Leadership and Policy in Schools, 9:245–291, 2010

ISSN: 1570-0763 print/1744-5043 online
DOI: 10.1080/15700761003731500

Routledge
Taylor & Francis Group

Characteristics of School Districts that Are Exceptionally Effective in Closing the Achievement Gap

KENNETH LEITHWOOD
Ontario Institute for Studies in Education, University of Toronto, Ontario, Canada

This article identifies characteristics of school districts that have been exceptionally successful in closing gaps in achievement among diverse groups of students, including students in challenging circumstances. Evidence for the paper was provided by 31 studies. These were studies, published in the past ten years, which reported original evidence about the association between one or more district characteristics and some valued set of outcomes, or described one or more practices within a district previously found to be high performing. Ten district characteristics are described and several implications for future policy, research, and practice are outlined.

INTRODUCTION

School districts and their leaders have recently been rediscovered in the ongoing drama of school reform. This development stands in stark contrast to scenarios played out across the United States not much more than a decade ago, when districts were pretty much "restructured" out of the leadership game by the attraction of site-based management (Murphy & Beck, 1995). During that period, England also shifted the relationship between its Local Education Authorities and schools from one of hierarchical authority to support. In an effort to rid education of its "stifling bureaucracies," policymakers in many areas devolved authority for school governance increasingly to principals (and sometimes to teachers and parents) in regular as well as charter schools, and these newly empowered authorities gained the dubious opportunity to spend time dealing with bricks, buses, and budgets.

Address correspondence to Kenneth Leithwood, Professor, Ontario Institute for Studies in Education, University of Toronto, 252 Bloor Street West, Toronto, Ontario M5S 1V6, Canada. E-mail: kleithwood@oise.utoronto.ca

Such restructuring did not do much to improve student learning (Leithwood & Menzies, 1998).

Now districts and their leaders have re-emerged, thanks in part to responsibilities assigned to them by legislators. The federal No Child Left Behind Act, for example, extends accountability for student learning beyond the schoolhouse to the district organizations that, in all states, continue to make crucial decisions about the use of resources for school improvement. The act also specifies new roles for districts in reform activity. Along with their schools, districts are now accountable for the learning of all students. While some large-scale reforms initiated in the past decade (e.g., Fullan & Levin, 2009) have been successful in raising average achievement levels, reducing disparities or gaps in the achievement of students from different social, cultural, and economic backgrounds has proven to be largely elusive.

This article provides a synthesis of evidence about the characteristics of districts that have been especially successful in improving the achievement of students who are typically at risk of failure in school.

REVIEW METHODS

Selection criteria

Thirty-one articles provided the evidence for this review. In order to be included in the review, an article had to be published in a refereed journal or comparable source. It also had to either report original evidence about the association between one or more district characteristics and some valued set of outcomes, or describe in some detail one or more practices within a district previously found to be high performing.

The final selection of articles was limited to those defining district performance in terms of student achievement. This criterion eliminated about 25 otherwise eligible studies that defined high performance as, for example, increased collegial support among staff, high school graduation rates, teacher quality, reductions in student misbehavior, and success at implementing reform initiatives.

Search Procedures

All abstracts for refereed articles from the ERIC data base that included references to school districts within the article for 1998 to 2009 inclusive were examined first; none of the abstract descriptors directly identified reports of research on effective districts. This resulted in 944 abstracts that were skimmed to select any that reported empirical research or reviews of research related to effective districts.

Forty-nine of the 944 articles were read thoroughly because their abstracts implied reports of district effects. Of those, about 25 were documents useful

for this review. The remaining 24 did not report actual district effects, or reported differences between districts without exploring or reporting on characteristics of effective districts. Bibliographies from the original studies and a half dozen literature reviews were used to identify studies not found through searching the ERIC data base. Author searches were also used to ensure articles were not missed due to inadequate ERIC identifiers. This added several more articles.

Google was used to find reports of research studies not reported in refereed articles in ERIC. About 16 studies (or variations of studies with the same data base) were found through this method. Author searches were also done on Google to find work not readily available through educational searches but carried out by scholars involved in district research. This method produced about a half a dozen additional reports. Some articles included in the final sample were identified through more than one search method. So the final number of articles is less than the sum of articles found through the several search methods. The subsequent report of results also makes reference to some of the conclusions reported in another recent review of literature by Rorrer, Skrla, and Scheurich (2009) carried out with a broader purpose in mind.

Analysis

Articles were content analyzed at least twice. The first reading searched for evidence of the set of district characteristics included in the framework (described above). The second reading examined articles for evidence of other characteristics of high-performing districts.

NATURE OF THE STUDIES REVIEWED

Location of Districts Studied

The Appendix summarizes key features of the 31 empirical studies that provided the core of the evidence included in the review. In addition to bibliographic information (the first three columns on the left), the Appendix summarizes key features of each study's sample and research methods. Of the studies reviewed in this paper:

- Sixteen were conducted in districts in a wide variety of U.S. contexts, some of them in single states and some in multiple states;
- Six were conducted in New York City's District # 2, by now a well-known exemplar of district initiatives;
- Three were conducted in San Diego during the period in which the former superintendent of New York City's District #2, appointed as Chancellor of Instruction, attempted to replicate much of what had been learned in District #2 within a compressed period of time;

- Four were carried out in Texas, three of them exploring different aspects of the work in the same four districts and conducted by the same team of investigators; and
- One study (Maguire, 2003) was conducted in Canada (Alberta).

Almost all districts included in the 31 studies served a high proportion of disadvantaged, low SES or minority students. The purpose of the majority of these studies was to determine what districts could do to at least improve the achievement, if not close the gap, between the achievement of such children and their more advantaged peers.

Methods Used in the Studies

Results provided by the 31 studies were dominated by evidence produced using some form of "outlier" research design typically harnessed to case-study data collection methods. An outlier design, in the case of these studies, means that researchers first determined the patterns of student achievement across districts (within a state, for example) serving high proportions of disadvantaged students. Then districts performing at one or both ends of the achievement distribution were selected for study. Most of the studies using outlier designs only examined districts performing at the high-achieving end of the distribution.

Outlier designs provide only weak causal information. Once a district is selected, researchers collect information designed to pinpoint the causes of the district's exceptional performance by, for example, asking organizational members about their work and their opinions about the causes of the district's performance. When such data are available for both high- and low-performing districts, differences in the evidence provide the basis for inferring the causes of high performance. When data are available for districts at only the high-performing end, the causal inference is considerably more uncertain.

Some studies among the thirty-one arrived at their causal inferences by selecting the characteristics that seemed to be common across multiple high-performing districts. Of course, this still leaves open the possibility that other districts could have the same characteristics or some of the same characteristics. When an outlier study is based on only one district, causal inferences must be considered very tenuous. The external validity of evidence from such studies depends on the degree of consistency with evidence from other relevant studies.

Table 1 identifies which of the studies summarized in the Appendix provide evidence about each of the district characteristics used to summarize results of the review. While 31 studies about the nature of high-performing districts should be considered at least a moderate-sized sample, by social science standards, only a sub-sample of this set provides evidence about each of the district characteristics outlined below, as Table 1 indicates.

TABLE 1 Evidence About the Characteristics of High-Performing Districts.

Characteristics of High-Performing Districts	Studies Providing Evidence about this Characteristic*	Total Studies
1. District-wide focus on student achievement	1, 2, 3, 5, 11, 12, 14, 15, 18, 20, 23, 24, 25. 31	14
2. Approaches to curriculum and instruction	1, 2, 3, 5, 8, 10, 13, 14, 17, 18, 23, 24, 25, 31	14
3. Use of evidence for planning, organizational learning and accountability	1, 4, 5, 6, 8, 11, 13, 14, 15, 20, 23, 24, 25, 29, 31	15
4. District-wide sense of efficacy	5, 8, 13, 20	4
5. Building and maintaining good communications and relations, learning communities, district culture	3, 4, 7, 8, 10, 12, 13, 15, 20, 23, 24, 28, 31	13
6. Investing in instructional leadership	1, 2, 3, 4, 5, 6, 8, 10, 12, 13, 15, 21, 20, 23, 24, 31	16
7. Targeted and phased orientation to school improvement (targeting interventions on low performing schools/students)	3, 5, 6, 10, 15, 17, 23, 24, 31	9
8. District-wide, job-embedded PD for leaders and teachers	1, 2, 3, 4, 5, 8, 10, 11, 13, 14, 15, 18, 19, 20, 21, 23, 24, 25, 27, 29, 31	21
9. Strategic engagement with the government's agenda for change and associated resources	1, 3, 17, 23, 29, 31	6
10. Infrastructure alignment	1, 3, 7, 8, 9, 11, 12, 17, 20, 22, 23, 24, 26	13

*The numbers in these cells correspond to the number assigned to studies described in the Appendix.

These sub-samples range from a high of 21 studies providing evidence about "district-wide, job-embedded professional development," to a low of four studies about "district-wide sense of efficacy."

In sum, then, as a consequence of the research designs used, and the number of studies providing information about each characteristic, the evidence base for any single district characteristic should be considered suggestive rather than conclusive.

RESULTS

District-Wide Focus on Student Achievement

As Table 1 indicates, 14 studies provide direct evidence about the importance of this characteristic. It should be noted, however, that many other studies included in the review also provided important, though less explicit, support for its contribution to district effectiveness. Evidence about the importance of a direct focus on student achievement touches on the need to:

- develop a widely shared set of beliefs and a vision about student achievement; and

- include in this vision the concepts of "closing the gap" as well as "raising the bar."

Develop a widely shared set of beliefs and vision about student achievement

Research carried out in both NYC's District #2 and San Diego demonstrate exceptional clarity of vision on the part of district leaders regarding the importance of focusing all district work on the improvement of teaching and learning (e.g., Elmore & Burney, 1998; Darling-Hammond et al., 2003; Hightower, 2002; McLaughlin & Talbert, 2003). Other studies support the importance of such clarity. For example, four of the five high-performing districts in Togneri and Anderson's study: "began their reform efforts by reassessing and revising their visions. Over time those visions became the guiding focus of all strategic planning . . . What was notable . . . was the extent to which these districts used their visions to guide instructional improvement" (2003, p. 12). Similarly, the high-performing districts in Iatarola and Fruchter's (2004) study were much clearer than the low-performing districts about their educational goals. All four districts in Skrla et al.'s (2000) study had developed a clear sense of direction and focus. All staff appeared to share a common sense of mission. Understanding of this mission was highly consistent across all of the stakeholders in these districts.

