

Teacher and Principal Perceptions of Change in Low-Performing Schools

Pamela D. Tucker, Jennifer A. Higgins, and Michael J. Salmonowicz

Using a mixed-method design, this study examined principal and teacher perceptions of change in 10 low-performing schools. Survey data from principals and teachers were used to ascertain the extent of perceived improvements made in specific areas noted in case studies of other low-performing schools that increased student achievement. A second purpose was to compare perceived changes with overall student achievement in the 10 schools in the sample. Overall, teachers' ratings of improvement were lower than the principals' ratings. No statistical relationship was found between teachers' ratings of change and student achievement. The findings from this study illuminate the differences in perception of changes by principals and teachers and the absence of a relationship between these perceptions and actual improvements in student achievement. Principals concerned about improving achievement must recognize the need to not only develop a vision for learning but also to articulate, implement, and monitor that vision.

No Child Left Behind (NCLB) legislation established 2014 as the year by which all U.S. students are expected to demonstrate proficiency in core subject standardized tests. As that date grows nearer, the pressure on low-performing schools to improve continues to increase. In response, schools and districts across the country have undertaken a variety of improvement efforts to raise student achievement levels. The sense of urgency is growing stronger as we approach the watershed year set by

NCLB because, in many areas, early progress seems to have stalled. Based on 2006-2007 data, 30% of schools across the nation did not make adequate yearly progress (AYP) under the legislation's requirements and 11% were identified as in "need of improvement" (U.S. Department of Education, 2008). In Virginia, where this study took place, 26% of schools did not make AYP (Virginia Department of Education, 2008). Many schools are undertaking change efforts, but what types of efforts are being made in these underperforming schools as they struggle to improve performance and meet the achievement requirements under NCLB? Who is the best judge of whether changes have taken place? Is there any relationship between typical change efforts and improvements in student achievement? This exploratory study was undertaken to capture principal and teacher perceptions of changes in school-level practices as part of the improvement process and examine the relationship of these perceived changes to student achievement.

Literature Review

With the transparency of achievement results for student subgroups within schools and across school districts, pressure has increased on educators to take action in response to perceived weaknesses in how schools are structured, how they respond to students, and the alignment of curriculum, instruction, and assessment. Research spanning the last 30 years (Datnow & Stringfield, 2000; Edmonds, 1979; Kannapel & Clements, 2005; Lezotte & Jacoby, 1992; McGee, 2004; Nunnery, 1998) has demonstrated that changes implemented at the individual school level can have a substantial effect on

Pamela D. Tucker is a Professor at the University of Virginia, Curry School of Education. Email pdttucker@virginia.edu. Jennifer A. Higgins is a Research Manager at Nimble Innovation Lab. Email higgins.jennifer@measuredprogress.org. Michael J. Salmonowicz is a doctoral candidate at the University of Virginia, Curry School of Education. Email msalmono@virginia.edu.

student performance; this includes schools that serve high-minority, high-poverty populations that are at the greatest risk of underachievement. While reform efforts have not been uniformly effective or self-sustaining (Stringfield, Teddlie, & Kemper, 2000; Zhang, Fashola, Shkolnik, & Boyle, 2006),

we know that the improvement of schools is possible when the reform effort is well thought out, when teachers are active agents in the change process, when there are sufficient resources and time to support reform, when capable leadership is present, and when school cultures change along with school structures. (Datnow & Stringfield, 2000, p. 184)

Large scale studies of school improvement efforts (Datnow & Stringfield, 2000; Stringfield & Ross, 1997; Zhang et al., 2006) and case studies of high-performing, high-poverty schools (Charles A. Dana Center, 1999; Chenowith, 2007; Cole-Henderson, 2000; Kannapel & Clements, 2005; Manset et al., 2000; McGee, 2004) support this brief summary of our knowledge about the enabling conditions for successful school reform.

Role of Leadership

Foundational to most of the frameworks on school improvement has been an emphasis on effective educational leadership (Cawelti, 1999; Leithwood, Louis, Anderson, & Wahlstrom, 2004; Lezotte & Jacoby, 1992; Marzano, Waters, & McNulty, 2005; McGee, 2004; Shields, Knapp, & Wechsler, 1995). According to Leithwood et al.,

leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school. The total (direct and indirect) effects of leadership on student learning account for about a quarter of total school effects. This evidence supports the present widespread interest in improving leadership as a key to the successful implementation of large-scale reform. (2004, p. 3)

Leithwood and colleagues go on to argue that “leadership effects are usually largest where and when they are needed most” (2004, p. 3). Leaders within schools, no matter what their formal role may be, facilitate both structural and cultural changes that enable teachers to focus on student learning in more responsive and productive ways (Leitner, 1994). One useful framework for conceptualizing the core practices of successful leaders is provided by Leithwood and colleagues. It includes (a) setting direction, (b) developing people, and (c) redesigning the organization (2004, p. 6).

