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PERSPECTIVES

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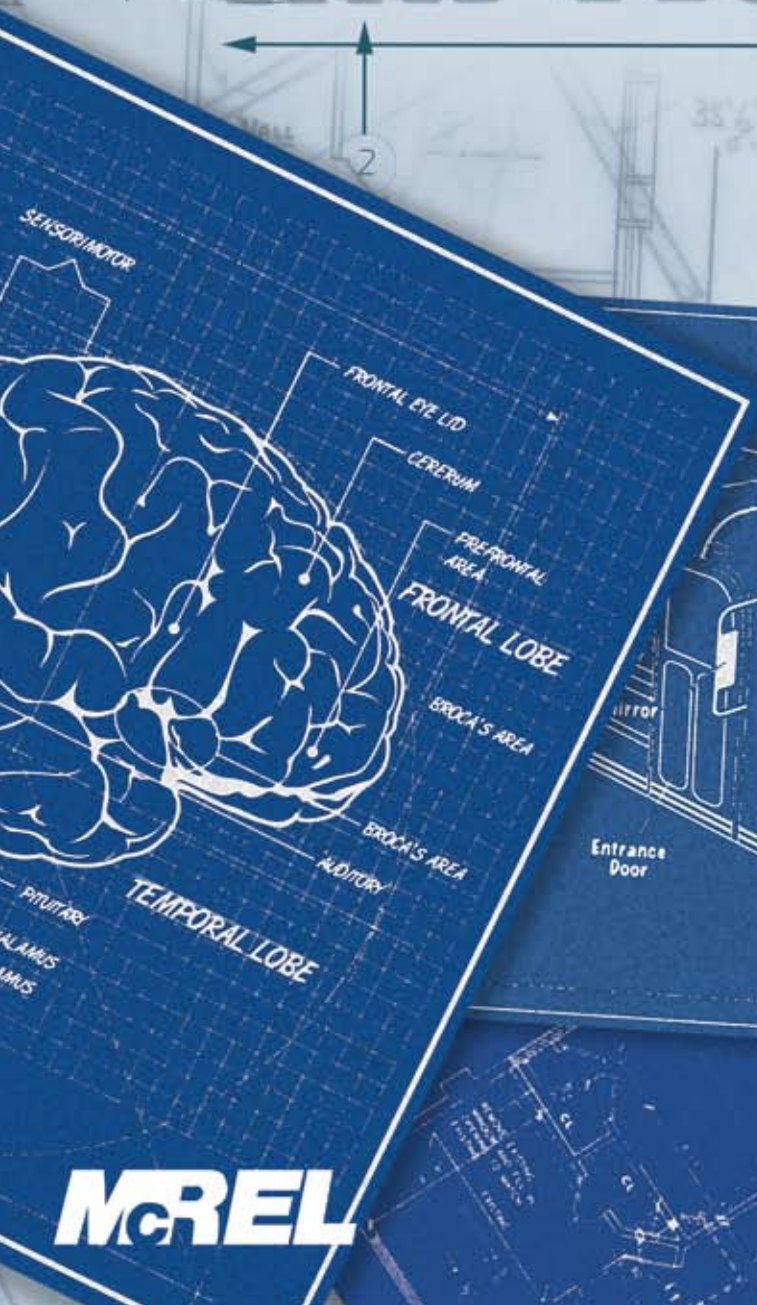

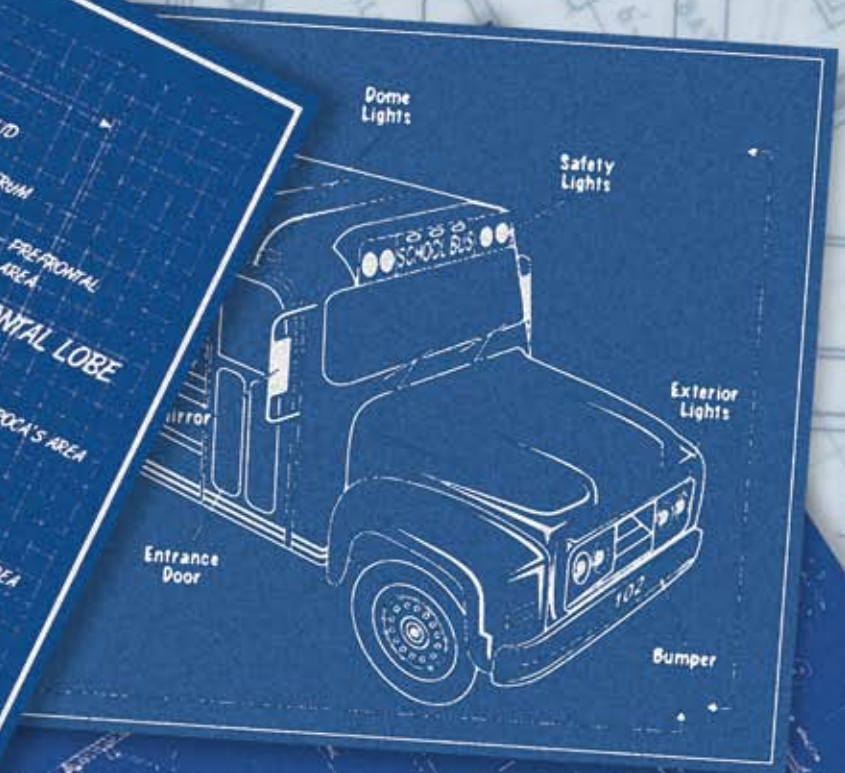

McREL

Noteworthy

PERSPECTIVES

School Improvement

McREL

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In 2006, McREL published *Noteworthy Perspectives: Success in Sight*. It tells the story of a school using McREL's approach to school improvement. It includes guidelines for a school to use in its planning process and "Tips" developed out of McREL's broad experience with school improvement. Download at http://www.mcrel.org/topics/products/229

Contact McREL to order additional copies of *Noteworthy Perspectives: School Improvement* at:

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Introduction:

The Science & Art of Schooling

In McREL's *2003 Annual Report*, *Advancing the Science and Art of Education*, we wrote this:

> Educators today have more than 30 years worth of research about what works and what does not in schools and classrooms. . . . [However], it would be a mistake to conclude that we can universally boost student achievement solely by advancing this new science of education. As parents and teachers know, every student is unique, defying one-size-fits-all solutions. Effective educators. . . know how to create learning environments that are both challenging and supportive. This intangible, affective quality of effective teachers is what some call the art of education.

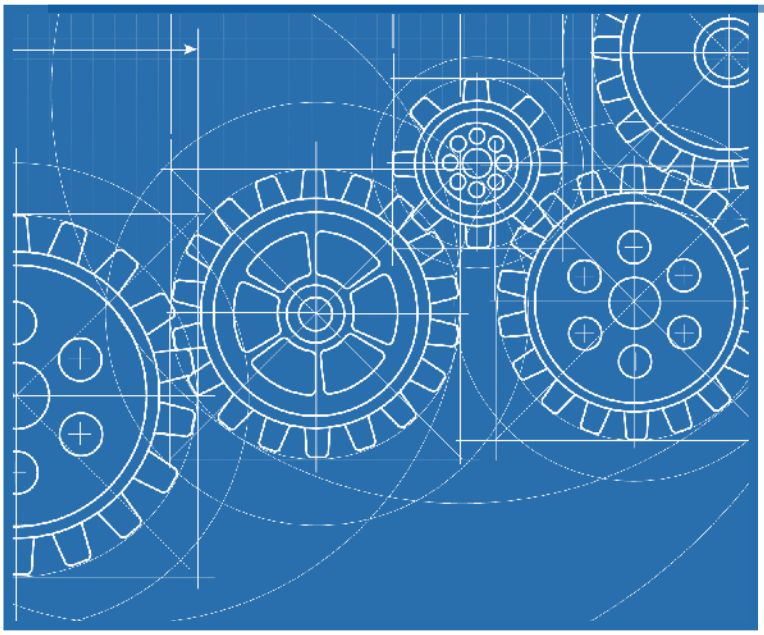
In the years that followed this report, McREL staff members wrote more than 100 published articles in practitioner and peer-reviewed journals describing what we know from four decades of research on effective schools as well as years of practical experience working to help educators raise student performance: that improving schools is both a "science" and an "art." This idea is the common thread running through this unique issue of *Noteworthy Perspectives*, which brings together several previously published articles from McREL.

We open with Bryan Goodwin and Ceri Dean's pointed "Three School Improvement Mistakes (and How to Avoid Them)." The authors assert that there are three common, yet avoidable, mistakes many schools make when trying to implement their school improvement efforts.

On page 7, we offer a McREL policy brief wherein Laura Lefkowits and Carolyn Woempner describe steps a school board might take to improve the environment (and ultimately the performance) of low-performing, high-needs schools.

Beginning on page 16, we have reprinted highlights of McREL's research on effective school district leaders as it appeared in *The School Administrator* magazine.

Collectively, these articles represent some of McREL's best thinking and research to date on what it takes to improve school performance and student achievement. We hope these articles provide you with some new insights and fresh perspectives on how to balance the science and art of effective schooling to support the success of all students.