The four "improving" Alberta districts in Maguire's research study had vision statements "that were more sharply focused on student learning and more widely promulgated and internalized at all levels" (2003, p. 10). They had "widespread, top-to-bottom understanding of the district's mission and goals" (p. 11). In these districts, as well, there was "a powerful concentration by the district's administration on improving student achievement, coupled with at least one senior leader whose passion and energy are sufficient to fuel the district's vision" (p. 11)

Internalized beliefs and visions are not enough, however. Cawelti's evidence supported continuing work by districts aimed at developing shared beliefs "about learning and how the school system should operate, and a vision of the future" (2001, p. 2). But this evidence also stressed the importance of getting "beyond the rhetoric of 'all students can learn' by developing programs, policies and teaching strategies that lead to higher levels of achievement" (p. 2).

How this might be stimulated is exemplified in Ragland et al.'s (1999) study of ten high-performing Texas districts. Evidence from this research stressed the critical role of the superintendents. Many of the qualities of these ten districts had been developed through the efforts of the superintendents. A major theme across these districts was "creating a sense of urgency in the community" regarding the improvement of students' academic achievement. Initiatives undertaken by superintendents and their district

colleagues to create this sense of urgency included: establishing a trustful relationship with the parents and the wider community; using data and goals to reinforce a sense of urgency; and maintaining a productive working relationship, one based on relatively high levels of trust, between the superintendent and the school board.

Districts in this study also focused the work of the system on students by reducing distractions that might divert the energies of principals and teachers from the focus on students. In the case of principals, for example, this meant "structuring activities so that principals could spend minimum amounts of time away from their campuses during the school day and spend a maximum portion of each day focused on instruction" (Ragland et al., p. 15). These districts also reduced monitoring requirements and eliminated central office requests for information and other similar distractions.

Include in this vision the concepts of "closing the gap" as well as "raising the bar"

Several studies included in the review were especially concerned with district efforts not to just improve average levels of student achievement, but to also improve the achievement of disadvantaged and minority students in particular. Snipes et al.'s (2002) retrospective case study, for example, compared four high-performing districts with a selection of low-performing districts. The high-performing districts, in contrast with their low-performing counterparts, developed a strong focus on specific student achievement goals based on a fixed schedule with clearly specified consequences. These high-performing districts focused on the lowest-performing schools, sometimes providing them with more resources and attempting to improve the quality of leadership and teaching available to them.

State and federal accountability policies figure strongly in the research about districts that are successful in closing the gap. The studies by Skrla and her colleagues (Koschoreck, 2001; Skrla et al., 2000; Skrla & Scheurich, 2001) are based on evidence collected in four Texas districts that were explicitly committed to, and had a record of achieving, high levels of performance on the part of disadvantaged and diverse students. Their overriding goal was equity of outcomes for all students. Reports of this research describe how the four districts managed to raise the bar with low-income students and students of color. These studies also found that the Texas accountability system (described more fully below) stimulated superintendents, in particular, to radically change their expectations for the achievement of underperforming students and to lead their districts away from deficit thinking about these children.

Also providing evidence about the effects of accountability policies on district focus is research by Opfer and colleagues (2007). This study examined the responses of districts in six southern U.S. states to state accountability

systems, as well as the effects of district responses on three variables—teachers' engagement in improving instruction, teachers' perception of school support, and teachers' perception of district support. Evidence suggests that districts act as intermediaries of external state policies and play an important role in the success of reform initiatives. More highly developed high-stakes accountability systems stimulate more focus on teaching and learning on the part of districts and their leaders. Explained the authors: "districts are compelled [by state accountability policies] to develop coherent instructional policies, including professional development opportunities; these policies focus teacher attention on instructional improvement; and this instructional focus results in improved teaching and learning" (p. 311). Other features associated with high performing districts in this study were unity of purpose, a clear focus, and shared values for student learning.

District efforts to create a shared sense of purpose about student achievement are fundamental strategies for generating the *will to improve*, one of the means identified by Rorrer et al. (2009) that districts exercise instructional leadership needed to improving achievement and promote equity.

Approaches to Curriculum and Instruction

Fourteen of 31 studies included in the review (see Table 1) provided information about the approaches of high performance districts to curriculum and instruction as well as the importance of this focus for districts. These approaches encompassed taking action to:

- establish student performance standards;
- develop or adopt districtwide curricula and approaches to instruction capable of achieving the standards; and
- align all of the elements of the technical core.

Establish student performance standards

By now most states have established their own student performance standards and these standards are reflected in state achievement tests. Nonetheless, several studies in this review provided additional information about standards-setting practices in high performing districts. For example, several Texas districts in the Skrla et al. studies (e.g., Skrla et al., 2000) had developed benchmark targets for all grades in the core subjects and some districts in Cawelti's (2001) study learned that item-by-item analysis of student responses to state test data was a quick way to determine if state curriculum standards were being taught.

The adoption of performance standards for students in NYC's District #2 grew out of the instructional improvement work of the district, as a supplement

to better serve the needs of underperforming students (Elmore & Burney, 1998). San Diego also established its own (state related) student performance standards; this was done by the central office (Darling-Hammond et al., 2003; Hightower, 2002).

Develop or adopt districtwide curricula and approaches to instruction capable of achieving the standards

Not all high-performing districts included in this review were reported to have developed a district-wide curriculum, or to have mandated particular approaches to instruction. However, Snipes et al. (2002) found that the high performing districts in their study did both of these things, rather than leaving decisions about curriculum and instruction to be made at each school. Three of the five high performing districts in ogneri and Anderson's (2003) study developed their own curricula aligned to state standards and district goals, because teachers in these districts had believed they lacked curricular guidance. Once developed, the implementation of these curricula became the focus of districtwide professional development.

In the case of NYC's District #2, the priority focus was first literacy and then math. Both the curriculum and the instruction for these areas of the curriculum emerged from the intensive professional development which all teachers and administrators engaged in continuously. But this professional development was organized around balanced literacy instruction from the outset, and later in the process, around Resnick's Principles of Learning (Fink & Resnick, 1999). D'Amico et al. (2001) claimed that use of NYC's District 2's literacy and math programs "levels the playing field" between impoverished and more affluent students. The district also adopted a mathematics program (TERC's *Investigations*) to serve the same districtwide purpose as the Balanced Literacy program.

One of the four Texas districts in the Skrla et al. studies developed an eight-step process for instructional improvement that most of its schools followed.

Align all elements of the technical core

Curriculum, instruction, teaching materials, and assessment procedures constitute the meaning of "technical core" in this case. Some evidence associates variation in district (and school) performance with the extent to which these components of the technical core are aligned with relevant standards for student performance (Florian et al., 2000; O'Day & Bitter, 2003; Snipes et al., 2002).

Such alignment can be accomplished successfully in a wide variety of ways, however. For example, in the improving districts in Cawelti's (2001) study, central office staff set achievement targets and encouraged school staffs to make decisions about how best to use their funds to meet those

targets. Ongoing professional development of all teachers and administrators in NYC's District #2 prompted continuous efforts to align all elements of the instructional program (Elmore & Burney, 1998). D'Amico et al., (2001) indicated that these efforts to align instructional practices with the district's Balanced Literacy program was associated with improved student outcomes.

One of the important lessons from the O'Day and Bitter (2003) evaluation of California accountability initiatives was that districts should give priority to helping schools develop internal capacity and a coherent instructional program. Snipes et al. (2002) also found that high-performing districts, aligned curricula with state standards and helped develop such standards into instructional practices, although they often did so from the top down.

Finally, one of the six features of high performing districts and schools in Langer's research was the nurturing of a climate that "orchestrated coordinated efforts to improve student achievement" (2000, p. 397). This included making available to teachers resources for professional development, and engaging teachers in ideas and debates leading to "a targeted local plan for instruction that would be orchestrated across grades and over time" (p. 413). According to Langer, this created coherence between policy and instruction. As performance increased, even higher goals were set for student performance. Desired outcomes were made overt and teachers and students received the support they needed in order to be successful.

Use of Evidence for Planning, Organizational Learning, and Accountability

Evidence about this characteristic of high-performing school districts, identified in Table 1, was provided by 15 studies. These studies suggest that high-performing districts:

- develop efficient district information management systems;
- provide schools with relevant data and assist them in using it effectively;
- create collaborative structures and opportunities for the interpretation of data, including the use of external expertise when needed;
- use data for accountability purposes; and
- make use of existing research.

Develop efficient district information management systems

Four studies highlight this aspect of high-performing districts' approaches to the use of evidence. For example, the six "significantly improved" districts in Cawelti's (2001) study developed efficient information management systems allowing them to swiftly retrieve performance information, which they then provided to schools and teachers. As another example, the majority of

high-performing districts in Florian et al.'s (2000) study used performance assessments as part of their district assessment program. Developing the capacity to use evidence from the district assessment program was often done with assistance from external partners. McLaughlin and Talbert's (2003) study of high-performing San Francisco Bay area districts identifying five key sets of activities associated with successful reforming districts also included using data-based inquiry and accountability.

In their qualitative comparison of two high- and two low-performing New York City sub-units or districts, Iatarola and Fruchter found that the high-performing units "made better use of data to drive instructional improvement and also diversified the data they used by balancing students' test score outcomes with other forms of performance data" (2004, p. 508). High-performing districts also were more confident about their ability to use:

> both data-driven results and observational assessments to make instructional changes. High-performing districts also stressed the importance of integrating parental information and feedback about children's learning needs and tried to balance test score results with a blend of other information about students' learning capacities and performance. (p. 504)

Provide schools with relevant data and assist them in using it effectively

Studies by Snipes et al. (2002), Ragland et al. (1999), and Langer (2000) exemplify the efforts made by many high-performing districts to provide support for schools in making evidence-informed decisions. This support seems likely to enhance the sense of efficacy or confidence of teachers and principals about meeting the challenges posed by their districts; it is also a means that districts can use to foreground equity as a key priority (Rorrer et al., 2009). Administrators and teachers in the high-performing schools and districts in Langer's (2000) study, for example, responded to each arrival of statewide achievement results by reviewing the results and using this evidence to reflect on their own practices. Teachers in these schools and districts also stayed abreast of research in their field, consulted with experts, and used such advice and evidence to continually reshape their instructional practices. Togneri and Anderson (2003) described the efforts of high-performing districts in their study to encourage data use as including:

- making the data safe: encouraging a climate of openness to learn from data even if it did not always contain good news;
- making the data usable: providing schools with simplified, already digested results; providing help with data interpretation; and

- making use of the data: providing teachers and school administrators with the time and training needed to make sense of data for purposes of decision making in their own schools.