The literature on school improvement and reform elaborates on the specific types of strategies that are often used in schools that are successful in their efforts to

improve student learning. These strategies offer concrete guidance on what it means to “set direction” or “develop people.” For example, “developing people” involves providing support to individuals and enhancing their capacity to contribute to the organization (Leithwood et al., 2004). Some of the practices used by effective schools serving at-risk students that are encompassed by this category include shared planning time for teachers (Charles A. Dana Center, 1999), teamwork as a way of life (Cawelti, 1999), and provision of professional development opportunities (Shields et al., 1995). Many authors argue, however, that implementing these practices simply introduces structural changes but does not necessarily produce improvements. Instead, the catalyst for activating school change is the creation of a collaborative environment for adult learning and decision making that runs deep in the culture of a school (Charles A. Dana Center, 1999; Corallo & McDonald, 2002; Datnow & Stringfield, 2000; Kannapel & Clements, 2005; Maccoby, 2007; Shields et al., 1995). Taking this idea a step further, Datnow and Stringfield (2000) posit that reform efforts must be “co-constructed” by the participants because “school change is a dynamic, active process that involves changing hearts and minds as well as policies, operating procedures, and relations of power” (p. 187). Principals cannot simply institute a set of practices that is structural in nature, however well-conceived, and expect cultural shifts in how a school approaches teaching and learning.

What school leaders can do is to set aside time for and facilitate the dialogue necessary to “co-construct” school change efforts. Discussion and debate are necessary to develop shared understandings (Leithwood et al., 2004) and engender commitment (Rorrer & Skrla, 2005) for identified changes. According to Leithwood et al., “a critical aspect of leadership is helping a group to develop shared understandings about the organization and its activities and goals that can undergird a sense of purpose or vision” (2004, p. 23). In their study of how school leaders reconceptualized accountability policies to enhance student success, Rorrer and Skrla identified “relationships and interactions” as major mediating factors which enabled leaders to “gain commitment for changes in organizational structures and served as a bridge to the capacity of districts and schools to create learning environments in which all children could be successful” (2005, p. 55).

Likewise, other research on school improvement, particularly in schools serving at-risk students, suggests that establishing a coherent set of goals, norms of practice, and beliefs is critical to deep-rooted and pervasive change in schools (Corallo & McDonald, 2002; Datnow & Stringfield, 2000; Lezotte & Jacoby, 1992; Shields et al., 1995; Skrla, Scheurich, & Johnson, 2000). This is not a task of leaders, per se, but a process undertaken by leaders with faculty

based on teachers' perceptions of school characteristics, teachers' commitment to change, and organizational learning (Leithwood, 1994). As a result of this co-construction of change efforts, there is an expectation of enhanced student outcomes, including increased student learning and documented student achievement. This line of reasoning assumes a synchronicity, or congruence, of perceptions by school leaders and teachers of the need for change, responses to the identified problems, and the effects of chosen strategies to address the problems (Hoy & Miskel, 2007).

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Disparities in Perceptions

Administrators and teachers, however, often have different perceptions of phenomena in schools. This is particularly evident in large surveys such as those conducted by Public Agenda. According to the *2006 Reality Check* (Johnson, Arumi, & Ott, 2006), 76% of superintendents said that "students graduating from middle school have learned the reading, writing, and math skills they will need to succeed in high school" (p. 8). By comparison, only 59% of principals and 33% of high school teachers had the same view. Seemingly, the closer the actor is to the core tasks of schooling, the less "buoyant" they are about its accomplishments. Both superintendents and principals were almost twice as positive about student learning as teachers. The differences in perceptions were substantial and indicate a fundamental problem in grasping the severity of challenges facing schools.