Three school improvement mistakes

(and how to avoid them)

By Bryan Goodwin and Ceri Dean

Despite having well-intentioned, thoughtful improvement plans, many schools still struggle to raise student performance—often because their improvement efforts are doomed to failure from the very start by three common, yet avoidable, mistakes.

Mistake #1: Treating the Symptoms, Not the Underlying Problem

Everyone knows cough syrup doesn't cure you; it just treats your symptoms. But all too often, like cough syrup, school improvement plans attempt to treat the symptoms, but not the root causes of low student achievement. For example, if a school's data show that it has an unacceptably low number of students who are proficient in reading, it can be easy to rush to a solution, such as creating 90-minute literacy blocks to provide additional time for reading instruction. But what if the real issue is something deeper—such as widespread, low expectations for student performance? Will a 90-minute literacy block really provide the cure?

Herein lies the rub with data-driven decision making. Data, by itself, is no more instructive than tea leaves. Schools must dig below the surface to get at the real issues and address them head-on rather than serving up a "cocktail" of symptom-treating medications. Digging beneath the surface of school-level data might reveal, for example, that most teachers haven't actually implemented the school's reading program and are unwittingly using a "chicken feed" approach to teaching, throwing out knowledge to students, expecting some will get it and others won't. Providing more time for reading instruction might help, but it probably won't create the desired effect until teachers are aware of their practices and know how to change their teaching strategies. To achieve that, the school needs to focus on building a culture of high expectations for teachers and students alike.

Mistake #2: Focusing Only on Tangibles and Ignoring Intangibles

Digging deeper into data often reveals that school culture, teacher attitudes and beliefs, and other norms and values are at the heart of low school performance. McREL research suggests that a key distinction between high- and low-performing schools is that high-performing schools work to create a "culture of high expectations." Similarly, in our own Balanced Leadership® reports and program for school leaders, we refer to the importance of creating a "purposeful community," one that comes together around a clear focus and does what it takes to accomplish its goals.

In an era of accountability, culture and climate may seem like "soft" concerns that are disconnected to pressing needs to demonstrate gains with "hard" data, such as student achievement. Our research and experience in working with schools that have demonstrated significant gains in student achievement and other hard data, however, suggests that addressing soft issues such as culture, environment, attitudes and beliefs, are at the heart of every successful improvement effort. By some estimates, up to 85 percent of publicly traded companies market value is related to "intangible" assets, namely the talents, dispositions, and ideas of its employees. As a similar metric likely applies to the value schools bring to student learning, improvement efforts should focus on not just *tangible* assets, but also (and perhaps more importantly) *intangible* assets.

Mistake #3: Biting Off More Than You Can Chew

We recently examined several improvement plans from around the country and found that most plans focus not on one or two clearly defined efforts, but rather sweeping efforts with multiple goals and several action items related to each goal. Indeed, some plans we reviewed identified 30–40 actions for a single year—that's one per week! That's far

too many initiatives for school faculty and staff to keep in their heads or take seriously. As a result, usually very little happens.

One way for schools to focus their efforts with a "less-is-more" approach is to engage in a "fractal experience." A fractal experience is a small-scale, short-term effort that results in quick, measurable gains in achievement. These "quick wins" encourage school staff to undertake ever more complex and substantive improvement efforts that have the dramatic affect of transforming a school's culture.

In short, rather than attempting to do many things and doing none of them well, schools should identify the one or two big things they will do next. And when they are in the process of doing this, they must not overlook culture. By paying attention to both technical processes as well as issues related to school culture, they will eventually find that their improvement efforts have become comprehensive and systemic. In our report *Success in Sight: A Comprehensive Approach to School Improvement*, we refer to the approach of taking one step at a time as "thinking systemically and acting syste*mat*ically."

Learn From Your Mistakes

In Japan, successful companies, such as Toyota, adhere to the concept of "kaizen"—that is, the continuous process of taking frequent and small steps on the path to improvement. Kaizen declares that "every defect is a treasure"—that is, making, and uncovering mistakes is all part of the improvement process. In their own improvement efforts, schools should be thoughtful and intentional and give 100 percent to the effort, yet be willing to learn from their mistakes. In the end, the only real improvement mistake a school can make is to do nothing at all.

This article originally appeared in McREL's quarterly magazine, *Changing Schools* (Spring 2007) and was reprinted in the Fall 2008 issue of the Australian journal, *Leadership in focus*.

Turning Failure Into *Opportunity*

By Mike Galvin and Danette Parsley

Faculty and staff sat in stunned silence as the principal delivered the news: Alcester-Hudson Elementary School had been designated a school "in need of improvement." After two years of declining test scores at the school, in 2001 the state of South Dakota was requiring the faculty to develop a school improvement plan for review and approval by the state. Failure to improve could lead to a series of increasingly severe consequences.

"Looking back, going on school improvement status was the best thing that ever happened to us," said Kathy Johannsen, the school's test, technology, and school improvement coordinator. "But at the time, we were surprised, embarrassed, and humiliated."

The McREL Approach

The small neighboring communities of Alcester and Hudson sit amid fertile farms in the southeast corner of South Dakota. The two communities consolidated their schools several years ago. The student population of Alcester-Hudson Elementary, a K–6 school with 150 students, is 95 percent white, with 26 percent of students eligible for free or reduced-price lunch. In many ways, the school and community are characteristic of small farming communities in the upper Midwest. Along with a slowly declining student population and a degree of geographic isolation, the school embodies strong traditions and a high level of community support and pride. There is great continuity in this community: Looking through photographs of graduating classes of Alcester-Hudson dating back to the 1950s, one can see the parents and extended family members of many current students and faculty members.

When we first visited Alcester-Hudson, we were impressed by the pride that teachers showed in their school. However, they were clearly devastated by their new label of "underperforming," and were unsure how to follow through on their desire to improve.

While staff members at Alcester-Hudson were considering their next course of action, our team at Mid-continent Research for Education and Learning (McREL) was launching a project with the South Dakota Department of Education to build statewide capacity for helping local schools in need of improvement. Alcester-Hudson Elementary School became part of this project, and as project consultants, we became partners with the school in a school improvement process that would not only significantly raise test scores but also create lasting structural changes.

McREL's approach is to ground school change strategies in each school's local context. We aim to teach local school teams how to use data and research to solve their own problems. This strategy helps educators develop their own capacity for improvement, enabling them to target their particular needs and keep building on their progress long after McREL consultants leave.

Three years after beginning their improvement efforts, staff members at Alcester-Hudson have indeed developed their own capacity for continual improvement. Student achievement has risen dramatically: In 2004, 94 percent of students achieved "proficient" status on South Dakota's standardized math test and 100 percent tested as "proficient" on the state's reading test. In 2001—the year Alcester-Hudson was labeled as needing improvement—only 55 percent of students tested as proficient in reading and 45 percent as proficient in math. As a result of this jump in achievement, the school has received the state's highest rating of "distinguished."

We believe that Alcester-Hudson dramatically raised student achievement through six key practices:

- Distributing leadership.
- Developing shared expectations for students.
- Getting hooked on data.
- Focusing on one problem at a time.
- Building a professional learning community.
- Turning a problem into an opportunity for growth.

Distributing Leadership

True school improvement requires widespread, shared commitment to the effort and a sizable group willing to make a plan and carry it out. One of McREL's first recommendations to Alcester-Hudson was to form a school leadership team that would manage the steps of the improvement process, beginning with writing the improvement plan. The principal chose a representative group of teachers, parents, paraprofessionals, and school board members. Forming this team proved to be an effective way to develop leadership capacity. In 2002, because of decreased funding, the school district eliminated the principal's position at Alcester-Hudson, combining the positions of elementary principal and district superintendent. The Alcester-Hudson leadership team became the source of continuity in school leadership.

After an initial awkward period during which teachers hesitated to take charge and act collectively, the group gelled and teachers began offering to lead in different ways. In one of the first such instances, a leadership team member enlisted several colleagues to plan and carry out a math games night to further the goal of increased parental involvement. Most teachers at the school are now comfortable taking the initiative to start new projects and invite other teachers to join them.

Team membership changed as the original members cycled off and new members joined. In the third year, the school reached a milestone in distributed leadership when team members realized that none of the original members remained on the team. At that point, the group formalized membership arrangements, creating a policy of staggered two-year terms of service.

Developing Shared Expectations

As is true in many public schools, teachers at Alcester-Hudson were initially almost entirely autonomous. They tended to close their classroom doors each morning and do their own thing during the day. We noticed right away that teachers were using the math program differently in each classroom and that teachers of the same grade level had differing levels of expectations for students' reading. We encouraged the staff to take a "balcony view"—to step back and look at their teaching practice as part of a group effort with shared goals and standards for students. With the benefit of an outside perspective, the faculty members began to see how many aspects of their school culture—including their autonomy as teachers—got in the way of working together to make a difference.

Teachers on the leadership team began to take a hard look at student achievement data to determine where they should focus their improvement efforts. The leadership team proposed a number of "shared agreements," which various groups of teachers discussed and in most cases accepted, to be consistent across their classrooms. For example, all teachers in the school agreed to teach mathematics for one hour and 15 minutes each day; follow timelines for completing various portions of the math curriculum; implement a rigorous schedule of formative and summative assessments in reading and math; and use guided reading strategies in grades K–3. One challenge for faculty was figuring out how to handle situations in which a faculty member was not abiding by these shared agreements. The leadership team proposed—and all teachers agreed—to use regularly scheduled meetings to check in with one another about whether everyone was adhering to the shared agreements and how they could support one another in doing so.