High-performing districts in most other studies touching on district data use also devoted considerable amounts of their professional development resources to assisting school staffs to improve their capacities to analyze, interpret, and use data to make decisions about their own students (Elmore & Burney, 1998; Maguire, 2003; Skrla et al. 2000).

Such efforts seem critical in order for the increased availability of data to actually result in better decisions. Consider the findings of Stringfield and Yakimowski-Srebnick (2005), for example. In their longitudinal study (1992–2003) of the Baltimore City Public School system, the researchers examined student achievement trajectories through three phases of accountability introduced by state or federal governments. The district had spent millions of dollars on computer systems to assist with financial and academic accounting. While there had been many positive outcomes of this investment, the authors pointed to many instances in which decision makers had been awash in numbers—data rich and information poor. This was attributed to lack of professional development to help with asking the right questions and interpreting the data. As an example of the latter problem, the authors cautioned other districts and states "to avoid overreactions to what may well be hyper-rationalized analyses of small differences in moderately reliable measures over time" (p. 68).

Create collaborative structures and opportunities for the interpretation of data including the use of external expertise when appropriate

Three studies included in the review demonstrate the range of ways in which districts encouraged collaborative data interpretation practices. Fink and Resnick's (1999) study of how NYC's District #2 developed the instructional leadership capacities of principals described a series of conferences with school leaders and district staff held throughout the school year. The central focus of these conferences was the improvement of instruction. Discussions with this focus often began by examining each school's achievement data, and using that examination as a guide for improving instructional practice. This very public sharing of school test results helped to reinforce a culture of shared responsibility for improving instruction and achievement across the district as a whole.

In the high-performing districts studied by Ragland et al. (1999), superintendents and central office personnel regularly discussed schools' student achievement data to keep teachers and administrators focused on the improvement of teaching and learning. While these discussions were ongoing over the school year, superintendents also tried to maintain a balance

between accountability and flexibility. As schools increased their students' performance, they enjoyed increasing amounts of autonomy and discretion.

Eilers and Camacho's research was conducted in just one elementary school that served disadvantaged children and had dramatically improved its students' academic achievement over a five- to six-year period. Much of the credit for this improvement was attributed to the work of a principal who enacted a collaborative leadership style. Prior to this principal's arrival, the school had largely ignored what evidence it had. The new principal, however, brought a strong commitment to evidence-informed decision making to the school. As he said, "In God we trust, all others bring your data" (2007, p. 629).

This principal was supported by a district curriculum and a testing specialist during much of the time encompassed by the study. This specialist helped both the principal and the staff better understand and use the data that were available to them. In addition, at the request of the principal, other district staff went over the school's data and helped staff interpret it. The district provided teachers with release time to do this and additional training in data use.

Use data for accountability purposes

Togneri and Anderson (2003) found that their high-performing districts considered state test results incomplete for their accountability purposes. These districts, among other initiatives, supplemented state test data by filling gaps in such data, adding a wide array of other student performance evidence to their accountability systems (e.g., student work, attendance rates), and collecting information about the community's views of their schools.

NYC's District #2 began to use student achievement data more directly to improve instruction as it became apparent that its initial instructional reform efforts were not having the desired impact on underperforming students (Elmore & Burney, 1998). Analysis of achievement data prompted the district to adopt a much different and more difficult set of tests for students than the state administered assessments. This led, as well, to an extension of its focus on balanced literacy instruction termed "focused literacy instruction," which was more prescriptive, more teacher centred, and faster paced. Snipes et al. (2002) also found that unlike low-performing districts, high-performing districts in their study developed accountability systems for both school and district staff that were more rigorous than those of the state.

Make use of existing research

Many of the high-performing districts included in the 31 studies in this review were explicitly responsive to research evidence about best practices. However, NYC's District #2, and San Diego were more explicitly guided by

such evidence than most. Instructional improvement efforts in literacy and math were based on research in these areas, and were directly informed by the engagement of the researchers in the district's coaching and professional development activities. (Fink & Resnick, 1999; McLaughlin & Talbert, 2003).

Districtwide Sense of Efficacy

Only four studies (see Table 1) associated building a sense of collective efficacy among staff as an important explanation of variation in district performance. Quite recent and as yet unpublished research, however, suggests that district efficacy-building practices may be a significant part of a district's performance. Leithwood and his colleagues (2007) found that a sense of collective efficacy on the part of a district's principals was a significant factor in accounting for district effects on student achievement.

The potential impact of a staff's sense of efficacy (both individual and collective) finds considerable support in a rich empirical and theoretical literature, much of it based on Bandura's research (e.g., 1993). High levels of efficacy are associated with persistence in solving problems, and effortful responses to challenges that might cause others to give up. According to Bandura, sources of efficacy include experiences of mastery, verbal persuasion, vicarious experiences, and work settings perceived to support one's work. Leithwood, Strauss, and Anderson (2007) have identified district characteristics and practices that significantly influence principals' sense of efficacy about their jobs through these sources. Evidence from the four studies included in this review indicates that districts build a sense of efficacy among their staffs when they:

- Provide extensive opportunities for teachers and administrators to develop expertise relevant to achieving the district's goals; and
- Create organizational structures and settings which support and enhance staffs' work and learning.

Provide extensive opportunities to develop expertise relevant to the district's goals

Evidence from Florian's (2000) study indicated that districts' success at sustaining a reform effort over many years was due, in part, to the strong sense of efficacy about instruction in the state's new standards, since teachers had already implemented a somewhat similar reform effort at an earlier point in time.

Opportunities to develop professional expertise can arise from planned professional development or through extensive experience that results in on-the-job learning. Elmore and Burney (1998) describe an example of the first type of opportunity. As a result of the ongoing and lengthy professional

development they had received through NYC's District #2 efforts, teachers and administrators had become quite expert on instructional matters, and demonstrated considerable confidence in their own knowledge about the best forms of instruction. This actually made it quite difficult to introduce new forms of instruction intended to better meet the needs of underperforming students into the system, since these new forms of instruction seemed at odds with instructional practices that had proven to be very successful with most students.

Create organizational structures and settings which support staffs' work and learning

Building efficacy was a major theme identified across the ten high performing districts in Ragland et al.'s (1999) study. Such efficacy, the authors concluded, was developed when central offices were reorganized to support instruction, and when structures were created to support the learning of teachers and administrators.

Langer (2000) used the term "agency" to describe what we mean here by "efficacy." In her study, the development of a sense of agency distinguished teachers in high-performing schools and districts from their counterparts in more typical schools and districts. Such agency arose through teachers' extensive engagement in professional communities through which they continued their professional learning, kept up-to-date with new knowledge in their field, and shared their practices with trusted colleagues. This contributed to the sense of mastery that Bandura (1993) claims is a central source of one's confidence or efficacy in being able to solve problems in one's work.

Building and Maintaining Good Relations

As Table 1 indicates, 13 studies associated good relationships with high-performing districts and, in some cases, described how such relationships were developed and maintained. Good relationships are a prerequisite for effective communication. High-performing districts, this evidence suggests:

- develop good relationships and a sense of community among staff in the central office;
- establish collaborative and congenial working relations with school administrators and teachers;
- build close ties with external community groups; and
- nurture teacher-teacher relationships through support for professional learning communities.

Develop good relationships and a sense of community among staff in the central office

Only one study identified this aspect of relationship building (McLaughlin & Talbert, 2003). It is included, nevertheless, because large districts are very unlikely to be as productive as they could be if central office staff are unable to work well together. It is difficult to imagine, for example, the kind of radical central office reform reflected in NYC's District #2 (Elmore & Burney, 1998) occurring successfully without central office staff sharing the same vision, presenting a united front to the rest of the school system, and working together across functions.

Establish collaborative and congenial working relations with school administrators and teachers

Communication in high-performing districts is fostered by a perception of "flatness" in the district. Principals and teachers feel socially and organizationally close to those working in the central office, a perception that encourages fluid horizontal and vertical communication. Shared beliefs, values, and purpose are both stimulants for, and the result of, such communication. For example, one of the factors identified by Florian in a study of districts' success in sustaining reform initiatives was shared "school and district cultures that value learning, innovation and collaboration" (2000, p. 16). Eilers and Camacho's (2007) case study of a single successful turnaround school demonstrates just how important to the principal, and to the success of the school, was the development of a close, collaborative working relationship between the school and a wide array of both senior and mid-level district staff members.

Skrla et al. (2000) and Skrla and Scheurich (2001) found that to make the changes needed to become high performing, the four districts in their study focused on treating their staffs in positive and supportive ways. These districts had adopted a "no blame" policy in which significant change efforts were expected to result in some failure. People were not blamed for the failure, but were encouraged to continue to try to improve, and were continuously supported in those efforts. Those in leadership roles were "expected to create an environment of caring and support, encouragement, and assistance to ensure that the teachers could be equally successful with all children" (Togneri & Anderson, 2003, p. 32). This became an integral part of the districts' cultures, as Rorrer et al. (2009) also claimed. Based on comparable evidence from their study, Togneri and Anderson (2003) concluded that:

> Collaboration and trust did not simply happen in the districts; rather, they were the result of deliberate and involved processes. Led by their boards and superintendents, the most collaborative districts in the study

> worked on working together. They engaged in ongoing dialogue, created cross-role leadership structures to facilitate communication among stakeholders, and intentionally sought tools to facilitate collaboration. (p. 32)

Reinforcing the value of good working relationships, but from a negative perspective, both Darling-Hammond et al. (2003) and Hightower (2002) report that the speed and central source of the changes made in San Diego—changes made as a result of a decidedly non-collaborative process—created at least initial tensions and some distrust in the central office on the part of significant numbers of teachers and principals. This tension and distrust persisted well into the reform effort, constantly challenging efforts to move forward.

Build close ties with external community groups

Districts and schools depend on their communities for financial support and often for human capital, as well. Access to these assets is contingent upon the quality of relationships a district establishes with individuals and groups in its community. Many high-performing districts understand the importance of developing and maintaining good working relations with these individuals and groups, and work hard to foster such relations.

The four improving districts in Maguire's study, for example, had "more links with community partners and agencies capable of supporting students" (2003, p. 10). Similarly, Ragland et al. (1999) discovered that good relationships in high-performing districts were part of a strategy intended to create a sense of urgency to improve student achievement. In particular, this study emphasized the relationships between the superintendent and parents, as well as the superintendent and members of the school board. These relationships depended on creating trust, which, once established, allowed for the alignment of everyone's efforts in the service of raising achievement levels. Skrla et al. (2000) and Skrla and Scheurich (2001) found that not only the superintendent, but also other district-level leaders, school board members, and members of the wider community were involved in the effort to create an equity-focused school system in response to the Texas state accountability system. These districts nurtured active alliances with business, government, and other community groups.