Additional academic studies comparing teacher and principal perceptions reveal a slight to substantial level of variation between the groups in how they view educational concerns. Some studies found only slight disagreement in the perceptions of issues surrounding special education (Kataoka, van Kraayenoord, & Elkins, 2004) and the components of school effectiveness (Gaziel, 1996). Other researchers documented considerable differences in the perceptions between the two groups with regard to the amount of mentoring and support beginning teachers received (Andrews, Gilbert, & Martin, 2007), principals' effectiveness and flexibility (Kelley, Thornton, & Daugherty, 2005), and changes that needed to be undertaken to improve school performance (Duke,

Konold, & Salmonowicz, in press). Still other researchers noted anywhere from minor to extreme differences in their surveys of teacher and principal perceptions (e.g., Tetenbaum, Mulkeen, and Hale [1987], who explored the groups' perceptions of what the principal did and should be doing as part of his or her job, and Voltz [1998], who examined the challenges facing urban schools, the extent to which school personnel felt they could influence the challenges, and the potential for using promising practices to resolve the challenges). In one study on the characteristics of a quality science teacher, Searles and Kudeki (1987) found that teachers and principals held fairly similar perceptions. In most studies, however, the perceptions of teachers and principals differed.

Despite a focus on the perceptions of teachers and principals, none of these studies addressed recent changes in schools, nor did they specifically look at low-performing schools. Since detailed data on student demographics and student achievement were provided in only one case (Duke et al., in press), it was not possible to determine the characteristics of the schools in these studies. Furthermore, none of the studies compared building principals' perceptions with those of a large portion of their faculties. Four of the studies compared principals and teachers from different schools (Andrews et al., 2007; Duke et al., in press; Kataoka et al., 2004; Tetenbaum et al., 1987). The other four compared principals and a small number of their teachers (Gaziel, 1996; Kelley et al., 2005; Searles & Kudeki, 1987; Voltz, 1998).

The primary aim of the present study was to determine the extent to which teachers and principals agreed about the extent and success of changes made in their low-performing schools. Survey data from both the principal and teachers were used to ascertain the extent of perceived improvements made in specific areas noted in case studies of other low-performing schools that were able to increase student achievement. A second purpose was to compare perceived changes with overall student achievement in the 10 schools.

Design

This descriptive research design used questionnaires to collect perceptual data from teachers and principals in 10 underperforming Virginia schools. "Underperforming" was defined as schools that failed to obtain accreditation in Virginia and/or did not meet AYP under NCLB for the 2004-2005 school year (both classifications were based on test data from spring 2004). Schools were selected to provide a stratified sample representing three levels of student enrollment in the state and geographic diversity based on those principals who responded to the invitation to participate. Table 1 provides demographic

Table 1. Demographic Information About 10 Participating Schools, 2004

	1	2	3	4	5	6	7	8	9	10
Enrollment	540	276	663	197	658	414	293	497	603	659
White (%)	39	100	20	42	25	34	70	35	46	54
Black (%)	49	na	73	51	71	47	29	60	49	39
Economically Disadvantaged (%)	81	72	75	79	74	63	56	60	70	65
Students with Disabilities (%)	17	24	16	11	16	11	18	13	21	19
Mathematics Pass Rate (%)	69	69	71	69	68	76	75	73	90	91
English Pass Rate (%)	88	61	72	67	69	86	91	89	85	91

Note: Pass rates are accreditation adjusted. Data retrieved from <http://www.doe.virginia.gov/VDOE/src>.

information on the convenience sample of the 10 schools which participated in the study—nine elementary schools and one middle school. The number of economically disadvantaged students served by the schools ranged from 56 to 81%. Most of the schools served a high-minority population. Achievement levels in English and math varied widely, with passing rates on the state assessments ranging from 61 to 91%.

The primary data source for the first part of the study was a survey of principals and teachers on improvements in specific areas at the school level. Survey data are considered an excellent means to “produce statistics—that is quantitative or numerical descriptions of some aspects of the study population” (Fowler, 1993, p. 1). In this case, survey data were used to elicit perceptions from both the principal and teachers on the extent of improvements made in the school during the year. The survey instrument was developed based on case studies of changes undertaken by principals in 15 schools from Texas and Virginia that had reversed the tide of low performance (Duke, 2006). Student achievement data were obtained from the Virginia Department of Education Web site (<http://www.doe.virginia.gov>) and were used to explore relationships between improved student achievement and perceived changes within the 10 schools.

Twenty items addressing possible changes in the school (e.g., principal visibility) were rated for the extent to which improvements had been made, using a 4-point Likert scale of “not at all” (1) to “very much” (4). In addition, two questions about satisfaction with the changes made during the year and the extent to which changes raised student achievement were also rated using the same

4-point Likert scale. In an open-ended portion of the questionnaire, participants were asked to list the three most significant changes made during the year and to add any other comments they wished to make.