Getting Hooked on Data

Early on in the improvement process, the staff at Alcester-Hudson learned the cycle of school improvement: Study data, form hypotheses, plan and implement changes in instruction, reallocate resources, and remeasure to determine changes in student learning. Data also became a vehicle for noting success and celebrating the achievements of the staff. Today, instruction in the school revolves around data.

Teachers grew so adept at using data that they were able to use formative assessments to monitor each student's learning in relation to state and district content standards. Midway through the 2003–2004 school year, the McREL consultants asked the staff to use formative assessment data to predict performance on the upcoming state test. The teachers predicted that student scores would decline; they believed that as teachers they may have let up on some of the efforts that had led to their initial success in 2002. This prediction energized the teachers to recommit to their shared agreements, and in 2004, student scores on the state math and reading tests again showed improvement.

Focusing On One Problem at a Time

Too often, data—far from empowering schools—leave schools and teachers feeling overwhelmed, realizing that they need to make drastic improvements but unsure where to begin. As a result, schools often try to make too many improvements at once, drafting comprehensive improvement plans that change instructional programs, alter scheduling, and revamp organizational and support structures. Such plans throw everything but the kitchen sink at the problem; in trying to do everything at once, they often do nothing well and bring little or no gains in student achievement.

The leadership team at Alcester-Hudson used data to focus on one problem at a time. For example, teachers in the primary grades jointly agreed on specific minimum test scores in reading comprehension (using the Developmental Reading Assessment to measure reading) as achievement targets for all students at each grade level. After

a year of consistently focusing on instructional goals and discussing student achievement, the teachers were gratified (but not surprised) to see scores on the state standardized tests rise significantly. With these "quick wins" under their belts, the teachers consulted the data again, derived a new focus for their improvement efforts, and consulted the research for guidance about next steps.

Building a Professional Learning Community

During initial discussions about reallocating resources to support their improvement goals, the teachers developed a scheduling strategy that allowed them to meet monthly in instructional teams (K–3 and 4–6) on what they called "Working Wednesdays." During this uninterrupted two-hour block of time, classroom, special education, and Title I teachers met as a whole group to discuss instructional strategies and the needs of individual students who were not meeting the standards. They drew up lists of students who needed help to meet standards, which they posted on the walls of their meeting room to consult together from time to time. The teachers also used Working Wednesdays for just-in-time professional development—short learning opportunities that arose from discussions about student needs. At one meeting, a teacher asked for advice about assessing a student with ADHD who seemed to understand the math concepts but had problems demonstrating that competency on a paper-and-pencil test. Colleagues offered ideas for making accommodations to testing, but many teachers felt a need to learn more about teaching students with attention problems. The special education teacher offered to provide instructional strategies for teachers to help them meet the needs of these students.

Working Wednesdays played a significant role in making teachers aware of their own attitudes about student learning. As teachers saw how others used strategies successfully, they became more aware of the learning potential of all students. At the beginning of the work, we often heard teachers attribute student achievement to factors in the home environment or participation in special programs. As teachers shared strategies and proposed new ideas to get students "off the list," such comments became less frequent. Instead, conversations focused on changes that teachers could make in their instruction. Staff members also celebrated together when formative assessment data allowed them to remove a student from the list.

With a structure that guided discussion, the teachers made great progress in learning new strategies and became a cohesive professional learning community. But creating and maintaining that structure was challenging at times. At first, teachers were not used to publicly discussing their students' progress or speaking openly about challenges in the classroom. They also had little experience engaging in structured and focused discussions as a group, and early meetings did not go well. As time went on, the Alcester-Hudson teachers realized that assigning roles (such as facilitator and note taker) and setting an agenda in advance helped them use their time effectively. They established a format of spending the first half of the meeting talking about individual student progress and suggesting strategies and the other half engaged in professional development activities tied to student learning issues that had surfaced in previous meetings.

Turning a Problem into a Chance for Growth

To be effective and sustainable, school improvement needs to focus on specific problems at the beginning of the process but be broad and systemic by the end. The Alcester-Hudson staff's original perception of the improvement process as a way to get off the "needing improvement" list quickly evolved into a comprehensive, systemic effort to forge a stronger learning environment. As Kathy Johannsen observed,

> I knew we were a school marked for improvement by the state and that we needed to improve our standardized test scores. But it's much more than that. The school improvement process . . . improves a lot more than just your test scores. It improves literally every aspect of the school—how we interact with each other as staff members, how we work with kids, what we're teaching those kids, and the climate of our school.

At the beginning of the process, Alcester-Hudson relied heavily on McREL's expertise; the leadership team and the consultants typically met for a half-day each month to work on whichever aspect of the improvement plan needed the most attention. As the work progressed, the leadership team gained expertise in curriculum and instruction and in working together as a team. Over time, the team became more self-directed in making decisions and scheduling group work. Gradually, members of the leadership team took over coordinating Working Wednesdays.

As we end our active involvement in Alcester-Hudson's improvement process, the school leaders are focusing on the future—and so are we. From the beginning, our goals went beyond helping the school make its required adequate yearly progress to helping it become a true learning organization that could sustain changes and make new ones. Because of its hard work, the Alcester-Hudson community now has the skills to tackle any kind of challenge that might come its way.

Parsley, D. & Galvin, M. Turning failure into opportunity. *Educational Leadership*, vol. 62, Summer 2005.

Creating a culture of high expectations

By Zoe Barley and Helen Apthorp with Bryan Goodwin

In 2006, McREL released the findings from a three-year study of high-performing, high-needs schools. Findings from this study, which are summarized in the report, *McREL Insights: Schools that "Beat the Odds*," suggest that low-performing schools may be doing many things "right." Teachers in low-performing schools were just as likely as teachers in high-performing schools to say they were attending to such research-based practices as offering challenging curricula and engaging in staff development on instruction. So, if low-performing schools are doing those things right, what aren't they doing?

Study Methodology

McREL researchers identified 739 high-performing and 738 low-performing schools with 50 percent or more of their students eligible for free and reduced lunch. We surveyed participating teachers in those schools about their schools' performance in four areas: 1) school environment, 2) professional community, 3) leadership, and 4) instruction.

Findings

Five key differences emerged between the perceptions of teachers in high-performing schools vs. low-performing (see table). Teachers in high-performing schools were more likely to report that their schools had a shared mission or goals, a press for academic achievement, and a safe and orderly environment. In addition, teachers in these high-performing schools were more apt to report that they could influence school decisions, and that they had clarified instructional goals for students.

Creating a Culture of High Expectations

One conclusion we draw from these findings is that high-performing schools develop a "culture of high expectations." That is, they develop, with input from teachers, a common vision and focus for their efforts. This vision establishes high expectations for student performance and behavior. Through shared leadership, teachers take responsibility for creating structured, well-managed classrooms, where they ensure that students are clear about their learning goals and behavior expectations.

This conclusion validates our earlier examinations of more than 30 years of research on effective schools and classrooms (reported in the ASCD publications, *What Works in Schools* and *Classroom Instruction that Works*). These studies found that creating a "safe and orderly" school environment and classrooms with "clear goals and effective feedback" are strongly correlated with higher levels of student achievement.

Distinguishing characteristics of schools that "beat the odds"
1. Shared mission & goals
2. Academic press for achievement
3. Orderly climate
4. Support for teacher influence
5. Structure *(clear student goals, strong classroom management)*

But what about the fact that many other well-documented influences on student achievement, such as creating a challenging curriculum tied to standards do not appear to differentiate high- and low-performing schools? Does this mean these other activities and processes are unimportant? Not at all. But it does suggest that absent a culture of high-expectations, potentially valuable activities, such as encouraging teacher collaboration can be akin to sowing seeds on rocky ground—the right idea, but in the wrong environment and unlikely to bear fruit.

In summary, what appears to distinguish high-performing schools from low-performing ones is less the tangible aspects or technical processes of schooling, but rather, the more intangible sometimes elusive aspects, such as a school's mission, culture, and its teachers' and students' attitudes and beliefs. This insight may explain why school improvement is so difficult. Were it simply a matter of offering a different professional development program, raising student achievement would be easy. But the differences between high- and low-performing schools suggest that successful schools may need to first change something far more complex—people's perceptions, expectations, motivations, and behaviors.

This article originally appeared in McREL's quarterly magazine, *Changing Schools* (Spring 2007).