While the central tendency in the review evidence points to the value of district efforts to engage parents and the wider community, there is contrary evidence as well. For example, Togneri and Anderson found that districts left the task of parent engagement largely up to schools, and most districts in their study, rhetoric aside, "advanced their instructional reform efforts without the robust engagement of parents" (2003, p. 46).

Nurture teacher-teacher relationships through support for professional learning communities

Almost all significant reform efforts that are aimed at improving student achievement, no matter what else they entail, depend for their success on significant changes in teachers' classroom practices. These changes are sometimes the product of quite formal learning, for example, planned professional development opportunities. Such opportunities are often well-designed for the teaching of explicit or codified knowledge. But changes in teachers' practices often occur in less formal and more socially intense environments that allow for, and more importantly encourage, the sharing of practices with one's peers.

Environments such as these allow for the acquisition of tacit knowledge. The sharing of such knowledge is usually stimulated by conversations about real problems in particular contexts, and about the process of trial and error involved in finding solutions that work. The power of collegial environment to stimulate learning is now acknowledged in such concepts as "communities of practice" (Lave & Wegner, 1994), and "professional learning communities" (Louis, Marks, & Kruse, 1996). High-performing districts, the evidence suggests, work hard to reduce the traditional isolation of teachers and ameliorate the lack of opportunity they have to learn from one another by fostering the development of community-like environments in districts and in schools.

Langer's (2000) study is one of the best sources of evidence about this work on the part of high-performing districts. This was an in-depth study of secondary school English teachers in 14 schools "beating the odds," and 11 schools achieving typical and expected results with their students. In this case, beating the odds meant that the diverse, poor, and traditionally low-achieving students in these schools were achieving much better than comparable students in other schools. The main focus of the study was on teachers, their professional communities, the learning that occurred in these communities, and the consequences of that learning for their classroom instruction. Results of the study highlighted the nature and quality of teacher relationships and learning within case schools, and in a variety of different communities to which these teachers belonged. But the support provided to these teachers by their districts was remarkable, as well.

Both schools and districts fostered teachers' participation in a variety of professional communities. These ranged from informal communities, such as teacher dyads and reading groups, to formal professional associations. Teachers' participation in these communities solidified their commitment to their profession and to lifelong professional learning. It also built their confidence and sense of agency with respect to their own work and their work with colleagues. The districts in which these teachers worked supported teachers' activities in professional communities by providing time and

resources for their participation, as well as engaging teachers in the curriculum and instructional work of the district. District administrators remained members of these communities; thereby modeling the value they attached to them.

Other studies also reported evidence about the importance that high-performing districts attach to the development of collaborative working relations among teachers (D'Amico et al., 2001; Darling-Hammond et al., 2003; Florian et al., 2000; Togneri & Anderson, 2003). One of the studies of NYC District 2's reform strategy found moderately significant relationships between achievement in reading and math and the quality of schools' professional communities (Stein et al., 1999).

Investing in Instructional Leadership

Table 1 identifies the 16 studies that provided information about high-performing districts' investments in instructional leadership—both the importance and the nature of such investments. As other sections of the review make clear, significant improvements in student achievement depend on significant improvements in the quality of classroom instruction (e.g., Togneri & Anderson, 2003). This is an especially strong claim for districts serving substantial numbers of students from disadvantaged and minority backgrounds who have traditionally not been served very well by districts and schools. Their success is much more sensitive to the quality of their school experiences, than is the case for students from more advantaged and majority backgrounds.

While consistently effective leadership is widely believed to be a key variable in a school's and district's success (e.g., Florian, 2000), the need for leadership to be instructionally focused as well is especially strong in districts serving diverse student populations.[1] Neither district nor school leaders in these contexts can allow the quality of instruction in their schools to be anything less than the best that is possible.

These studies,[2] as a whole, indicate that high-performing districts "invest" in instructional leadership when they :

- change the conceptions of leadership expected of senior staff and others;
- hold principals directly accountable for the quality of instruction in their schools;
- encourage principals to supplement the instructional leadership in their schools with central office expertise as needed;
- provide opportunities in the district for principals to further develop their instructional leadership capacities; and
- use expertise external to the district to help develop instructional leadership in the district.

Change the conceptions of leadership expected of senior staff and others

The suggestion that senior district leaders, far removed from daily contact with students, and typically embroiled in the management of complex organizational, legal, financial, and political issues, should somehow be "instructional leaders" seems unrealistic. Yet research by Skrla and her associates (Koschoreck, 2001; Skrla et al., 2000; Skrla & Scheurich, 2001) in four Texas districts that dramatically improved the achievement of their disadvantaged and minority students illustrates this as a real possibility (see also Rorrer et al., 2009).

Faced with a mandate from the state to improve the achievement of disadvantaged children in their districts, the role played by superintendents gradually shifted from acting as organizational managers to being instructional leaders. As the four districts changed their beliefs about equitable achievement for all children, and as they developed practices consistent with this belief, there was a profound change in the role definition of other educators in the districts as well. The description of the instructional leadership of the superintendent included: "keep[ing] both the community and the district staff focused on learning as the primary activity and goal of the school district. The superintendent must literally sell it to the community. He or she must also continually sell it the district staff" (Skrla et al., 2000, p. 33).

In one of these districts, the superintendent also created senior administrative positions responsible for instruction, who along with district support staff worked directly with principals on instructional matters.

Superintendents also were prompted to look for exemplars of districts, schools, and classrooms in which instruction was more successful for previously low-achieving, disadvantaged children. The new role of the central office was to support principals and teachers in their efforts to improve instruction and ensure high levels of learning for all students. The role of the school boards in these four districts included clarifying for their superintendents the expectation that changes in student performance were anticipated, and then monitoring progress toward improvements in students' results.

Hold principals directly accountable for the quality of instruction in their schools

In these same four Texas districts, the principals' work was to help teachers be academically successful with all students; principals were directed to focus on instruction as their first priority (Koschoreck 2001), a priority also evident in Maguire's (2003) study of high-performing districts in Alberta, for example. Ragland et al. (1999) found that the development of instructional leadership was part of a larger theme—"sharing responsibility for academic

achievement." In many of the high-performing districts in this study, superintendents created a focus on improving teaching and learning by clarifying expectations and responsibilities for principals. Both district and school administrators knew that their future employment depended on increasing their students' achievement on state tests.

NYC's District #2 (Elmore & Burney, 1998) adopted perhaps the most demanding set of expectations for principals found in any of the 31 studies included in the review. School-level leadership was considered to be a pivotal element, if not the pivotal element, of this district's instructional improvement strategy. Principals were expected to perform all the functions required to integrate the district's overall strategy in their schools, including:

- continuously monitoring instruction and providing teachers with feedback and guidance,
- planning and organizing professional development targeted on specific instructional issues in their building,
- negotiating with district administrators around the resources required to deliver professional development,
- removing teachers who are unable to meet the district's instructional expectations; and
- recruiting and hiring new teachers. (p. 22)

Encourage principals to supplement instructional leadership in their schools with central office expertise as needed

A small body of current research and theory envisions a "neo-heroic" role for principals as instructional leaders with deep pedagogical content knowledge (e.g., Stein et al., 1999). Influenced by the reform efforts in NYC's District #2 and San Diego, this literature assumes capacities unlikely to be acquired by more than a small proportion of real principals. The leadership depicted in this literature, however, becomes much more likely if it is envisioned as a shared or distributed responsibility. This appears to be how principals in most of the research on high-performing districts approached their instructional responsibilities.

Eilers and Camacho's (2007) case study of a new principal illustrates such an orientation. This principal had adopted a collaborative approach to instructional leadership in his school. The district invested in his development in many ways, most of which took the form of responses to requests he made to the central office for assistance. This assistance included the provision of mid-level central office staff with instructional expertise for ongoing consultation in the school. It also took the form of "just-in-time" coaching and mentorship from the assistant superintendent for elementary schools with whom the principal developed a strong working relationship.

Although helping to forward what was referred to above as a "neo-heroic" view of principals' instructional leadership, evidence from the District #2 and San Diego studies also shows central office staff working side-by-side with principals to deliver meaningful instructional leadership to teachers.

Provide opportunities in the district for principals to further develop their instructional leadership capacities

Most districts that have succeeded in moving from low to high performance have provided intensive long-term opportunities for principals to further develop their capacities as instructional leaders (Togneri & Anderson, 2003). Many of these districts have developed their own leadership development programs rather than relying on programs available from universities and other external agencies.

Fink and Resnick (1999) provide an extended description of NYC's District 2's approach to the development of instructional leadership capacities of its principals, among the most ambitious of such efforts found in the 31 studies included in the review. Those especially interested in this issue would do well to read the paper themselves. But key features of District 2's investment in instructional leadership included:

- principal conferences and institutes;
- support groups and study groups;
- inter-visitations and buddy systems; and
- individualized coaching.

Each of these components was aimed to accomplish well-defined goals such as the development of shared purposes across the district, the endorsement of widespread commitment to continuous learning for all, the encouragement of collaborative problem solving, and a focus on individual skill development. The development of instructional leadership capacities was a major responsibility of the superintendent and deputy superintendent, who also modeled instructional leadership in their relationships with principals.

Among the most important capacities for school-based instructional leaders is diagnosing teachers' instructional capacities and providing opportunities for their improvement. Principals in the six significantly improving districts studied by Cawelti "had to learn how to identify teacher needs at the building level" (2001, p. 2). Their role included providing for the staff development needs of teachers, sometimes in their own building, sometimes by sending teachers to district professional development.

Other evidence makes clear that diagnosing teachers' instructional capacities need not be done by the principal acting in isolation. While primarily focused on teachers' professional lives and teachers' participation in

professional learning communities, Langer's (2000) study also described cases of school administrators with strong affiliations to school-level professional communities, remaining involved as they took on senior district leadership roles. Engagement in professional communities, this study suggests, builds the capacity of all those involved, including principals and district leaders, to help their colleagues improve instruction, and creates opportunities for more formal instructional leadership roles as well. A district's support for teacher engagement in professional communities of many sorts can be viewed as an investment in both formal and informal instructional leadership.