Surveys were distributed to the principals of the 10 schools and their faculty members. Each school’s principal responded to the survey. Of the 444 teachers who received a survey, 167 responded. Five schools’ response rates were between 39 and 52%, with the five others between 23 and 33%. The overall response rate was 38%.

Virginia’s Standards of Learning (SOL) assessments were used to measure student achievement. These assessments are composed of multiple choice items. For each SOL test, a cut score is established to determine whether students “pass” the test. The percentage of students that passed the English/language arts and mathematics SOL tests for participating schools was added to provide a crude measure of performance for each school in the 2003-2004 and 2004-2005 school years. Given that scale score data is not published for schools, this approach was taken to capture some estimate of fluctuations in student performance in these two core testing areas.

To examine the degree to which principals and teachers believed that improvements had been made in their schools and the degree to which principals and teachers agreed on the improvements that had occurred, a series of analyses were performed. The statistical software program SPSS was used to compute mean ratings on the extent of reported improvements in the 10 schools, independent samples t-tests to determine the significance of differences in perceptions of principals and teachers, and Pearson

Table 2. T-Test Summary by School

	1		2		3		4		5		6		7		8		9		10	
	Prin n=1	Tch n=14	Prin n=1	Tch n=12	Prin n=1	Tch n=16	Prin n=1	Tch n=7	Prin n=1	Tch n=25	Prin n=1	Tch n=11	Prin n=1	Tch n=11	Prin n=1	Tch n=16	Prin n=1	Tch n=28	Prin n=1	Tch n=27
To what extent have improvements been made to...																				
the amount of time devoted to particular subjects (like reading or mathematics)?	4	3.07*	4	3.50*	4	3.31*	3	3.00	4	3.63*	4	3.09*	1	2.91*	4	2.62*	3	2.75	2	2.76*
how teachers work together?	3	3.29	4	3.50	4	3.31*	4	2.71	4	3.48*	2	2.36	3	2.27*	4	1.88*	3	2.32*	2	2.57*
instructional practices?	4	3.29*	4	3.17*	4	3.06*	4	3.00	4	3.48*	3	2.55	2	3.00*	2	2.47	3	2.68	3	2.62
staff development?	4	3.00*	4	3.25	4	3.13*	3	2.43	4	3.36*	3	2.82	2	2.55	3	2.19*	3	2.14*	3	2.57
how students are grouped for instruction?	3	2.71	3	2.55	4	2.69*	4	3.14	4	3.16*	3	1.82*	2	2.18	3	2.50	4	2.74*	3	3.00
interventions for students who are struggling academically?	3	3.29	4	3.17*	4	3.25*	3	2.43	4	3.42*	2	2.36	3	2.82	4	3.44*	3	2.81	3	2.76
curriculum content, emphasis, and/or sequencing?	4	3.21*	4	3.42*	4	3.13*	2	2.57	4	3.46*	1	2.82*	3	3.09	4	2.19*	3	2.52	3	2.62
assignment of teachers and other staff members?	4	3.43	4	2.64*	3	2.19*	3	1.86	3	3.04	2	1.91	3	2.27	3	2.13*	3	2.30*	3	2.68
principal communication among faculty and staff?	3	2.71	4	3.08	3	2.69	4	2.86	4	3.08*	2	2.09	3	1.91*	3	2.13*	3	2.39*	2	2.62
the adoption of new textbooks or curriculum programs?	2	2.69	4	3.64	3	3.31	3	3.29	4	3.50*	4	3.18	2	2.27	3	3.13	3	3.19	3	2.86
school morale?	3	2.93	4	2.73*	3	2.50	3	2.71	4	3.16*	4	1.82*	3	1.91*	2	2.06	2	1.79	2	2.48*

Table 2. T-Test Summary by School (continued)