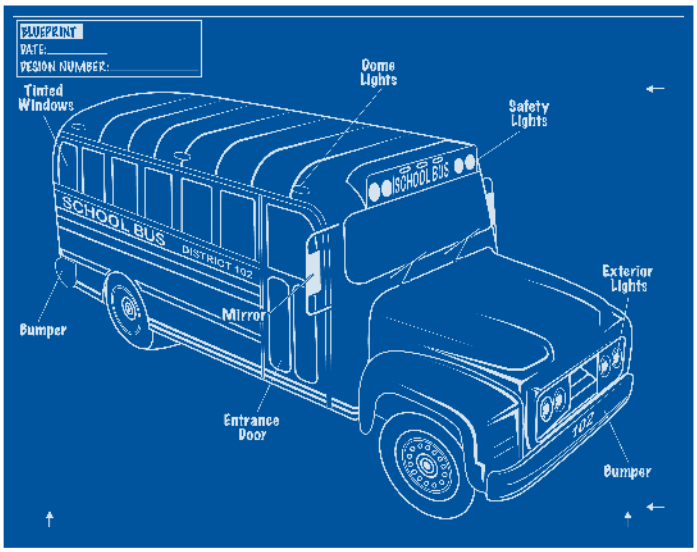
Focusing on the Basics in *Beat-the-Odds Schools*

By Laura Lefkowits and Carolyn Woempner

State and local education officials across the country feel a sense of urgency about reducing achievement gaps and raising the level of knowledge and skills of all children ("McREL Study Examines How High-needs Schools Beat the Odds," 2005). To realize the intent of the No Child Left Behind Act (NCLB) by 2014, education researchers, practitioners, and policymakers need solutions to the problem of persistently low achievement in many of our nation's schools. Previous research has revealed a number of "critical factors" that make a difference in student achievement (see Marzano, 2000, for a synthesis). But why do these factors work in some schools and not in others? Why do students in some schools that lack certain critical factors, such as student tutoring and computer aided instruction, succeed nonetheless? What is the relationship among these factors and which are the most essential?

Researchers at Mid-continent Research for Education and Learning (McREL) recently completed a study of "beat-the-odds" schools—high-needs schools (as defined by percentage of student poverty) that demonstrated atypically high student achievement. The study showed that high-performing schools have a more supportive school environment, teachers use more structured instructional practices, and there is stronger school leadership than in low-performing schools.

This policy brief draws from the technical report of the study's findings, *High-Needs Schools—What Does It Take to Beat the Odds?* (McREL, 2005). In the report, the authors focus on four key components they identified as broadly contributing to school success and examine how the components interact to contribute to success in high-needs schools.



The Four Components

- **Leadership:** Leading organizational change, providing instructional guidance, and establishing shared mission and goals;
- **Professional Community:** Teachers collaborating, receiving professional development, and being encouraged to have influence in school matters;
- **School Environment:** Parents involved meaningfully, the school culture focused on academic achievement, a safe and orderly climate, and attention to assessment and monitoring; and
- **Instruction:** Individualized learning, structured instruction with feedback to meet student needs, and challenging opportunities to learn.

McREL Insights: Schools that "Beat the Odds" and *McREL's High Performing/High Needs Schools Resource Guide* are two resources that McREL has prepared to help further the application of this important research in the field. This brief extends this work and offers guidance to local school board members and other policy makers who seek to support their district's school improvement efforts by providing effective policy derived from research-based evidence. These policy suggestions can become part of a system-wide effort to improve student achievement.

Important Findings for Moderate-to High-Poverty Schools

McREL's initial study compared two groups of similar high-needs elementary schools in 10 states. To qualify as high-need, schools were defined as having 50 percent or more of their students eligible for free or reduced lunch. High- or low-performing status was based on state assessment results in reading and mathematics over a three-year period. HPHN schools scored above the level predicted by their demographics, and LPHN schools performed below the predicted level.

Once schools were identified and assigned to a study group, a teacher survey was designed to measure their

perceptions of the four components. McREL researchers analyzed survey data using structural equation modeling, a statistical technique which enabled them to examine relationships among key components in high-needs schools. Additionally, analyses were conducted that accounted for the fact that individual teacher data were not independent of other data collected in a school. Finally, analyses were conducted to identify which of the components characterized the largest difference between high-and low-performing schools.

Researchers found that the largest differences between the HPHN schools and the LPHN schools, as measured by teachers' perceptions, occurred in the set of school environment influences. These differences were followed by differences in instruction and influences and leadership influences. In other words, what emerged as being *most* different between the high-performing and the low-performing schools were teachers' perceptions of their schools' *environment, instruction,* and *leadership*. Teachers in the high-performing schools felt more positive about these influences than those in the low-performing schools.

Translating Research into Policy

NCLB requires school districts to take "corrective action" if a school fails to make adequate yearly progress (AYP) for four consecutive years. The law identifies corrective actions including replacing school staff, implementing a new curriculum, decreasing management authority at the school level, appointing an outside expert to advise the school, extending the school day or year, or reorganizing the school internally. Ultimately, if these sanctions are unsuccessful and the school fails to improve, the state must take corrective action that can include reducing funding to the school, placing the school in receivership, or closing the school altogether.

School boards wishing to avoid imposing such sanctions on schools that have not made adequate yearly progress would do well to launch remedial interventions as soon as a school appears on the district's "watch list."

Specifically, McREL's findings point to three fundamental areas of school systems related to higher student achievement. The influences that most differentiate high-performing from low-performing high-needs schools are school environment, instruction, and leadership. Although the school effectiveness research literature has long included these among many factors shown to be important in improving schools, McREL's study identified these three areas as those that most clearly differentiate high-performing from low-performing high-needs schools. This is important because these results provide more targeted guidance about how to assist low-performing schools, based on the successful practices used in *high-needs* schools.

Armed with this research-based understanding of what it takes to succeed, what can a school board do to prevent its schools from becoming candidates for "corrective action?" First, school boards can look closely at school environment. McREL's study demonstrated three subcomponents of this factor with the strongest relationship to student achievement outcomes: 1) orderly climate, 2) parent involvement, and 3) academic press for achievement. Guidance about each of these subcomponents that is especially relevant to district policymakers is presented in the following section.

Guidance for District Policymakers

Designating those schools that have failed to make adequate yearly progress for two consecutive years as "high priority" schools and establishing a monitoring system for these schools should be the first step a school board takes. The board might ask the superintendent to create measures of the factors that the research indicates are critical and to report progress at each regularly scheduled school board meeting throughout the school year. In this way, attention remains focused on those schools with greatest need all year long, not just when test scores are published. By gathering and reporting data on a regular basis, these school principals will have an opportunity to make adjustments in their academic program as the year proceeds. Acknowledging incremental improvements during the course of the year is an important benefit for those schools that may not reach the AYP bar but are making progress nonetheless.

Safe and Orderly Climate. Orderly climate in an effective school is most frequently characterized as one that supports school safety. A school with a safe and orderly climate has policies in place that clearly articulate rules and codes of behavior, along with associated rewards and punishments. In such a setting, students, faculty, and staff understand the policies and consistently follow them. In addition,

Environmental Factors
Subcomponent 1: Orderly Climate

To what extent does the school board

- Engage a wide range of participants in collaborative inquiry and develop solutions that represent their best thinking
- Foster an exchange of information and ideas among educators and stakeholders from across the nation on issues related to standards-based education
- Help all stakeholders reach a shared understanding of how best to implement standards-based reforms

an effective school encourages the "thoughtful prevention" of disruptions, and ensures that enforcement and punishment are dealt with consistently (McCollum, 1995). The literature on school climate clearly stipulates that this does not mean that the school has a strictly negative or severe environment; rather, the climate encourages positive and open interactions between staff and students (Rutter, Maughan, Mortimer, & Ouston, 1979; Creemers, 1994; Hallinger & Heck, 1996; Heck, 2000; Marzano, 2000). It follows that a school with an orderly environment would promote a more academic atmosphere and thus increased student achievement because, with fewer disruptions, students could be more productive, and teachers could focus on monitoring students' progress and working on academics.

School boards should require all schools to have clearly articulated and widely communicated rules and codes of behavior, including a system of rewards and sanctions, as many schools have already. In addition, schools should be required to monitor the effectiveness of their disciplinary system by keeping accurate and up-to-date records of referrals, suspensions, acts of violence, vandalism, and other disruptive activities. Although there are many different approaches to discipline in schools, ranging from peer-to-peer conflict mediation to zero-tolerance methods, most educators concur that school personnel should agree on the approach to use in their school and enforce that approach consistently. There must be agreement among faculty, staff, students, and parents about the rules of conduct in each building and the consequences students will face when the rules are broken. According to Boynton and Boynton (2005), "Most students will behave appropriately when each and every staff member hold expectations for appropriate behaviors, when effective discipline systems are in place, when these systems are taught to students, and when students are held accountable for their actions" (p. v.). School boards should expect their superintendents to hold principals accountable for implementing such policies.

In addition to establishing and monitoring the effectiveness of the discipline code, schools should also be required to monitor the overall school climate. There are several survey instruments readily available for this purpose (see Resources for a sampling.) These surveys allow school staff to collect data on student perceptions of the school climate and make data-driven decisions about appropriate changes. Gathering and responding to these data is a requirement that the board can make, thus sending the message that this is an expectation of all schools.

Not everything can be solved by the imposition of policy, of course. Sometimes, a school community needs to sit down and discuss its problems. For instance, in a school with significant numbers of referrals and suspensions, it would be important for school leaders to understand *why* so many discipline problems are occurring. What is causing the bad behavior? Is there a way to address the cause, rather than just the symptoms? Are adults modeling the behavior you want to see in your students? Are students given attention for the behaviors you want them to exhibit or are they disengaged and bored, getting the one-on-one attention they crave only when they've been sent to the principal's office? These are important discussions that must occur at the school level and that, in some cases, can be sparked by the policy and the requirement that data be collected.

