement of both administrator and teachers around matters of pedagogy ($p \leq .05$). The backgrounds of the students in these teachers' classrooms are not influential for school average pedagogy, with the exception of baseline achievement as measured on the NAEP assessment. In schools where classroom average prior achievement is higher, pedagogical quality tends to be higher by 0.4 *SD* ($p \leq .001$). The model explains 26% of the between-school difference in pedagogical quality.

Authentic achievement. The student performance analysis entails a three-level HLM model, although the model contains no predictors at Level 2, the classroom level (Table 5). The model takes into account student background characteristics that have the potential to affect their achievement beyond school effects (Newmann et al. 1996).

Schools with integrated leadership are higher achieving by close to 0.6 *SD* ($p \leq .01$). As was the case with pedagogical quality, strong student performance probably reflects the concerted work of administrator and teachers focused on curriculum, instruction, and assessment. Student background characteristics are somewhat influential. Girls achieve at higher levels than boys by 0.1 *SD* ($p \leq .001$), whereas minority students, both African American and Hispanic, perform at lower levels than their peers ($p \leq .01$). Although

TABLE 5
Integrated Leadership and Authentic Student Achievement: A Three-Level Hierarchical Linear Modeling Analysis Controlling for Student Characteristics[a]

	Dependent Variable Authentic Achievement
Fixed effects	
Intercept	.29
Integrated leadership	.56**
Female	.11***
Black	–.11**
Hispanic	–.11**
SES[b]	.03
NAEP Achievement[b]	.26***
Between-school variance in authentic achievement explained: (%)	57.0

NOTE: SES = socioeconomic status; NAEP = National Assessment of Educational Progress.
a. The model contains no predictors at Level 2.
b. Standardized variable ($M = 0$, $SD = 1$).
**$p \leq .01$. ***$p \leq .001$.

student SES is not a significant factor, prior achievement is. High scores on the NAEP assessment will add close to 0.3 *SD* to students' achievement. The model accounts for 57% of the between-school variance in authentic achievement.

DISCUSSION

The starting point for the study was a recognition both of the importance of instructional leadership if schools are to improve and of its evolving nature in the context of teacher professionalism. Early conceptions of instructional leadership had focused on the principal's role in managing school processes and procedures related to instruction and supervision. As the challenge of school reform demanded the principal to become an agent of change, the managerial role of instructional leader lost its centrality. Transformational leadership emerged as the model needed by principals to lead schools through reform. Transformational leadership emphasized the ingredients of change—ideas, innovation, influence, and consideration for the individual in the process.

As the school reform movement evolved, however, principals felt pressure to be accountable for school improvement and the achievement of students. Dealing with accountability in the context of systemic change, principals also had to face the implications of the standards movement, curriculum

frameworks, and new forms of assessment. Responding to these demands with an outmoded conception of instructional leadership was senseless, but engaging teachers in a collaborative dialogue about these issues and their implications for teaching and learning was essential. Thus, the conception of shared instructional leadership that we proposed to evaluate emphasized the principal's interactive role with teachers in the central areas of curriculum, instruction, and assessment.

Conducting the analyses based on data from restructuring schools in this unique sample had a major advantage and a major disadvantage. Because of the leadership for change inevitably entailed in school restructuring, on the positive side, we believed the schools in this study would be promising sites for finding transformational leadership. Moreover, because a central goal of school restructuring is improved student achievement, we also expected instructional leadership to be prevalent. These expectations were largely borne out by the data. Yet, even in this rather select sample of schools, as the analyses demonstrated, considerable variation existed in these two approaches to leadership. Although the variation made the study possible, it serves as a reminder that effective school leadership, as distinct from management, is a relatively rare commodity.

The disadvantage in focusing on this sample, however, is that we are unable to generalize our findings. We view our findings as suggestive, therefore, posing a pattern that, ideally, we want to investigate in a random sample of U.S. elementary, middle, and high schools. Nonetheless, the data permitted us to examine the relationship between transformational and shared instructional leadership and to investigate the implications of these leadership models for school performance measured as pedagogical quality and student achievement. The absence of shared instructional leadership in schools that lacked transformational leadership is an important finding. Whereas transformational leadership is its prerequisite, moreover, shared instructional leadership will not develop unless it is intentionally sought and fostered. This latter finding supports the observation of Hallinger and Leithwood (1998) that transformational leadership does not imply instructional leadership.

Our second set of findings establishes the importance of what we termed *integrated leadership*—transformational leadership coupled with shared instructional leadership. Where integrated leadership was normative, teachers provided evidence of high-quality pedagogy and students performed at high levels on authentic measures of achievement. Although this study does not provide details on how principals and teachers shared instructional leadership, a follow-up investigation will present an analysis from the case study data to show how shared instructional leadership worked in the SRS schools.

This study suggests that strong transformational leadership by the principal is essential in supporting the commitment of teachers. Because teachers themselves can be barriers to the development of teacher leadership (Smylie & Denny, 1990), transformational principals are needed to invite teachers to share leadership functions. When teachers perceive principals' instructional leadership behaviors to be appropriate, they grow in commitment, professional involvement, and willingness to innovate (Sheppard, 1996). Thus, instructional leadership can itself be transformational.

Our findings suggest that teachers have both the desire and the expertise to lead. We disagree with the view of Leithwood and Jantzi (1999), therefore, that adding the notion of leadership to teaching does a disservice to both teachers and leaders. We argue instead that our findings demonstrate the importance of cultivating teacher leadership for enhanced school performance.

In summary, the integrated view of leadership we propose highlights the synergistic power of leadership shared by individuals throughout the school organization. We agree with the argument of Donaldson (2001) that past understandings of school leadership have failed to meet two functional tests: that leadership promote organizational improvement and be sustainable for the leaders themselves. The study demonstrates the effectiveness of integrated leadership—both transformational and instructional—in eliciting the instructional leadership of teachers for improving school performance. Arguably, principals who share leadership responsibilities with others would be less subject to burnout than principal "heroes" who attempt the challenges and complexities of leadership alone. When the principal elicits high levels of commitment and professionalism from teachers and works interactively with teachers in a shared instructional leadership capacity, schools have the benefit of integrated leadership; they are organizations that learn and perform at high levels.

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