	1		2		3		4		5		6		7		8		9		10	
	Prin n=1	Tch n=14	Prin n=1	Tch n=12	Prin n=1	Tch n=16	Prin n=1	Tch n=7	Prin n=1	Tch n=25	Prin n=1	Tch n=11	Prin n=1	Tch n=11	Prin n=1	Tch n=16	Prin n=1	Tch n=28	Prin n=1	Tch n=27
To what extent have improvements been made to...																				
teacher involvement in how instructional decisions are made?	3	2.71	4	2.83*	4	2.81*	3	2.14	3	2.88	3	2.00*	2	2.27	3	2.19*	3	2.14*	2	2.38
grading and assessment practices?	4	3.14*	4	3.00*	3	2.63	2	2.29	3	3.12	1	1.91*	4	2.45*	3	2.50	3	2.26*	2	2.45*
the school schedule?	3	3.14	4	3.64	3	2.31*	3	3.43	3	3.12	1	2.91*	3	2.73	3	1.56*	4	2.37*	2	2.71*
principal visibility?	4	2.79*	4	2.83*	3	2.62	3	3.00	3	2.92	2	2.00	1	2.27*	3	1.69*	3	2.21*	2	3.14*
student discipline?	3	2.57	4	1.73*	3	2.25*	4	2.86	4	3.00*	1	1.55	2	1.36*	2	2.31	3	1.96*	2	2.14
school safety?	3	2.50	4	2.45*	3	2.13*	2	2.86	3	2.92	3	1.82*	3	2.00*	2	2.44	1	2.21*	3	2.57
technology to support instruction?	2	3.21*	4	2.92	3	2.56	2	3.14	3	3.38	1	2.27*	4	3.09*	3	3.06	2	2.82*	3	2.86
teacher supervision?	2	2.50	3	2.64	3	2.25*	3	2.33	3	2.96	2	1.91	1	2.36*	3	2.06*	3	2.43*	2	2.76*
parental support of students' academic success?	2	2.43	3	2.50	3	2.06*	2	1.57	2	2.72*	4	2.10*	2	2.18	3	1.69*	1	1.86*	2	2.14
To what extent are you satisfied with the changes that have been made this year?	4	3.36*	4	2.92*	4	2.94*	3	2.86	4	3.28*	4	2.55*	3	2.27*	3	2.69	3	2.04*	3	2.71
To what extent do you believe that the changes made this year have helped to raise student achievement?	4	3.57	4	2.91*	4	3.06*	3	2.83	4	3.40*	4	2.73*	3	2.36*	3	2.75	4	2.22*	3	2.75

* Teacher responses differ significantly from the principal response ($p < .05$)

correlations to determine correlations of two change indicators and student achievement. Responses to the open-ended items were grouped into common categories of school practices using the method of constant comparison (Glaser & Strauss, 1967). The narrative responses were compiled and key phrases were identified. Similar phrases and ideas were grouped together and after all the responses had been reviewed, labels were assigned to the clusters based on consensus by two of the researchers. Findings from these analyses are presented below.

Findings

These findings are organized into four sections: the perceptions of change taking place in low-performing schools, the differences in those perceptions by principals and teachers, open-ended responses, and the relationship of perceived changes to student achievement. It is important to point out that the results are based on a small sample of 10 low-performing schools in one state and that response rates were low to moderate. Gaining access and a high level of participation in schools experiencing accountability pressures is extremely difficult and the low response rate is somewhat indicative of the school culture. A higher response rate may have changed the results, but an examination of the schools with the three highest response rates (48 to 52%), which accounted for 80 of the 167 respondents, indicated that they had similar patterns of item ratings as those with the lowest response rates. Table 2 displays responses from each school's principal and teachers for each survey item, while Table 3 shows the mean responses of all principals and teachers for each item.

Perceived Areas of Change

Overall, teachers' ratings of improvement were lower than those of principals. Principals and teachers agreed that "the amount of time devoted to particular subjects," "instructional practices," and "interventions for students who are struggling academically" had a high degree of improvement in comparison to other survey items. Principals also thought that improvements had been made in staff development, student grouping, and how teachers worked together, but teachers' ratings of these same items were much lower relative to other survey items. Teachers identified the curriculum content, emphasis, and/or sequencing and the adoption of new textbooks or curricular programs as areas of greater improvement compared to other survey items.

There was relative agreement among principals and teachers on the least improved areas of change. Principals and teachers agreed that "parental support of students' academic success" was the area of least improvement. They also agreed that "student discipline," "school safety" and

"teacher supervision" had a low degree of improvement in relation to the other surveyed items. In addition, teachers rated "school morale" as one of the least improved items, while principals rated "principal visibility" as one of the least improved items.

Differences in Perceptions of Changes

With the exception of one item ("the adoption of new textbooks or curriculum programs"), principals consistently rated the survey items higher than teachers. Teachers apparently viewed this change as having more saliency than principals. Independent sample t-tests were run at the item level to determine whether teachers and principals agreed on the degree of improvement or change for each survey item. The t-tests showed that principal and teacher responses differed significantly, at the $p < .05$ level, on 6 of the 22 items. The differences in principal and teacher ratings of the summative survey items were statistically significant at the .001 probability level. These items were general in nature and asked whether the respondent was satisfied with the changes made during the year and whether he or she believed that the changes had helped raise student achievement. Principals rated these items highly while teachers did not.