Environmental Factors
Subcomponent 2: Parental Involvement

To what extent does the school board help the district with

- Developing positive and productive relationships between school staff and parents
- Integrating parental "voice" in the school culture and operating principles
- Providing good written exchanges between schools and parents
- Training parents to work with children at home
- Ensuring frequent teacher outreach
- Linking parent involvement programs to student learning

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Parent Involvement. Parent involvement in an effective school should be viewed in terms of the degree to which there is a positive and productive relationship between the school's staff and students' parents (Teddlie & Reynolds, 2000). This includes determining not only how involved parents are in the school but also how much their voice is represented in the school culture and operating principles. In order to accomplish this, there must be good communication, including written exchanges between schools and parents, a parent involvement policy, and ready access to administrators and teachers, including those able to communicate with non-English speaking families and community members.

School boards should require all schools to have a written parent involvement policy. Marzano, Waters, and McNulty (2005) suggest a policy that addresses communication, participation, and governance. School boards should require high-priority schools to demonstrate their

Environmental Factors
Subcomponent 3: Academic Press for Achievement

To what extent does the school board help the district with

- Instilling the belief that learning is possible
- Establishing a clear focus on mastering basic skills and setting clear academic goals
- Establishing high expectations for all students
- Establishing a school-wide emphasis on high academic achievement
- Using records to monitor student progress

avenues of communication to and from parents (e.g. newsletters, phone calls, home visits, conferences), their efforts to involve parents as active participants in the school (e.g. by volunteering or sharing expertise), and that their efforts to include parents in school-level decision-making activities are robust and ongoing.

Academic Press for Achievement. Academic press for achievement asserts that all students will achieve at a high level and is a factor that is cited consistently in the school effectiveness literature as being critical to success (Teddlie & Reynolds, 2000; Creemers, 1994; Marzano, 2000). This component most closely aligns with the nature of effective schools because it is a necessary factor in helping low-achieving students perform to standards. Researchers Teddlie and Reynolds (2000) found that the ability to instill in students a belief that they could learn was critical to the success of effective schools with large percentages of low-income students. The underlying components of this factor include a clear focus on mastering basic skills, high expectations for all students, the use of records to monitor student progress, and a clear, school-wide emphasis on high achievement (Marzano, 2000). Pressing for achievement includes assigning homework, setting clear academic goals, and having high expectations for performance.

School boards should require schools to show evidence of a school-wide emphasis on high achievement. This can be done by requiring principals of the identified high-priority schools to report on their school goals and the progress they are making toward meeting them during regularly scheduled board meetings. The board's responsibility is to ensure that the goals are sufficiently high and challenging, that there is evidence that the school is consistently working toward those goals, and that the necessary resources and supports are in place to assist the school as it provides the particular program of instruction that each student needs to reach high levels of achievement. As important, principals should be given an opportunity to identify for the board any barriers or hindrances to their potential success, so that the board can remove them, if possible. As always, the role of the board is to set clear expectations, hold the superintendent accountable for results, and then get out of the way so the staff can implement the instructional programs that help students achieve academic success.

The Role of School Leaders

A key finding of the *Beat the Odds* study is that school-level leadership influences other elements of school improvement. School boards should resist taking on leadership tasks best left to superintendents and school-level leaders and should instead nurture and support the skills of school and district leaders. Leadership research, including that conducted by McREL (Marzano et al., 2005), provides specific recommendations for effective school-level leadership responsibilities and practices that influence student achievement. Using this research base, it is possible to develop the leadership capacities of the front-line leaders—those leaders whose behaviors have a demonstrated impact on student achievement.

To help leaders develop this capacity, McREL has developed the Balanced Leadership Profile®, an online subscription-based survey that, when used as a professional development tool, helps principals self-assess their leadership ability. For example, assessing and developing the leadership responsibility of culture (one of the 21 responsibilities in McREL's analysis of the literature) has a direct impact on a leader's ability to improve the school environment. Districts could use this tool as a way to assess and develop school leadership to promote improved performance (see Resources).

Conclusion

Schools at risk of sanction need research-based, focused direction from school boards. Research affirms that paying attention to a few fundamental factors is time (and money) well spent. In this brief, we have described how school boards can take deliberate steps to improve the environment of a low-performing, high-needs school and ultimately improve school performance.

Constantly monitoring these fundamental factors is not an overwhelming task. It may be as simple as creating a reporting structure that includes looking at goals, progress, and achievement of identified schools at each board meeting. Such deliberate actions will help put the focus on relatively simple, yet important fundamentals that are needed for improved student performance. Furthermore, developing the capacity of school and district leaders to carry out the direction provided by the board

ultimately will serve to improve the achievement of the students, the schools, and the district.

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School, Family, and Community Partnerships: Your Handbook for Action, 2nd ed. (2002). Epstein, Sanders, Simon, Salinas, Jansorn, & Van Voorhis. Thousand Oaks, CA: Corwin Press. Available at www.corwinpress.com

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Keys to Learning: Using Standards to Improve Curriculum and Instruction. (2005). Aurora, CO: McREL. Available at www.mcrel.org/keystolearning

This micro site provides comprehensive online tools for helping schools establish high standards and determine essential standards-based content.

This article originally appeared as a McREL Policy Brief in July 2006.

Creating Conditions for Leadership Effectiveness: *The District's Role*

By Kirsten Miller

Research increasingly points to the relationship between effective leadership and increased student achievement. But just what constitutes effective leadership—and how to best support school leaders—has been a matter of both study and speculation. This policy brief draws on McREL's leadership research and an analysis of the needs in McREL's Central Region service area to provide suggestions for districts on ways to support principals and other school leaders in realizing the goal of enhanced learning for all students.

Framing the Issue

On August 16 and 17, 2004, state education chiefs, state legislators, governors' policy advisors, higher education officials, association officials, and superintendents and principals from McREL's Central Region service area gathered in Denver for McREL's Annual Policy Forum, "School Leadership that Works: Creating Conditions for Success through Policy." Participants met to develop plans for effecting positive changes to school leadership in their states. During the event, Richard Laine, director of education for the Wallace Foundation, discussed the often-cited shortage of certified principals willing to step into leadership positions. Drawing on findings from three research projects commissioned by the Foundation, Laine noted that this "shortage" may not actually be a shortage per se. Instead, as noted in the Wallace Foundation's (2003) report *Beyond the Pipeline: Getting the Principals We Need, Where They Are Needed Most*, "Many credentialed or would-be candidates, both inside and outside the education field, either are not seeking jobs in the districts or schools that most need them—or are shunning leadership positions altogether (p. 8)."

The problems related to attracting and retaining qualified administrators, Laine noted, are problems related to difficult working conditions, a lack of incentives, and an unmanageable range of responsibilities. Many principals, for example, are expected to supervise cafeteria staff, coordinate bus schedules, attend athletic events, develop and maintain effective parent- and community-school relationships, complete numerous mandated state and federal reports, and act as instructional leaders.

Leading schools in ways that ensure that all students learn the knowledge and skills they need at each stage of education is a vitally important task. Now more than ever, it is important for districts to implement policies and practices to support principals in this work. Before local policymakers institute such policies and practices, however, a review of the research on effective leadership is critical.

What Does Effective Leadership Look Like?

In 2001, McREL began an extensive review of more than 5,000 studies conducted over a 30-year period that purported to examine the relationship between school leadership and student achievement. Seventy of these studies met McREL's criteria for inclusion in a meta-analysis. The sample in this analysis included 70 studies, which involved 2,894 schools, approximately 14,000 teachers, and 1.1 million students—one of the largest-ever samples for an examination of research on leadership practices.

McREL's meta-analysis (see Waters, Marzano, & McNulty, 2003) resulted in the identification of 21 leadership responsibilities and 66 associated practices that are correlated with student achievement. Another key finding that emerged is that principal leadership is significantly correlated with student achievement. The average effect size, expressed as a correlation, is .25. This means that a one standard deviation improvement in principal leadership translates into a 10 percentile-point gain in student achievement on a norm-referenced test. The authors explain this correlation as follows:

> ....Consider two schools (school A & school B) with similar student and teacher populations. Both demonstrate achievement on a standardized, norm-referenced test at the 50th percentile. Principals in both schools are also average—that is, their abilities in the 21 key leadership responsibilities are ranked at the 50th percentile.
>
> Now assume that the principal of school B improves her demonstrated abilities in all 21 responsibilities by exactly one standard deviation.
>
> Our research findings indicated that this increase in leadership ability would translate into mean student achievement at school B that is 10 percentile points higher than school A. Expressed differently, a one standard

deviation improvement in leadership practices is associated with an increase in average student achievement from the 50th percentile to the 60th percentile. (Waters et al., p. 3)

How Do We Develop Strong Leaders?

As the effects of good leadership on student achievement become more evident, the question becomes: How can districts best support principals in raising student achievement?

Improve Principal Preparation Programs

Quantitative and qualitative evidence support the notion that many principals are not adequately trained to cope with the demands of the position. In their study of the principalship, for example, Portin, Schneider, DeArmond, and Gundlach (2003) report that "principals generally characterized traditional principal preparation as middle management training which did not include substantive mentorship" (p. 38). A majority of the principals surveyed for the report noted that most of the skills they needed to effectively run their schools were learned "on the job." Complicating matters is the fact that a spate of new federal and state accountability mandates has fundamentally changed the job. No longer are principals simply responsible for managing the day-to-day operations of the school. Now they also must be school improvement experts who are able to motivate staff to make any necessary changes.