Use expertise external to the district to help develop instructional leadership in the district

Leadership development, once again in District #2, included initial preparation, sometimes in a specially designed program developed with a partner university, as well as a year-long internship, mentoring by an experienced principal, and interaction in a network of colleagues on a continuous basis (Elmore & Burney, 1998).

Targeted and Phased Focuses for School Improvement

Nine of the 31 studies included in the review provided evidence related to this dimension of high-performing districts. The evidence suggests that approaches taken to school improvement by high-performing districts:

- proceed in manageable stages;
- build coherent approaches to school improvement;
- integrate changes in the district with existing policies and procedures, and situate those changes as being evolutionary rather than revolutionary;
- build the internal capacities of schools; and
- include safeguards against "fatal" errors.

Proceed in manageable stages

The staging of improvement efforts is usually designed to reduce the complexity of the improvement task while ensuring that, in the long run, improvement is extended to the entire district. Some high-performing districts in our review approached the staging task by "creating a set schedule with defined consequences" (Snipes et al., 2002, p. xviii). These districts began with their elementary schools before moving on to their secondary schools, and provided intensive instruction in reading and math to their students even if it meant reducing attention to other parts of the curriculum.

Many studies reported that high-performing districts began their improvement efforts by focusing on underperforming students first.

Among the most complex approaches to staging were to be found in NYC's District #2. All of the district's improvement efforts were focused initially on improving literacy, and then moved at a second stage to add improvements in math instruction. The strategy began with a focus on instructional improvement, and then added a focus on standards of student performance in order to better meet the needs of underperforming students. Among the key elements of District 2's approach to improvement were:

- maintaining and building on established structures and procedures rather than beginning new procedures every time a new need was identified. District 2 stresses "continuity and extension of core values and existing institutional structures . . . into new problems" (Snipes et al., p. 33);
- continually raising the bar for student achievement on the assumption that "all levels of performance can be improved continuously" (Snipes et al., pp. 33–34);
- shortening the improvement cycle: this means let the improvement cycle be driven by the problem not the school calendar;
- creating open and public debate about new initiatives; and
- making the resources follow the problems.

Fink and Resnick's account of the professional development provided by District #2 to its principals also sheds light on another dimension of the district's staging efforts. This professional development included coaching by senior district leaders on the development of school goals and plans for improving instruction. The authors describe this as a process of negotiation in which principals "develop their goals in multiple iterations, conferring with the deputy [superintendent] herself, as well as their mentor principals and other peers in the process" (1999, p. 18). This work continues until an acceptable plan for the improvement of instruction is arrived at and funded.

Build coherent approaches to school improvement

From their research, Opfer et al. (2007) concluded that:

> The single most consistent finding across all of the studies of district activity is the presence of a coherent strategy that relies on a combination of both bureaucratic activities—those initiated by district administrators—and professional activities—those that rely on teachers to define and enforce standards of practice. (p. 315)

So neither top-down or bottom-up activities alone lead to successful reform. Successful reform requires a coherent strategy across the district.

Integrate changes with existing policies and procedures

Florian's study of districts able to sustain their reform efforts after a decade points to the importance of districts integrating new initiatives into existing routines and practices. This integrative approach was also characteristic of the improvement efforts in NYC's District #2. Its aim was to maintain and build on established structures and procedures rather than creating a new procedure every time a new initiative was begun. This district stressed "continuity and extension of core values and existing institutional structures . . . into new problems" (2000, p. 33).

Follow-up efforts in San Diego were in many respects very similar to District 2—a tight focus on the improvement of instruction, heavy investment in hiring, developing teacher and administrator expertise, and complete alignment of policies and resources in service of the instructional improvement mission. But these efforts were not evolutionary and it seems unlikely that educators at the school level would have viewed them as integrative, either. This is because while District 2 took many years to accomplish its goals, San Diego was attempting to duplicate those results in a very compressed timeframe (Darling-Hammond et al., 2003; Hightower, 2002). Evidence from the first four years of this effort neither confirmed nor disconfirmed the success of this speeded-up approach.

Build the internal capacities of schools

O'Day and Bitter's (2003) evaluation helps to justify attention to internal capacity development as a key part of district approaches to school improvement. This was an evaluation of the implementation of and impact on students of two programs associated with California's Public Schools Accountability Act of 1999 (the Immediate Intervention/Underperforming Schools Program and the Achieving/Improving Schools Program). One of the important implications from the evaluation was that school improvement efforts and support from external agents should adopt, as a goal, helping schools develop internal capacity and a coherent instructional program. Improvement efforts should aim, as well, to develop professional communities within schools that are focused on improving student learning, a strategy for sustaining improvements over the long term.

School-level capacity development can take many forms. For example, the four improving districts in Maguire's (2003) study awarded considerable value to action research as a strategy for school improvement, a strategy that complements district programmatic efforts to improve instruction and increase assessment literacy by expanding local capacity for both determining improvement needs and monitoring their progress.

Include safeguards against "fatal" errors

Only the Skrla studies of high-performing Texas districts (Skrla et al., 2000; Skrla & Scheurich, 2001) provided explicit evidence about this element of district approaches to school improvement. The four districts in this study undertook many different actions to improve the achievement of low SES and minority children. But the authors argue that the success of these actions depended, as well, on the widely held view in the district that improvement efforts were ethically driven. That is, people truly believed that not to do whatever it took to accomplish equitable outcomes for all children would be ethically wrong. This ethical imperative infused their actions with significant energy and urgency.

Emerging from this view of improvement as an ethical matter, the Skrla team reported that a key part of the improvement strategy used by the exemplary districts was "proactive redundancy." This meant that the districts introduced multiple ways to ensure student achievement. So, for example, area superintendents in one district:

> expected principals to use data to help teachers identify students who had not yet mastered objectives and refine teaching practices accordingly. At the same time, however, the curriculum director supervised a team of instructional specialists who reviewed the same data. When teachers . . . were not achieving expected results with all of their students, the instructional specialists were assigned to work with the teachers (along with the principal) to help teachers improve student performance (Koschoreck, 2001, p. 31)

Proactive redundancy is one characteristic of "high reliability" organizations. The features of such organizations have been described by Stringfield (1995), for example, and introduced into several large school improvement initiatives carried out in England with impressive results.

Districtwide, Job-embedded Professional Development for Leaders and Teachers

Evidence about this characteristic of high-performing school districts was provided by 21 studies, the largest number reporting evidence about any of the dimensions of high-performing districts reflected in this review. Professional development in high-performing districts, according to this evidence, is intended to:

- ensure that the time and money allocated to professional development reflects its value to the district;
- refocus routine institutional practices in the service of professional development;

- align the focus of professional development with district and school improvement initiatives;
- differentiate professional development opportunities to reflect the needs of individual schools, administrators and teachers; and
- use contemporary learning theory as the foundation for designing professional development methods.

Ensure that the time and money allocated to professional development reflects its value to the district

High-performing districts, the evidence suggests, do not just claim to award the professional development of staff a central priority, they reflect this priority in the time and resources they devote to professional development (McLaughlin & Talbert, 2003). The district budget, for example, has a line item designated "professional development" (Pritchard & Marshall, 2002).

A longitudinal study by Stringfield and his colleagues (2005) provides exceptionally compelling evidence about the importance of districts allocating a high priority to professional development. This was a longitudinal study (1992–2003) of achievement trajectories in the Baltimore City Public School system, examining the trajectories through three phases of accountability introduced by state or federal governments.

The achievement trajectories showed small changes in response to accountability policies that introduced high-stakes testing, but provided few or no new resources, or added little to the district's human capital. However, more comprehensive approaches to accountability that included not only high-stakes testing, but also infused new resources and promoted increases in the capacities of teachers and administrators, were associated with significant gains in the achievement of students, a very high proportion of whom were disadvantaged. One of the central implications of the study, according to the authors, is that the future success of the district will depend on "the multifaceted professional development of current staff and the hiring of increasingly qualified administrators and teachers" (Stringfield et al., p. 68).

At least three other studies among the 31 included in this review speak to the general importance of establishing professional development as a district priority:

- The four improving districts in Maguire's study demonstrated significant efforts and devoted significant resources to classroom-embedded teacher development programs. They had "successful implementation of a curriculum-based, collaboratively developed and instructionally embedded model of staff development" (2003, p. 10);
- The four high-performing districts in Skrla et al.'s (2000) research devoted considerable effort and resources to helping teachers develop the capacities they needed to be successful with all students. Similar help was given to

school administrators so that they could help support their teachers. Superintendents' meetings with principals were refocused on instructional issues and became professional development opportunities for principals; and

- The six high-performing districts in Cawelti's study gave a high priority to staff development of both teachers and administrators**.** The goal was to ensure that teachers "routinely are able to assess skills before introducing new material, differentiate instruction for students at different levels, providing both enrichment and tutorial help, and reinforce learning skills throughout the year to ensure retention" (2001, p. 3).

Refocus routine institutional practices in the service of professional development

The central priority awarded to professional development in high-performing districts is reflected in institutional practices that would normally be devoted to routine administrative matters. For example, the monthly meetings that most districts have with their principals are consumed with the delivery of information or discussions about school and district management issues. Many high-performing districts, in contrast, dedicate this valuable time to the continuing professional development of principals.

Align the focus of professional development with district and school improvement initiatives

The uncontested focus on student learning and the improvement of instruction in high-performing districts is accompanied by careful alignment of professional development. At both the district and school levels, time spent on professional development is clearly aimed at providing staff with the knowledge and skills they need to accomplish the improvement goals established by the district and school. Indeed, in the NYC District #2 context, D'Amico et al. found significant effects on student achievement when professional development was aligned with the district's literacy and math programs. As Firestone et al. (2005) claim: "districts play a key role in supporting instructional reform by being the primary designers and deliverers of learning opportunities for teachers, and if they do so in a focused, coherent fashion they can influence teaching practice" (2005, p. 316).

Several studies exemplify the key features of this type of professional development. Pritchard and Marshall's (2002) study of "healthy" districts—districts that, among other things, produce better than average achievement—found that professional development: addressed fundamental issues of curriculum and instruction as part of an integrated district strategy; was driven by shared district focus on learning; and included a shared school focus aligned with district vision. In these districts, consistent district purpose came before individual selection or preference, and there was an

expectation that professional development was a responsibility of everyone in the district.

Opfer et al. (2007) found, not surprisingly, that the relationship between reform efforts and improvements in student achievement depended on what teachers knew and did in their classrooms, a consequence of their professional development opportunities. Coherent and aligned professional development provided by districts, according to this study, has three key features:

- consistency of focus: teachers have opportunities to develop in-depth knowledge on a specific subject or topic;
- extended and distributed time is spent on professional development to promote long-term change; and
- learning opportunities are provided that model the instructional approaches teachers are expected to employ, including problem solving, learning in authentic settings, and the examination of actual student work.