With the exception of one item ("the adoption of new textbooks or curriculum programs"), principals consistently rated the survey items higher than teachers.

Open-Ended Responses

At the end of the closed response portion of the survey, teachers were asked to list the three most significant changes made in their school during the year. This open-ended item was intended to solicit novel responses that were not included in the questionnaire. Responses were grouped into common categories using the teachers' language to capture the essence of the comments. The 10 most frequently reported broad categories of responses to the open-ended prompts were curriculum/instruction (51 comments), scheduling (41), remediation/intervention (33), staffing (26), assessment (23), staff development (17), discipline (15), technology (15), inclusion of special education students (10), and faculty morale (10). Inclusion of special education students was the only novel theme not included in the items on the survey instrument. The frequency with which themes were noted as being significant changes during the year was similar to the strength of their ratings on the survey. In other words, "curriculum content, emphasis, and/or sequencing" and "instructional practices" were two of the more highly

Table 3. Average Principal and Teacher Ratings of Change

Survey Item	Mean Rating		<i>p</i>
	Principal (n=10)	Teacher (n=167)	
To what extent have improvements been made to...			
the amount of time devoted to particular subjects (like reading or mathematics)?	3.30	3.06	.493
how teachers work together?	3.30	2.78	.080
instructional practices?	3.30	2.93	.198
staff development?	3.30	2.73	.028*
how students are grouped for instruction?	3.30	2.71	.024*
interventions for students who are struggling academically?	3.30	3.03	.244
curriculum content, emphasis, and/or sequencing?	3.20	2.89	.381
assignment of teachers and other staff members?	3.10	2.51	.010*
principal communication among faculty and staff?	3.10	2.58	.057
the adoption of new textbooks or curriculum programs?	3.10	3.13	.915
school morale?	3.00	2.41	.051
teacher involvement in how instructional decisions are made?	3.00	2.46	.033*
grading and assessment practices?	2.90	2.60	.375
the school schedule?	2.90	2.71	.521
principal visibility?	2.80	2.56	.437
student discipline?	2.80	2.56	.437
school safety?	2.70	2.41	.311
technology to support instruction?	2.50	2.48	.927
teacher supervision?	2.50	2.48	.927
parental support of students' academic success?	2.40	2.16	.396
To what extent do you believe that the changes made this year have helped to raise student achievement?	3.60	2.85	.001*
To what extent are you satisfied with the changes that have been made this year?	3.50	2.74	.001*

* Teacher responses differ significantly from principal responses ($p < .05$)

rated items by teachers (2.89 and 2.93, respectively, on the 4-point scale) and the most comments by teachers were made in this broad category.

Student Achievement

To determine the relationship between student achievement and teacher satisfaction with changes taking place in the schools, a Pearson correlation was calculated. Student achievement was measured by the combined passing rates on the English and mathematics SOL assessments. Teacher satisfaction was measured by the average rating (Likert scale of 1-4) on the following item: To what extent are you satisfied with the changes that have been made this year? The Pearson correlation (-0.04) showed a negligible statistical association between the two variables for the 10 schools. Similarly, a Pearson correlation was used to examine the association of student achievement and reported teacher belief in student achievement gains. Student achievement was measured as described above, and teacher belief in achievement gains was measured by the average rating (Likert scale of 1-4) on the following item: To what extent do you believe that the changes made this year have helped to raise student achievement? The Pearson correlation (0.05) indicated little or no relationship between the two variables.

Discussion

The findings from this study illuminate the types of changes that schools are making in their efforts to improve student performance on state assessments, the differences in perception of the changes by principals and teachers, and the absence of a relationship between these perceptions and actual improvements in student achievement. There is both good and bad news in these findings on the perceptions of change within low-performing schools.

Perceived Areas of Change

The areas of possible change that teachers rated as most improved in their low-performing school were: (a) adoption of new textbooks or curricular programs, (b) amount of time devoted to particular subjects, (c) interventions for students who are struggling academically, (d) technology to support instruction, and (e) instructional practices. The first three of these items were also reflected in the open-ended responses by teachers, which further reinforced their reliability. Principals rated three of these items highly but did not include technology or instructional practices among their highest-rated items.