In some states, principal preparation programs have not been revised to reflect these changes. McREL recommends that districts review their principal preparation policies to ensure that they effectively prepare principals to be instructional leaders—leaders who have the skills and knowledge set that is correlated with increased student achievement. Districts might consider tracking the performance of principals who graduate from specific preparation programs, and gauging their success over time. As part of this process, districts should review program designs to determine if they include research-based leadership practices correlated to school improvement and student achievement. Though factors other than preparation also are likely to impact a principal's success, compiling data on the components and effectiveness of specific programs can help districts tailor their preparation policies and programs to be most effective.

Support Novice Principals

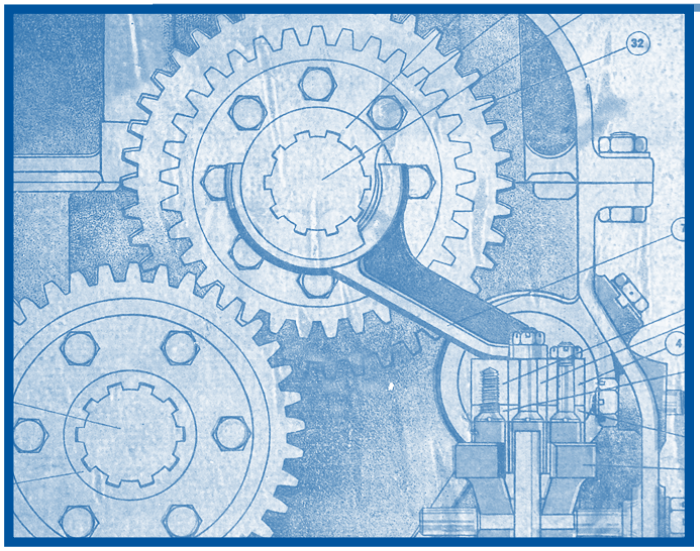
As important as initial preparation is, however, ensuring that principals are equipped for the demands of the job goes further. Principals also need support as they enter into their leadership roles. Though principals must be accountable to districts for their performance, districts too must be accountable to their principals; in other words, they must determine what tools and supports their principals need to be effective and find ways to provide principals with those supports.

A number of state education departments and professional organizations (e.g., administrator associations) have begun to sponsor principal mentoring programs, in which new principals are paired with veteran principals for guidance and support. Features of effective mentoring programs, as described in *Making the Case for Principal Mentoring* (The Education Alliance at Brown University & National Association of Elementary School Principals, 2003), include organizational support, clearly defined outcomes, screening and training of both mentors and protégés, and a learner-centered focus. Studies suggest that implementing mentoring or peer coaching programs can reduce professional isolation, boost collegiality, and encourage reflective thinking (see, e.g., Speck & Krovetz, 1996). By pairing new principals with veterans, districts are likely to mitigate some of the stresses that beginning principals face—which in turn may help reduce turnover.

Districts also might tap into resources available from professional organizations. The National Association of Elementary School Principals (NAESP), for instance, recently instituted a member principal "help line" on its Web site (www.naesp.org). Association members can post questions about a variety of topics related to the principalship, which are answered by a cadre of veteran principals who have been trained to staff the help line. Inquiring principals promptly receive a response to their questions, generally within 24 hours. In the alternative, districts might use resources such as this as a model for developing a local, collegial network of their own. These professional groups could provide additional support and much-needed collegiality, particularly in instances where formal mentorship programs might not be practical—for example, in smaller districts or districts with vast geographical distances between schools.

Free Up Principals to Focus on Academic Achievement

It isn't only new principals who may benefit from increased support at the district level, however. Veteran principals may be adept at the juggling act of the principalship, but likely still consider it difficult to find time for each of the many responsibilities they face each school day. A number of districts are addressing this issue by actively re-orienting the principalship toward what matters most. In Talbot County, Maryland, for example, the district has hired "school managers" to handle some management tasks that previously fell to principals. Now principals in the district



are free to focus on tasks such as instruction and professional development.

As districts consider such options, it is important to note that some management tasks are in fact correlated to student achievement. For example, one of the 66 responsibilities that are part of McREL's Balanced Leadership Framework® is "Order." This responsibility is defined as "the extent to which the principal establishes a set of standard operating principles and routines" (Waters & Grubb, 2004, p. 11) The practices associated with this responsibility include providing and enforcing clear structures, rules, and procedures for both students and teachers, and establishing routines for the running of the school that teachers and staff understand and follow. Given its correlation to student achievement, this management task should remain in the hands of a principal. Other management tasks, however, such as ensuring compliance with school finance laws, could be handed over to a school manager.

Set District Priorities in View of Research

In McREL's work with school districts, the district's role has emerged as a key issue in shaping the conditions under which principals can do their most productive work. Districts must set their priorities in view of what research has shown to be effective. As part of that process, districts should review the research on effective leadership, and determine whether their principals have the authority and supports necessary to implement the leadership practices that have been identified as effective.

For example, one of the leadership responsibilities identified in McREL's Balanced Leadership Framework is "Focus," which is defined as "the extent to which the principal establishes clear goals and keeps those goals in the forefront of the school's attention" (Waters, Marzano, & McNulty, 2004, p. 8). Practices associated with this responsibility include keeping everyone's attention focused on established goals and establishing high, concrete goals and expectations for students, as well as for curricula, instruction, and assessment, and the general functioning of the school. Marzano (2003) has documented the importance of establishing a "guaranteed and viable curriculum"; indeed, he identifies it as the most important school-level factor in increasing student achievement. Principals need district support to attend to this vital task effectively; aligning a curriculum to state standards, for example, is a tremendously time-consuming and detailed process. Requiring each school in a district to undertake this process may be unrealistic. Therefore, whereas the scope, sequencing, and pacing of the curriculum should be district based, the implementation of that curriculum is entirely a school-level focus.

Another example of an area in which districts may need to provide further support to principals relates to the responsibility that McREL calls "Monitors/evaluates," which is defined as "the extent to which the principal monitors the effectiveness of school practices and their impact on students' learning" (Waters & Grubb, 2004, p. 10). The practices associated with this responsibility include monitoring and evaluating the effectiveness of the school's curriculum, instruction, and assessment. This is another instance in which principals cannot effectively attend to this responsibility without appropriate supports from the district. The district's role, in this instance, is to create an infrastructure that allows principals access to the data they need to effectively monitor and evaluate curriculum, instruction, and assessment.

Conclusion

If principals are to create the conditions that lead to improved student learning, districts must consider the research on school and leadership practices that are correlated to student achievement. By finding ways to support their principals — by aligning training to job responsibilities, providing supports that free them up to attend to important leadership practices, by ensuring that they have the resources necessary to get their jobs done, and by making clear and logical distinctions between the responsibilities of the district and the job of the principal—districts will be well on their way to helping principals focus on their most pressing task: helping all students reach high standards.

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Additional Resource

Institute of Educational Leadership (IEL). IEL's mission is "to improve education—and the lives of children and their families—through positive and visionary change." To this end, IEL offers an array of programs, publications, and other resources aimed at empowering school leaders. Among these resources is e-Lead, a Web site developed by IEL in partnership with the Laboratory for Student Success. E-Lead provides, at no cost to its users, a programs database, leadership library, and professional development programming. www.iel.org

This article originally appeared as a McREL Policy Brief in November 2004.

The primacy of superintendent leadership

By J. Timothy Waters and Robert J. Marzano

Imagine two superintendents, both viewed as strong leaders by their school boards, their communities and their staffs. Let's give these two superintendents names, Jane and David.

Both Jane and David serve in mid-sized school districts with communities comparable in terms of student, teacher and administrator populations. Per-pupil expenditures in each district are at the state average. Both are seen as strong superintendents who hold high expectations for their districts. However, average district-level achievement is approximately 10 percentile points higher in one of these districts than the other.

Our recent meta-analysis of the effects of district-level leadership on student achievement, summarized in the 2006 McREL report "School District Leadership That Works," explains this difference in student achievement. Before sharing our findings, though, let's take a quick comparative look at these superintendents and their districts to better understand how two superintendents, both considered strong leaders, can have very different effects on mean district-level student achievement.

Both superintendents believe in the importance of strong school-level leadership and expect their principals to provide it. They extend considerable autonomy to their principals. Yet there are differences in how much autonomy Jane and David allow in particular areas.

David's view is that meaningful change and improvement in education occur at the school level. Schools are small enough organizational units to initiate and sustain organizational change in a reasonable period of time.

Jane's "theory of action," on the other hand, is that meaningful change and improvement must occur at district and school levels simultaneously. Though the time trajectory of change at the district level may be extended, Jane believes that for change and improvement to be substantial and sustainable, it also must be systemic, which makes the school district and the responsibilities fulfilled by the district critical.