Based on evidence from a retrospective case study comparing four high-performing districts with a selection of low-performing districts, Snipes et al. (2002) found that high-performing districts used professional development to help ensure consistent implementation of district-mandated programs and forms of instruction. These districts also created roles for themselves that involved guiding, supporting, and improving instruction at the school level.

Differentiate professional development opportunities to reflect the needs of individual schools, administrators and teachers

Alignment of professional development with the district and school improvement mission is accompanied, in many high-performing districts, by differentiated "delivery" of professional development reflecting variation in levels of development on the part of both schools and their individual staff members. For example, many of the high-performing districts in Florian et al.'s study systematically evaluated their professional development initiatives including for example, "surveying teachers about their attitudes toward and changes in practice resulting from staff development experiences" (2000, p. 8).

Langer's study of teachers' engagement in professional communities and the supports that schools and districts provided for such engagement adds considerable breadth to what differentiated, yet aligned, professional development for teachers and administrators can entail. For example, in one district reading specialists first went through their own training in several new programs being implemented by the district. After that training "during which they were immersed in the plan and its new instructional components,

state and district standards, benchmarks, and assessment tools, the reading specialists supported teachers in incorporating these foci into their classrooms through workshops, model teaching and other [individualized] face-to-face interactions" 2000, (p. 414). Teachers and supervisors in these organizations subscribed to a variety of professional journals; they "place themselves in the stream of new knowledge in their field" (p. 433).

Much of the professional development in both NYC's District #2 and San Diego was differentiated through the use of well-trained coaches and mentors, as well as encouragement for teachers to visit other classrooms and schools to form professional learning networks and to participate in teacher study groups (Darling-Hammond et al., 2003; Elmore & Burney, 1998).

Eilers and Camacho's (2007) study of a single school found that the district provided staff expertise and training on matters of curriculum and instruction through the use of Teachers On Special Assignment (TOSAs). This meant that the training was on-site and addressed the specific challenges with which each teacher was grappling. The district also provided week-long summer professional development over several years, targeting improvements in its areas of priority (math and language). Follow-up sessions were provided during the year in order to reinforce learning from the summer sessions. TOSAs attended grade-level meetings in the school each week and worked individually with teachers in the first, third, and fifth grades because of the schools AYP [Adequate Yearly Progress] status.

In Iatarola and Fruchter's (2004) high-performing districts, professional development was more highly developed and both district and school initiatives were more successfully integrated in their programs. Low-performing districts mandated specific professional development programs, whereas high-performing districts created programs that offered schools both resources and support.

Use contemporary learning theory as the foundation for designing professional development methods

Human learning, according to the best evidence now available (e.g., Bransford et al., 2006), is constructed from one's existing cognitive resources, influenced by one's social and cultural milieu, and shaped by the situation in which the learning occurs. The professional development provided by high-performing districts typically reflects this understanding of human learning.

By way of example, many of the high-performing districts in both the Togneri and Anderson (2003) and Ragland et al.'s (1999) studies had moved the conduct of professional development from a centralized function and location into schools, an authentic setting for teachers. These districts also looked to the socially and culturally informed expertise within their own

districts to help others improve their instructional practices. Professional development in NYC's District #2 also followed this pattern.

Based on interview and classroom observation evidence, Stein and D'Amico's (2002) study demonstrated other parallels in District #2 between teaching and learning that is successful for children and forms of professional development that were productive for the learning of teachers. The main features of such professional development, according to this evidence, is:

- engagement with complex tasks;
- interactions with more capable others; and
- the motivation for persistence and hard work that comes from a desire to become a member of a professional community whose goals and values one identifies with.

Strategic Engagement with the Government's Agenda for Change and Associated Resources

Six studies outlined how high-performing districts engaged with their government's agenda for change and the resources associated with that agenda in order to establish "policy coherence" (Rorrer et al., 2009). These studies reveal high-performing districts adopted one of three distinct responses to the government's agenda for change:

- comply with the government's initiatives and implement them well; or
- supplement the government's initiatives in order to increase their local impact; or
- leverage the government's initiatives in the interests of the district's priorities.

Comply with the government's initiatives and implement them well

This approach was reflected in Cawelti's high-performing districts. Typically, these districts "called on state education agency staff to help establish a timeline for the knowledge and skills to be taught throughout the year. The common approach was to compare the state framework and local textbooks or other instructional materials" (2001, p. 2).

Skrla et al.'s (2000) report of high-performing districts in Texas provides the most explicit account of all the studies reviewed about how districts engaged with state policy directions. It was the state's accountability policies that prompted most of the improvements for students described by the study. Skrla et al. (2000) point to three crucial features of this system in Texas. First, there was a change from a deficit model, holding lowered expectations for low SES children and those from diverse racial and cultural backgrounds, to an expectation that children from all backgrounds should

succeed at equally high levels. Second, there was a change from an input and process focus for accountability, to a focus on outcomes. Finally, the public was given access to disaggregated student performance data at the school and district levels.

The authors point out that many Texas districts did not reorient themselves in response to these state policies in the same way as did the four case districts. But for these four districts, the reorientation was profound. This reorientation was considerably enhanced by key events related to the state's new policy direction, including: demands by parent groups for more equitable achievement by students, superintendents' decisions to adopt equity as a moral imperative for their work; and school boards' decisions to refocus their energies on improving the achievement of all students.

In their 2001 paper, Skrla and Scheurich outlined five ways in which the state's approach to accountability moved their superintendents, and eventually many others, away from deficit thinking about what their disadvantaged students were capable of achieving. It did this by:

- providing highly visible, irrefutable evidence, which could not be ignored, that the districts were not serving all children equally well;
- shifting the political risk inherent in confronting racial and socioeconomic class educational inequity and in mandating improved performance for all student groups away from the district leadership to the state department of education;
- forcing the superintendents to seek out exemplars of successful classrooms and schools for underperforming children, and thus to grow as instructional leaders;
- causing the superintendents to reevaluate deficit views and develop antideficit orientations to district leadership; and
- driving increasing expectations of and higher goals for academic achievement for all groups of students as incremental success was experienced.

O'Day and Bitter (2003) also provide an example of a "comply and implement" approach to state directions. This was an evaluation of the implementation and impact on students of two programs encompassed by California's Public Schools Accountability Act of 1999 (the Immediate Intervention/Underperforming Schools Program and the Achieving/Improving Schools Program). One of the important findings from the evaluation was that districts significantly influence the quality of instruction and levels of achievement in low-performing schools. This influence was attributed to the instructionally related policies of the district for all underperforming schools. The authors concluded with four implications for districts interacting with state accountability initiatives:

- districts should give priority to helping schools develop internal capacity and a coherent instructional program;
- school improvement efforts and support from external agents should adopt this as a goal;
- improvement efforts should aim to develop professional communities within schools focused on improving student learning; and
- districts should target underperforming schools and classes for the placement of their most effective administrators and teachers.

Supplement the government's initiatives in order to increase their local impact

The six studies provide little information about either the nature or virtue of this approach to state initiatives. However, Stringfield et al.'s (2005) study leads to the not very surprising conclusion that government initiatives will not always be sufficiently powerful to accomplish their goals. In the face of such inadequacy, these findings imply that high-performing districts might usefully add whatever is needed to increase the local impact.

The Stringfield et al. (2005) longitudinal study (1992–2003) of achievement trajectories in the Baltimore City Public School system found only small changes in response to accountability policies that introduced high-stakes testing but provided few or no new resources or added little to the district's human capital. When approaches to accountability included not only high-stakes testing but also infused new resources and promoted increases in the capacities of teachers and administrators, significant gains in student achievement resulted. Districts do not have to wait for governments to get it right. They can supplement the government's strategy to better ensure the impact they want.

Leverage the government's initiatives in the interests of the district's priorities

Some high-performing districts actively engage with government initiatives and resources in order to strengthen support for their own reform initiatives and to ensure a good fit with their own reforms. These districts also engage with government initiatives in order to influence the government's own directions (Togneri & Anderson, 2003). A good illustration of this approach is provided by the San Diego reform efforts (Darling-Hammond et al., 2003; Hightower, 2002). Leaders in this district "used state—and sometimes federal—funding to achieve their goals by consolidating sources of funds and focusing them on major initiatives" (Darling-Hammond et al., 2003, p. 50). The district "also leveraged state policies toward its own programs" (p. 5), in some cases actually sharpening the state's initiatives into a more rational, performance-based accountability system.

Infrastructure Alignment

Evidence from the review suggests that in order for districts to become high performing and to sustain that high performance, they must align their infrastructures in support of their student-focused missions. The infrastructure in many school districts, this evidence seems to imply, has evolved in response to the needs of staff rather than in support of improvements in instructional practices and student learning. Thirteen of the 31 studies described the approaches high-performing districts have taken to better align their infrastructure with their efforts to improve teaching and learning. These efforts included:

- alignment of financial allocations;
- alignment of personnel policies and procedures; and
- alignment of organizational structures.

Financial alignment

Eight of the 31 studies included in the review described financial alignment as an important feature of most, but not all, high-performing districts. This meant both consolidating and aligning spending in the districts to support instructional improvements (e.g., Florian, 2000; Florian et al., 2000; Ragland et al., 1999; Skrla et al., 2000).

Based on interview data from district and school administrators in the New York City school system, Iatarola and Fruchter (2004) examined the differences between two high-performing and two low-performing administrative sub-units (each the size of a mid-sized school system) on several dimensions, including their allocation and expenditure of resources. Both types of districts made many of the same resource allocation decisions. As compared with the low-performing sub-units, high-performing sub-units tended to encourage schools to negotiate services provided by community-based organizations directly. Low-performing sub-units wanted more control over staff hiring and decisions about the use of their professional development funds. These differences appear to be what a well-functioning district would choose to do as part of its effort to improve its low performance.