The areas that teachers rated as improving the least during the year were: (a) parental support of students' academic success, (b) student discipline, (c) school safety, (d) school morale, and (e) teacher supervision. Although principal ratings were slightly higher numerically, they

rated four of the same five areas as least improved. The only difference was that teachers rated "school morale" as one of the least improved items while principals rated "principal visibility" as one of the least improved.

It is noteworthy that the changes agreed upon by both teachers and principals were primarily structural in nature: adoption of new textbooks, use of time, and interventions for struggling students. Items related to school culture—such as parental support and how teachers work together—were not highly rated. In fact, school safety and school morale, both of which are considered indicators of school culture, were rated as improving least during the year. Furthermore, the role of teacher participation in decision making is recognized as a mechanism for developing a "supportive culture of change" (Zimmerman, 2006, p. 242) and yet the item on teacher decision making was rated low by both principals and teachers in this study. As noted earlier by Datnow and Stringfield, "the improvement of schools is possible when ... school cultures change along with school structures" (Datnow & Stringfield, 2000, p. 184). Numerous authors (Kannapel & Clements, 2005; Kotter, 1995; Leitner, 1994; Maccoby, 2007) have noted the importance of cultural incorporation of change. In these schools, there appeared to be a disconnect between the structural changes taking place in the schools and the need for cultural changes around "the way people do things and how they relate to each other" (Gruenert, 2005, p. 44).

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Similarities in Perceptions of Change

Principals and teachers were largely in agreement about the areas of greatest and least improvement, thus providing a congruent assessment of improvements for the year. Furthermore, the open-ended responses corroborated the items rated as being most improved. The areas of greatest improvement were in fundamental educational areas: adoption of new textbooks or curriculum programs, instructional practices, instructional time, and interventions for struggling students. For low-performing schools, this laser-like focus on issues related to the academic program is appropriate and has been acknowledged as critical to success (Charles A. Dana Center, 1999; Chenowith, 2007; Corallo & McDonald, 2002; Kannapel & Clements, 2005; Manset et al., 2000).

Two areas of least improvement, however, have been cited as critical components to success in the current literature regarding high-performing, high-poverty schools. Parental involvement and school safety have figured prominently in the work by numerous researchers (Duke, 2002; Knapp, Shields, & Turnball, 1994; Lezotte & Jacoby, 1992; Manset et al., 2000; Marzano, 2003; McGee, 2004). For example, McGee (2004) found “extensive parent involvement” was present in 90% of the high-poverty, high-performing schools he studied and “attention to health and safety needs of students” was present in at least half. He characterized the Illinois “Golden Spike” high-poverty, high-performing schools as making every parent welcome. McGee concluded that “school is a safe, supportive place for them as well as their students” (p. 116). In contrast, the perceived inattention to school safety and parental involvement in the schools in this study is cause for concern.

Differences in Perceptions of Changes

Social systems theory suggests that “the greater the degree of congruence among the elements of the system, the more effective the system” (Hoy & Miskel, 2007, p. 41) and yet there were some areas of striking differences between teacher and principal ratings of the changes taking place in these schools. Key differences were the following:

1. Principals consistently rated the degree of change and improvement higher than teachers.
2. Principals were more satisfied with the changes made (.76 points higher on a 4-point scale, $p > .001$).
3. Principals believed the changes helped raise student achievement to a greater extent than teachers (.75 points higher on a 4-point scale, $p > .001$).

Principals were more satisfied than teachers with the changes that had been made at every single school, typically to a large extent. They were also more confident that the changes had made a difference. It is unclear what accounts for these differences, but other studies (Gaziel, 1996; Johnson et al., 2006; Kataoka et al., 2004; Kelley et al., 2005) have found comparable disparities in perceptions by teachers and principals about school-related issues. This leads us to ask a number of questions. Are differences in perceptions common to all schools or do these findings suggest a different dynamic in schools undergoing a change process? Do these differences reflect the enthusiasm needed by leaders of low-performing schools to maintain momentum in the face of daunting challenges, or do they reflect a greater realism on the part of teachers? What is the basis of these perceptions? Are data being used in these schools to inform perceptions of improvement and increased student achievement?