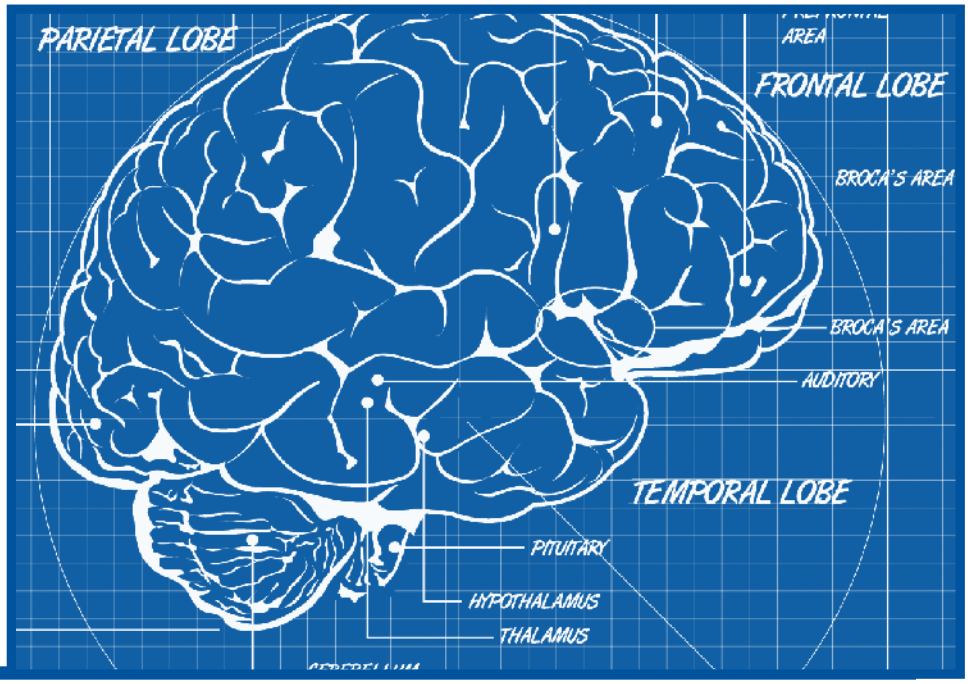
David's Approach

David is convinced instructional decisions are best left to each individual school, principal and teacher. He believes decisions about instruction should be made by those who are closest to students. After all, they were hired for their expertise and understand their students.

He takes seriously the guidance from the total quality management movement to move decision making about core institutional functions to appropriate levels of the system. In his view, instruction is a core institutional function and the appropriate level of decision making is the classroom.

David's approach to setting district goals for student achievement has been to "aggregate up" from individual school goals to establish districtwide goals for achievement. His district, like so many others in the United States, is focused on improved achievement in math and reading. The district goals for achievement in these two areas are that each school will improve sufficiently to meet or exceed state and federal standards for adequate yearly progress.

Because goals for achievement and instruction are set at the school level, and each school's instructional program reflects the knowledge,



skills and experience of the principal and teachers, the district professional development program also is decentralized. The district budgets resources for professional development, but each principal, along with his or her teachers, decides how best to use these resources.

David spends a considerable percentage of his time and attention managing the interests and energy of his school board members. They, along with David and his central-office staff, field many questions from parents and other community members about schools, programs and district effectiveness.

The board has a difficult time responding to questions about achievement and instruction because the district's approach is so decentralized. The district office staff is challenged to find ways to support the variety of instructional and professional development programs being delivered in the district.

David is frustrated that districtwide achievement is lower than expected and, despite his efforts, it has not improved annually at an acceptable rate or to an acceptable level. Disappointing levels of student achievement lead to additional questions from board members and the community. David nonetheless remains confident that individual school performance will eventually be reflected in higher district-level achievement.

Jane's Approach

Given Jane's theory that sustainable improvement occurs simultaneously at district and school levels, she takes a different approach to her responsibilities as superintendent. Jane includes her school board members, principals and other key district stakeholders in a goal-setting process that produces broad, five-year district goals for achievement and instruction.

As in David's district, these goals are focused on math and reading. For each goal, Jane's district establishes measurable success/progress indicators and annual performance targets. Jane and her board members review school-level progress on these goals each quarter and consider revisions to annual performance targets based on evidence of progress (or the lack of it). This process helps as Jane, the school board and the principals closely monitor implementation of the district's instructional program.

In Jane's district, the school board also adopts goals for a districtwide instructional program. Jane's instructional staff and her board decide what constitutes good instruction, especially where they have set achievement goals. They adopt a districtwide approach to instruction based on the best available research. It includes a framework for planning units and lessons and the use of research-based instructional strategies. It creates a common vocabulary about instruction for students, teachers, administrators and board members.

Principals in Jane's district closely monitor implementation of the district's instructional program. They conduct routine "walkthroughs" of classrooms to monitor the quality, fidelity, consistency and intensity of implementation of the district's instructional program. They update Jane, who in turn reports to the board on a quarterly basis, on the status of implementation.

The professional development program in Jane's district is designed to build the knowledge and skills teachers and principals need to implement the district instructional program. It is budgeted and coordinated at the district level to ensure a districtwide approach to high-quality professional development that is research-based, ongoing and job embedded. It includes specific and immediate feedback to teachers and principals on the quality and fidelity of implementation of research-based practices.

Having a districtwide approach to instruction allows Jane's central-office staff to more effectively coordinate resources and services to support school-specific needs. Instead of spending time trying to figure out each school's instructional program, district staff devote its energies to helping principals and teachers implement the district's instructional program.

While Jane expects her principals to provide strong leadership in their schools and extends considerable autonomy to them, she makes it clear that she expects them to align their school-level efforts with the district's overall direction. In other words, she and the board set direction at the district level, then grant principals the latitude they need to guide implementation of the district's instructional program, organizational development and school-level change.

Like David, Jane is optimistic about her district and confident in its capacity for producing higher levels of achievement. Jane has reason to be optimistic. Teachers, students, parents, principals and central-office staff understand the district's achievement goals and instructional program. Professional development resources are coordinated, aligned and used to develop research-based practices correlated with the district's goals.

Jane and the principals continually monitor the implementation of these practices and their effects on teaching, student learning, and the people implementing them. They use formative and observational data to make ongoing adjustments to implementation schedules and to professional development programming.

Based on demographics and economics, average district achievement in Jane's district should

be identical to David's. However, mean achievement in Jane's district is 10 percentile points higher than David's. Using the results of our most recent analysis of the effects of superintendent leadership, we can explain this difference. Jane's theory of action about the meaningful and sustainable change occurring simultaneously at district and school levels, and her approach to fulfilling these responsibilities, are aligned with our findings.

A Research Grounding

In our study at McREL, we asked the following basic research question at the outset about the effects of superintendent leadership: What is the strength of relationship between leadership at the district level and average student academic achievement in the district?

In addition, we asked these related research questions:

What specific district-level leadership responsibilities are related to student academic achievement?

What specific leadership practices are used to fulfill these responsibilities?

Although not part of our initial set of questions, we are able to answer another question that we believe to be of interest to superintendents and local school board members, but is not specifically focused on superintendent responsibilities and practices: Is there a relationship between length of superintendent service and student achievement?

We think of the answer to this fourth question as a bonus finding that was not initially part of our inquiry.

We conducted our study using meta-analysis, a technique for scientifically synthesizing research findings from smaller studies into a single, large sample. In this case we targeted all available studies conducted in the United States from 1970 through 2005 that met the following criteria:

- Reported a correlation between district leadership or district leadership variables and student academic achievement or allow for the computing or estimating of a correlation, and
- Used a standardized measure of student achievement or some index based on a standardized measure of student achievement.

Of the 4,500 studies conducted during this period, 27 met these criteria. The demographics for these 27 reports were as follows:

Number of districts involved: 2,714

Number of ratings of superintendent leadership: 4,434

Estimated number of student achievement scores: 3.4 million

Key Correlation

The correlation between district leadership and student achievement was .24 (95 percent confidence interval). This correlation is significant at the .05 level.

One way to interpret this .24 correlation is to consider an average superintendent who is at the 50th percentile in terms of leadership abilities and leading a school district where average student achievement is also at the 50th percentile. Now assume the superintendent improves his or her leadership abilities by one standard deviation (in this case, rising to the 84th percentile of all district leaders). Given the correlation between district leadership and student achievement of .24, we would predict that average student achievement in the district would increase by 9.5 percentile points. In other words, average student achievement in the district would rise to the 60th percentile.

Imagine a normal bell-shaped curve to represent the range of achievement in David's district. Now imagine average achievement in David's district at exactly the 50th percentile. Finally, imagine on this same curve average achievement in Jane's district at approximately the 60th percentile, nearly 10 percentile points higher than in David's district. This difference represents the effect of superintendent leadership on student achievement when the superintendent effectively fulfills the responsibilities we have identified.

District leadership responsibilities correlate with student achievement. In addition, the general effect of superintendent leadership, our second research question, sought to identify the specific leadership responsibilities that produce gains in student achievement.

In the responses, we found five district-level leadership responsibilities with a statistically significant (p. 05) correlation with average student academic achievement. They are as follows:

- The goal-setting process;
- Non-negotiable goals for achievement and instruction;
- Board alignment with and support of district goals;
- Monitor progress on goals for achievement and instruction; and
- Use of resources to support the goals for achievement and instruction.

Perplexing Finding

One set of findings from the meta-analysis that at first appears contradictory involves building-level autonomy within a district. One of the studies we examined reported that building autonomy has a positive correlation of .28 with average student achievement. However, this same study reported that site-based management had a negative correlation with student achievement of minus .16.