Descriptions of both the NYC District #2 and San Diego reforms indicate quite radical shifts in resources aimed at attracting, hiring, and further developing the capacities of teachers and principals (Darling-Hammond et al., 2003; Elmore & Burney, 1998; McLaughlin & Talbert, 2003). In San Diego, for example, a large number of teacher aides were eliminated and the money was used to support professional development programs. Many different funding sources were also consolidated to support in-depth forms of professional development that were often carried out within the schools. As McLaughlin and Talbert (2003) described it:

> Districts managed this expensive site-based support by ransacking their budgets to find the necessary funds. San Diego reallocated ESEA Title 1 dollars and various other state funds. . .[while] Bay area districts . . . were aggressive in seeking other supports for these site-based coaches. (p. 17)

Alignment of personnel policies and procedures

Nine of the 31 studies included in the review associated high-performing district contributions to student learning with significant efforts to align personnel policies and procedures with district improvement efforts. These alignment initiatives addressed virtually all staff in the district, but especially education professionals. The initiatives also touched on procedures across the continuum, including initial recruitment, selection, assignment, induction, ongoing evaluation and, as described in an earlier section, professional development. For each set of personnel practices, the goal was to ensure that the most capable people were doing the work, that there were as few constraints as possible on the use of their capacities, and that they had ongoing access to support and opportunities for new learning. Very few high-performing districts in the nine studies did all of these things but most did a significant portion of them.

Darling-Hammond et al.'s (2003) description of reform initiatives in San Diego indicated very significant organizational and administrative changes in order to align the work of all staff in the service of improving instruction. For example, the district overhauled its recruitment, hiring, placement, and evaluation processes in order to attract and retain the highest-quality teachers and administrators, while counseling out those unable to meet district expectations. The administration of the system was entirely redesigned, as well:

- area superintendents were replaced with instructional leaders who worked closely with principals to improve instruction;
- principals were charged with focused evaluation and support of instruction;
- central office staff were downsized to help create more money for improvement efforts;
- paraprofessionals were downsized to hire more fully qualified teachers; and
- aggressive teacher recruitment practices were put in place.

In their study of NYC's District #2, Elmore and Burney (1998) describe how, as district leaders detected a future problem in staffing schools with principals capable of doing the work now expected by the district, they began a systematic effort to recruit, develop, and place new administrators

in schools. This effort began with the design of a new initial preparation program in partnership with a local university, with much of it case-based and co-taught by District #2 principals. A year-long internship was part of this program. New principals were then mentored by experienced principals during their initial appointment. Principals identified as mentors received a $10,000 supplement for their work. A similar program was established for teacher mentors.

Snyder's (2001) description of the teacher quality system developed by the New Haven Unified School District is among the most impressive cases of a district turnaround reported in the literature. Thirty-one years ago, this district demonstrated all the usual characteristics of a low-performing system serving disadvantaged students—a terrible reputation in its community, a dysfunctional board of education, and very low levels of student achievement, for example. Beginning about 20 years ago, with the appointment of the leadership team current at the time of the study, this 11-school system began its evolution into what was, at the time of Snyder's report, among the most highly regarded districts in California, if not across the U.S. While still a low-wealth district, all of its schools had received important state or national awards for their quality and performance, and the demand for entry into those schools far exceeded their capacity. Student success, whether measured by state tests, entry into elite post-secondary institutions, or students' engagement in school, was exemplary.

The remarkable turnaround in this district, according to Snyder (2001), was largely a function of its "teacher quality system." From the outset, the district's leadership team focused its efforts on improving the quality of teaching in the district. Eventually, this amounted to a comprehensive system for both training and recruiting new teachers, inducting and mentoring them once in their schools, implementing an evaluation policy aimed at the elimination of poor teachers, fostering the ongoing learning of excellent teachers, creating school conditions to support teachers' learning, and providing school- and districtwide opportunities for teachers to use their knowledge and skills to help further develop their organizations. These initiatives and opportunities amounted to the creation of "hybrid" roles for teachers. Once hired, high-quality teachers were paid well and given access to superb technology to assist them with their work, along with the support required to use the technology effectively. These conditions resulted in very high levels of teacher retention.

A set of district teaching standards aligned with the state's standards served to create high expectations for teachers' work, and to let teachers know that their work was to ensure that all students were successful. Although New Haven's schools were relatively large, they were personalized by an uncommon level of staff attention to each student, and by the development of structures ("houses") and activities (clubs) within schools, thus creating more community-like environments that greatly increased the

chances of developing close ties among teachers, parents, and students. A comment from a middle school principal quoted by Snyder illustrates the disposition staff brought to their work: "Every life here is precious. . .they are not teenagers, they are confused angels" (p. 72).

While evidence from a qualitative study of four New York City sub-units by Iatarola and Fruchter (2004) suggested few differences in the recruitment, hiring, and retention of teachers, these districts did differ significantly with respect to school leaders. The two high-performing sub-units were more likely than their low-performing counterparts to hire from a pool of school leadership candidates within the sub-unit. The high-performing units also actively recruited and developed potential leaders from among their own teachers, worked closely with local colleges to develop leadership development programs, and had better developed local leadership development activities.

The four high-performing districts in Skrla et al.'s study had a prior history of making personnel appointments, especially principal appointments, that had been influenced by political pressure and community popularity. That approach changed as they began their improvement efforts. Appointments were made on the basis of people's capacity to improve student performance. These districts tied "performance evaluations and salary increases for principals and central office staff to the performance of students in the schools they served. Several districts offered bonuses that were available to teachers and other campus staff based on the performance ratings of the campuses where they worked" (2000, p. 28).

Florian's study of four districts able to sustain their reform efforts over significant periods of time found that they supported their reforms by "creating new positions and restructuring responsibilities of existing positions, establishing new committees, modifying hiring practices" (2000, p. 18); overall, this meant changing hiring policies designed to support the reform effort. Most of these districts evaluated teachers using professional standards associated with standards-based reform. In a second study of high performing districts, Florian et al. (2000) found that these districts built their instructional capacities, in significant measure, through hiring highly qualified staff who were knowledgeable about the district's reform efforts.

The personnel policies and practices described in each of these studies seem likely to foster both teacher and administrator retention, a factor which some evidence suggests also contributes to a district's performance. For example, in the New Haven case reported by Snyder (2001), the senior leadership team had been in place over the twenty-year period that New Haven's teacher quality system had been evolving. Teacher turnover also was quite low by state standards. Similarly, Iatarola and Fruchter found that, as compared with low-performing New York sub-units, high-performing sub-units "were the beneficiaries of many years of stable school board and superintendent leadership" (2004, p. 508).

Although such evidence about the positive effects of long tenure is consistent with the wider body of research on succession effects, there is some disconfirming evidence in the Skrla et al. (2000) study. While superintendents in several of the high-performing districts in this study were long serving, reform effort in others had been successfully maintained over several senior leadership successions, perhaps due to the belief, shared widely across the districts, in the importance of the district's mission.

Two studies included as part of the review offered insights about quite specific personnel issues and their effects on district performance. First, Goodman and Young examined the effects on district performance of allocating extracurricular support to the hiring of psychologists as compared with school counselors. They noted that the type and amount of such support provided by districts is highly variable. Results of their study indicated that the number of psychologists employed by a district "demonstrated a significant and decisive impact on achievement" (2006, p. 3). The authors explain that, as compared with counselors, psychologists are more interventionist-oriented and more assessment-driven.

The second, more narrowly focused, study (O'Day & Bitter, 2003) was an evaluation of the implementation and impact on students of two programs encompassed by California's Public Schools Accountability Act of 1999—the Immediate Intervention/Underperforming Schools Program and the Achieving/Improving Schools Program. One of the important implications of this evaluation was that districts should target underperforming schools and classes for the placement of their most effective administrators and teachers.

Organizational alignment

Eight of the thirty-one studies included in the review explicitly mentioned features of the districts' organizational structures, or changes to such structures, as explanations for high performance. These changes included greater decentralization, increases in instructional time, and realignment of structures to support instruction, changes also included in by Rorrer et al. (2009).

Four studies associated improved student achievement with increased decentralization or site-based decision making. For example, 11 of the 15 high-performing districts in Florian's (2000) study implemented site-based decision making teams responsible for such functions as staff development, action research, data-driven decision making, and team facilitation. The four Texas districts included in the Skrla et al. studies (Koschoreck, 2001; Skrla et al., 2000, 2001) had also moved toward greater site-based decision making. The single district selected from the four for more detailed analysis by Koschoreck (2001) also used both horizontal and vertical teams for decision making. Cawelti's (2001) six high-performing districts had moved toward more school-based management, including responsibilities for budgeting.

These districts linked individuals to results, and created teams to monitor student performance data and to plan for improvements. Each principal in these districts was held accountable for his or her school's student achievement results.

Two studies described changes in district structures designed to make more time available for instruction over the school year. Conducted in Wisconsin, Sims' (2008) study examined the effects on student achievement of low-scoring districts advancing the school start dates in order to increase instructional time for students. This change was associated with small increases in math scores for Grade 4 students, but not average reading or language scores; extra instructional time also may have increased Grade 3 reading scores for high-performing students. Elmore and Burney's (1998) evidence from New York City's District #2 pointed to the creation of an extended-day and extended-year instructional program to help improve achievement, especially for students scoring in the District's lowest achievement quartile.

Evidence from studies of both NYC's District #2 and San Diego indicates that these districts made significant structural changes in order to better align the organization with the districts' laser-like focus on instructional improvement. In District #2, for example, many middle management roles in schools and in the central office were eliminated to create the money needed for the extensive professional development efforts of the district (Elmore & Burney, 1998). San Diego's alignment efforts involved, for example, replacing area superintendents with instructional leaders who worked with teams of principals, creating three central office divisions—the Institute for Learning, Administrative and Operational Support, and the Center for Collaborative Activities (Darling-Hammond et al., 2003).

CONCLUSION

This review was based on 31 studies reported during the previous ten years and selected to provide information about the characteristics of school districts making exceptionally positive contributions to their students' achievement. The largest proportion of these districts served a majority of disadvantaged, minority, or otherwise at-risk children, or had chosen to focus their improvement efforts especially on those children in their districts. So the results of this review will be of greatest use to districts with a concern for similar types of students and for closing gaps in achievement between typically successful students and those who find themselves in especially challenging social and/or economic circumstances. These results give rise to several implications for practice, theory, and research by way of conclusion.

One important implication for those wanting to use the review results to inform their own district practices arises from the nature of the evidence included in the review. This is the best evidence presently available and so

needs to be given serious attention. But it is a body of evidence resulting primarily from "outlier" research designs that are capable of making only weak causal claims. Studies using outlier research designs do not allow us to separate, from the full set of district characteristics identified, those which are "necessary" from those which are "sufficient"; there are no data about the characteristics of more typical districts to use in discerning what it is that uniquely accounts for the superior performance of the outlier districts. So this evidence needs to be carefully interpreted in the light of one's own practical experiences and the particular nature of one's district context.