While optimism in the face of challenging circumstances may be necessary, principal satisfaction with the changes their schools were making and their belief that those changes raised student achievement are inconsistent with the evidence in this study and teachers’ perceptions. Without the recognition of a “compelling need for change” (Duke, 2004, p. 85), principals are unlikely to continue their improvement efforts or persuade their faculties to support them. Kotter (1996), for example, suggests that establishing a sense of urgency is the first step in leading organizational transformation and is “crucial to gaining needed cooperation” (p. 36). If people do not recognize that a problem exists, they are unlikely to invest the extra effort and time in addressing it. Based on our findings, principals were much more satisfied than teachers with the changes that had been undertaken in their schools, which may lead to complacency and a lack of urgency about the need for further changes by the principal and, as a result, by teachers.

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The lack of agreement between teachers and principals on some items may be due to still other reasons. For example, the extent of improvements around technology, instructional practices, staff development, and student grouping may be attributable to spheres of awareness and involvement by teachers versus principals. Possibly principals were not aware of improvements teachers were making in the use of technology and instructional practices while teachers were not aware of principals’ efforts to improve staff development and student grouping. This is consistent with Elmore’s (2000) observation that administration “has come to mean not the management of instruction but the management of the structures and processes around instruction” (p. 6). As a result of their role definition, principals are distanced from changes in the core technology (teaching and learning) of schools but are more aware of structural changes.

Perceptions and Student Achievement

The lack of a relationship between perceptions of change and increased student achievement may be due to the way in which both were measured for this study, but close examination of the data by a variety of means suggests that none exists. It may be that principals and teachers in many schools are simply unable to judge properly how changes in their schools affect student

achievement. Their means for determining where to make changes, how to implement changes properly, and how to monitor the impact of changes may not be effective, and in some cases, monitoring systems may not even be in place. The potential absence of effective monitoring systems for assessing the incremental effects of new strategies, curricula, and organizational practices is especially worrisome, as these systems have been found to be critical to school improvement efforts (Kannapel & Clements, 2005; Leithwood et al., 2004; Lezotte & Jacoby, 1992; Manset et al., 2000). Without effective feedback mechanisms to indicate when specific efforts have had a positive effect on student outcomes, new initiatives quickly can lose their momentum.

Conclusions

The results of this study clearly confirmed that changes were taking place in these low-performing schools, some of which principals and teachers alike agreed were substantial (e.g., the allocation of time to various subjects and the development of interventions for struggling students). However, there was a stark lack of agreement between principals and teachers about their satisfaction with changes and their belief that the changes had made a difference. The principals' expressed satisfaction with the efforts they had made seems doomed to generate complacency about the need for ongoing efforts to institute new measures to address weak student performance. Without the presence of a sense of urgency (Kotter, 1996) or perceived need for change (Duke, 2004) as the catalyst for improvements in schools, it is unclear whether further efforts to enhance learning for students will be brought to bear in these schools.

The types of changes noted by principals and teachers seem to be initial steps in the process of making sweeping changes in low-performing schools. New textbooks and modifications to the curriculum used in classrooms, how time is allocated, and academic responses to struggling students are all positive beginnings but they address surface issues and are primarily structural in nature. If deep changes that impact student learning are to take place, the focus in these schools needs to shift to issues such as "how teachers work together" and "parental support of students' academic success." It is through these working relationships and teacher involvement in decision making that change will be "co-constructed" with relevant constituents and deep cultural changes will begin to be made (Datnow & Stringfield, 2000).

Finally, the lack of a consistent relationship between perceptions of change and student achievement suggests the absence of feedback mechanisms on both student learning and faculty perceptions of the improvement

process. Principals who are concerned about improving achievement recognize the need to not only develop a vision for learning but also to articulate, implement, and monitor that vision (Leithwood et al., 2004). This requires principals to be proactive in soliciting teacher feedback on school improvement efforts continuously throughout the process (Duke et al., in press). In this way, teachers can be more fully invested stakeholders in school improvement efforts to which they are expected to contribute (Zimmerman, 2006). Of course, principals who decide to gather teachers' opinions in this way should have a plan for how to use the information. If teachers provide thoughtful feedback but are not involved in the process of making adjustments, they may become discouraged and disengaged (Valli & Buese, 2007).

These findings point to differences in teacher and principal perceptions about change efforts in struggling schools, but many questions remain to be examined. For example, do differences in perception exist primarily in low-performing schools or are they just as prevalent in high-performing schools? Do characteristics of teachers and administrators, such as age or years of experience, play a part in differing perceptions? Further research with a larger sample of schools is needed to address these questions. Findings from future projects such as these may help teachers and administrators in struggling schools to find common ground as they work toward improved student achievement.

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