This limitation on making practical use of the review results leads to several implications for future research on districts. While nothing approaching a quasi-experimental design seems plausible for studies of high-performing district characteristics, future research should include efforts to collect evidence from large samples of districts that represent the full range of district performance (high to low), however defined. Data of this sort is needed to seriously test the contribution to student learning of those district characteristics identified to date, as well as to distinguish those features that are necessary for high performance from those that are sufficient. Actually improving district performance costs scarce time and other resources. Future research should aim to assist districts to decide how best to allocate the time and resources that they have available for their improvement efforts.

Finally, much like the early school effectiveness research (Teddlie & Stringfield, 2007), very few studies included in this review were conducted with any significant theoretical guidance, nor did these studies do much to advance theory. While this can be justified in the early, exploratory, stages of a new line of research, there is now sufficient accumulation of evidence about the characteristics of high-performing districts to warrant more theory building as a guide to future research. Rorrer, Skyla, and Scheurich (2009) have recently offered a very promising exemplar of what this might entail. Conceptualizing districts as "institutional actors" in systemic reform, they identify four essential roles for districts (all of which are included in this review in some form) and argue that change at a district level is nonlinear and complex, with the four roles more or less tightly or loosely coupled depending on conditions in the district. Pushing back on the widespread belief in overall system alignment as a means of improving district performance, this theory points to the potential importance of either tight and loose coupling or alignment among district roles ("patterns of coupling") at different points in the reform process. After Lotto (1983), the authors argue that a district's effectiveness depends on the diversity of couplings, congruence between actual and expected couplings and leaders who are as flexible as the couplings require. District effectiveness, according to this formulation, also depends on the development of interactive feedback loops in the district allowing for alterations in "alignment and coherence as a result of changes in other roles (p. 339). These feedback

loops serve to "promote reciprocal and multidirectional changes in the [district's] roles" (p. 339).

This conception of how districts change, with its focus on complexity and nonlinearity, points to a much different research agenda than is reflected in most of the 31 studies in this review and demonstrates the power of theory to point research in productive directions.

NOTES

1. However, studies by both D'Amico et al. (2001) and by Resnick and Harwell (2000) failed to confirm assumptions made by District #2's reform strategy about the impact of instructional leadership.

2. While 16 studies seems a substantial number, only a few studies provide information about each component of high-performing districts' investments in instructional leadership.

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APPENDIX

CHARACTERISTICS OF STUDIES INCLUDED IN THE REVIEW

#	Author	Title	Source	Sample	Method
1	Cawelti, G. (2001)	Six districts, one goal of excellence	*Journal of Staff Development, 22*(4), 31–35	6 districts (TX, WV, ID, CA) with achieve gain over 5 yrs.	Case studies
2	D'Amico, L., Harwell, M., Stein, M. K., & van den Heuvel, J. (2001)	Examining the implementation and effectiveness of a district-wide instructional improvement effort	Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA, April, 2001	District #2 in NY–82 teachers	Correlation & HLM on teacher survey & student scores
3	Darling-Hammond, L., Hightower, A., Husbands, J. L. LaFors, J. R., Young, V. M., & Christopher, C. (2003)	Building instructional quality and coherence in San Diego city schools: System struggle, professional change	Retrieved July 2008 from http://depts.washington.edu/ctpmail/PDFs/Brief_nine.pdf	Three middle San Diego CA schools	Case studies
4	Eilers, A. M., & Camacho, A. (2007)	School culture change in the making: Leadership factors that matter	*Urban Education*, *42*(6), 616-637	1 low-achieving school	Case study
5	Elmore, R., & Burney, D. (l998)	Continuous improvement in Community District #2, New York City	Retrieved July 2008 from www.lrdc.pitt.edu/hplc/hplc.html	1 district, District #2, NYC	Case study
6	Fink, E., & Resnick, L. B. (1999)	Developing principals as instructional leaders	Retrieved July 2008 from www.lrdc.pitt.edu/hplc/hplc.html	1 district, District #2, NYC	Case study
7	Florian, J. (2000)	Sustaining educational reform: Influential factors	Retrieved July 2008 from www.mcrel.org	4 districts successful implementing state initiative	Case studies from interviews at state, dist & schools
8	Florian, J., Hange, J., & Copland, G. (2000)	The phantom mandate: District capacity for reform	Paper presented at the annual meeting of the American Educational Research Association in New Orleans, April 2000	16 improving districts in 13 states	Case studies

9	Goodman, G.S., & Young, I. P. (2006)	The value of extracurricular support in increased student achievement: An assessment of a pupil personnel model including school counselors and school psychologists	*Educational Research Quarterly*, *31*(1), 3–13	150 districts selected at random from 352 in large Pacific states	SEM using AMOS, controlling for SES
10	Hightower, A. M. (2002)	San Diego's big boom: District bureaucracy supports culture of learning	Retrieved July 2008 from http://depts.washington.edu/ctpmail/PDFs/SanDiego-AH-01-2002.pdf	1 CA district	Case study
11	Iatarola, P., & Fruchter, N. (2004)	District effectiveness: A study of investment strategies in New York City public schools and districts	*Educational Policy*, *18*(3), 491–512	13 schools in 4 NYC districts–2 low & 2 high performing	Case study from interviews at district & school
12	Koschoreck, J. W. (2001)	Accountability and educational equity in the transformation of an urban district	*Education and Urban Society*, *33*(3), 284–314	1 Texas improving district	Case study
13	Langer, J. A. (2000)	Excellence in English in middle and high school: How teachers' professional lives support student achievement	*American Educational Research Journal*, *37*(2), 397–439	25 schools, 55 teachers & 88 classes, high & typical performers in FL, NY, CA, TX	Nested case
14	Maguire, P. (2003)	District practices and Student Achievement: Lessons from Alberta	Society for the Advancement of Excellence in Education.	4 Alberta districts, consistently improving test scores over 4 years; plus 1 "typical" district	Case studies from interviews, surveys, focus groups and documents
15	Marshall, J., Pritchard, R., & Gunderson, B. (2004)	The relation among school district health, Total Quality principles for school organization and student achievement	*School Leadership and Management*, *24*(2), 175–190	4 effective (healthy) & 4 unhealthy districts	Mixed methods

(*Continued*)

APPENDIX 1 (*Continued*)

#	Author	Title	Source	Sample	Method
16	McLaughlin, M., & Talbert, J. (2003)	Reforming districts: How districts support school reform	Retrieved July 2008 from http://depts.washington.edu/ctpmail/Reports.html#Reforming	Teachers in 15 districts, district administrators in 58 districts, 3 reforming districts In CA	Multi-level, multi-methods On surveys & interviews
17	O'Day, J., & Bitter, C. (2003)	Evaluation study of the Intermediate Intervention/ Underperforming Schools Program and the High Achieving/Improving School Program of the Public Schools Accountability Act of 1999	Retrieved July 2008 from http://www.air.org/publications/documents/PSAA_Evaulation_Final_Report.pdf	21 case schools, 502 schools & 134 districts surveyed in CA	Multi-level, multi-methods
18	Opfer, V. D., Henry, G. T., & Mashburn, A. J. (2007)	The district effect: Systemic responses to high-stakes accountability policies in six southern states	*American Journal of Education*, *114*(2), 299–332	Teachers in 107 schools in 6 states (NC KY MS SC GA TN) -sequential probability	HLM on teacher surveys
19	Pritchard, R. J., & Marshall, J. C. (2002)	Professional development in "healthy" vs. "'unhealthy" districts: Top 10 characteristics based on research.	*School Leadership and Management*, *22*(2), 113–41	Stratified random, 14 districts, 7 high & 7 low "health" in 11 states	Mixed, based on artifacts from site visits
20	Ragland, M. A., Asera, R., & Johnson, J. F. Jr. (1999)	Urgency, responsibility, efficacy: Preliminary findings of a study of high-performing Texas school districts	Retrieved July 2008 from http://www.utdanacenter.org	10 Texas districts	Case studies
21	Resnick, L. B., & Harwell, M. (2000)	Instructional variation and student achievement in a standards-based education district	Retrieved July 2008 from http://www.cse.ucla.edu/products/Reports/TECH522.pdf	26 elementary schools in District #2, NYC	Regression & path analyses on scores & school quality ratings
22	Sims, D. P. (2008)	Strategic responses to school accountability measures: It's all in the timing	*Economics of Education Review*, *27*(1), 58–68	426 WI districts	Statistical modeling on scores, resources, time

23	Skrla, L., & Scheurich, J. J. (2001)	Displacing deficit thinking in school district leadership.	*Education and Urban Society*, *33*(3), 235–59	4 Texas improving districts	Case studies from site visits & interviews
24	Skrla, L., Scheurich, J. J., & Johnson, J. F. (2000)	Equity-driven achievement-focused school districts	Retrieved July 2008 from http://www.utdanacenter.org	4 Texas districts	Case studies
25	Snipes, J., Doolittle, F., & Herlihy, C. (2002)	Foundations for success: Case studies of how urban school systems improve student achievement	Retrieved July 2008 from http://www.mdrc.org/publications/47/full.pdf	3 improving large urban districts & part of 4th (NY, NC, CA, TX)	Retrospective case studies
26	Snyder, J. (2001)	The New Haven Unified School District: A teaching quality system for excellence and equity.	*Journal of Personnel Evaluation in Education*, *15*(1), 61–81	1 improving CA district	Case study
27	Stein, M. K., & D'Amico, L. (2002)	Inquiry at the crossroads of policy and learning: A study of a district-wide literacy initiative	*Teachers College Record*, *104*(7), 1313–44	1 district, District #2, NYC	Case study from observations, interviews
28	Stein, M. K., Harwell, M., & D'Amico, L. (1999)	Toward closing the gap in literacy achievement: High performance learning communities project Community School District #2, New York City	Retrieved July 2008 from www.lrdc.pitt.edu/hplc/hplc.html	1 district, District #2, NYC	Case study
29	Stringfield, S. C., & Yakimowski-Srebnick, M. E. (2005)	Promise, progress, problems, and paradoxes of three phases of accountability: A longitudinal case study of the Baltimore City Public Schools	*American Educational Research Journal*, *42*(1), 43–75	1 Baltimore MD district	Case study
31	Togneri, W., & Anderson, S.E. (2003)	Beyond islands of excellence: What districts can do to improve instruction and achievement in all schools	Retrieved July 2008 from http://www.learningfirst.org/publications/districts	5 districts reputational, varying in size, region (TX, CA, MD, MI, RI)	Case studies