Other studies on site-based management reported slightly better

results; yet the average correlation between site-based management and student achievement was (for all practical purposes) zero. This apparent contradiction begins to make sense, however, in light of the five district-level leadership responsibilities described above.

How can we find school autonomy positively correlated with student achievement and site-based management exhibiting a negligible or negative correlation with achievement? This question might be answered in at least two of the earlier findings.

The superintendent who implements inclusive goal-setting processes that result in board-adopted non-negotiable goals for achievement and instruction, who assures that schools align their use of district resources for professional development with district goals, and who monitors and evaluates progress toward goal achievement is fulfilling multiple responsibilities correlated with high levels of achievement.

When this superintendent also encourages strong school-level leadership and encourages principals and others to assume responsibility for school success, he or she has fulfilled another responsibility: to establish a relationship with schools. This relationship is characterized by defined autonomy, which is the expectation and support to lead within the boundaries defined by the district goals. The accompanying table shows the correlation of defined autonomy with mean district-level achievement, a brief description of this responsibility and selected examples of practices superintendents use to fulfill this responsibility.

A Bonus Result

Our meta-analysis produced an additional finding that initially was not a focus of our study. Two studies that we examined reported correlations between superintendent tenure and student academic achievement. Together, the weighted average correlation from these two studies was a statistically significant .19, which suggests the longevity of the superintendent has a positive effect on the average academic achievement of students in the district. These positive effects appear to manifest themselves as early as two years into a superintendent's tenure.

The positive correlation between the length of superintendent service and student achievement affirms the value of leadership stability and of a superintendent remaining in a district long enough to see the positive impact of his or her leadership on student learning and achievement. Of equal significance is the implication of this finding for school boards as the y frequently determine the length of superintendent tenure in their districts.

Defined Autonomy and Practices

Superintendent responsibilities	Selected examples of practices used by superintendent and central office to fulfill superintendent responsibilities
Defined autonomy; superintendent relationship with schools *The superintendent provides autonomy to principals to lead their schools, but expects alignment on district goals and use of resources for professional development.*	• Expecting principals to foster and carry out district achievement and instructional goals • Developing a shared vision and understanding of defined autonomy • Committing the district and schools to continuous improvement • Hiring well-qualified teachers • Establishing a teacher evaluation process that focuses on district instructional program as a priority for principals • Establishing strong agreed-upon principles/values which direct actions of people • Ensuring that schools have a clear mission focused on district goals • Ensuring that all students have the opportunity to learn • Maintaining high expectations for school performance • Directing personnel operations to assure a stable yet improving and well-balanced work force • Allowing for and promoting innovation at the school-level within the context of district goals • Providing leadership for principals regarding how to implement district goals

In his 2005 book Crash Course, Chris Whittle contrasts CEO stability in major corporations with superintendent stability in large urban school districts. Over the last 20 years, Kansas City, Mo., has had 14 superintendents, yielding an average tenure of 1.4 years. Washington, D.C., has had nine superintendents over that time for an average tenure of 2.2 years. During the same time frame, General Electric was run by two CEOs. Federal Express, Microsoft and Dell had one chief executive each.

Whittle, who founded the Edison Schools, asserts that CEO stability at the corporations accounts for a large measure of their success. He argues that the instability of superintendent leadership accounts for much of the low student achievement found in too many school districts. If the stability of superintendents were to approximate the stability of CEO leadership, he claims, school districts likely would experience greater success, assuming superintendents focus on the right priorities and skillfully fulfill their responsibilities. The bonus finding in this truly supports Whittle's conclusion.

Measurable Impact

David and Jane, of course, are fictitious superintendents in fictitious school districts. Their experiences, however, are much closer to fact than fiction and play out in real time in school districts across the country.

Jane's theory of action and her practices are clearly grounded in research based on our findings. In her experience, Jane skillfully fulfilled key leadership responsibilities with statistically significant relationships to student achievement. She worked with her board of education to adopt and support district goals for achievement and instruction. The board supports district-level and school-level leadership in ways that enhance rather than diminish leadership stability.

It is important to note that superintendents cannot fulfill the responsibilities we identified in our research on their own. They need their school boards as well as central-office staff members to share their understanding of these responsibilities and to integrate them consistently into their practice. Along with district-level responsibilities and practices, they must support the school-level leadership responsibilities and practices. When they do, the primacy and impact of superintendent leadership is obvious and measurable.

Marzano, R. J. & Waters, J. T. The primacy of superintendent leadership. Reprinted with permission from the March 2007 issue of *The School Administrator*.

Understanding resistance:

Lessons from a river

By Jim Eck with Bryan Goodwin

What do you do, as a school leader, when you encounter resistance to a change? Perhaps you steel your jaw and declare, like the famed Civil War naval commander Admiral Farragut is believed to have said, "Damn the torpedoes. Full steam ahead!"

Maybe you steam off in the other direction. Or do you cut your engines and sit, dead in the water?

Perhaps you take the path of least resistance, not unlike the advice an experienced principal received during her first year as a principal. Her mentor told her to think of a change agent as a "river of change," explaining that like a river, leaders encounter "stones," people who never change. The best thing to do is "flow over the stones," ignoring them and focusing on those who are willing to change. The principal has since learned that this well-meaning advice is wrong. She now understands that the stones in the river can trap other stones and eventually become a dam, stopping the river altogether.

Unless your school demonstrates off-the-charts performance each year, you're probably in the midst of leading a change effort. And unless your school operates in a school improvement utopia that eludes the rest of us, you encounter resistance, whether passive or outright hostile. At these times, you might want to issue an order for "full steam ahead," or you might be tempted just to flow like a river over stones impeding your path, but there is a better and more effective action a school leader should take—asking why.

Change: Perception is Reality

McREL authors have written extensively on the "magnitude of change" (See *School Leadership that Works, The Balanced Leadership Framework*®). In these various publications, we note that stakeholders tend to view change efforts in one of two ways: as incremental and routine "first-order" changes or as complex and values-challenging "second-order" changes (see table). Whether they perceive a change as first-order or second-order has as much to do with their own knowledge, experience, values, and flexibility, as it does with the change itself. Consequently, the same change can be perceived very differently by people within the same school.

Changes for Stakeholders

First-order Change When change is viewed as:	Second-order Change When change is viewed as:
An extension of the past	A break with the past
Within existing paradigms	Outside of existing paradigms
Consistent with prevailing values and norms	Conflicted with prevailing values and norms
Implemented with existing knowledge & skills	Requiring new knowledge & skills

Know What to Emphasize

Of the 21 school leadership responsibilities identified in McREL's research, seven were positively associated with change perceived as second-order. (see table on next page). McREL interprets these findings as indicating there are seven responsibilities that effective principals should emphasize when leading a second-order change initiative. Provocatively, the research also suggested that four of the responsibilities (Culture, Communication, Input, and Order) were negatively correlated to change with second-order implications. Principals also should emphasize these four when leading second-order change, but they should understand that others' perceptions will be that they are not adequately attending to them. Although a leader's emphasis on the four may have a stabilizing effect during first-order change, emphasizing them during second-order change seems to destabilize an organization.

Leaders guiding "second-order" changes are rated more positively I some key responsibilities and more negatively in others.

Listen and Ask Why

Have you heard one of the following responses to a change you've proposed? "But that's not the way we used to do things!" "You used

Key Responsibilities in Second-order Change

Positively Correlated	Negatively Correlated
Knowledge of Curriculum	Culture
Instruction and Assessment	Communication
Flexibility	Input
Change Agent	Order
Ideals and Beliefs	
Monitor and Evaluate	
Intellectual Stimulation	

to listen to our input when making decisions." "We don't seem to have the same vision anymore." Don't be surprised when you hear such replies, but don't ignore them either. Leaders ignore "resistors" at their own peril.

Resistors often are informal opinion leaders who can undermine change efforts. Moreover, resistors can have valuable insights and reasons for their resistance. Understanding and addressing these reasons can help to improve the effectiveness of the change efforts. And, because there's no zealot like a convert, helping someone work through initial resistance can create a powerful new champion for the effort. So, rather than ignoring resistors, listen to what they are saying and ask yourself why they are responding that way.

Watch and Adapt

As reported in *School Leadership that Works* (ASCD, 2005), McREL's researchers found that highly effective principals demonstrate an ability to understand how stakeholders respond to change, seek to uncover and address reasons for resistance, and adjust their behaviors accordingly. Specifically, two of the 21 responsibilities are among those that McREL found to be directly associated with second-order change: 1) monitor/evaluate and 2) flexibility. Monitor/evaluate indicates the need to monitor instructional efforts, their impact on student learning, and the impact of a change initiative on everyone involved in it. Flexibility includes the practice of adapting your leadership style to the needs of specific situations and people, which is especially important in dealing with the personal transitions inherent to change.

Conclusion

The key is not to ignore stakeholders' perceptions of change and the sharp edges of their responses. Like a river, see yourself smoothing down the stones of resistance. When you encounter it, rather than brushing it aside, steamrolling over it, or retreating in the face of it, ask *why*?

There is a Buddhist phrase referring to water: "Subtle pressure relentlessly applied." Water— fluid and dynamic—adapts to its landscape, making course corrections as it flows. Are these attributes of your leadership?

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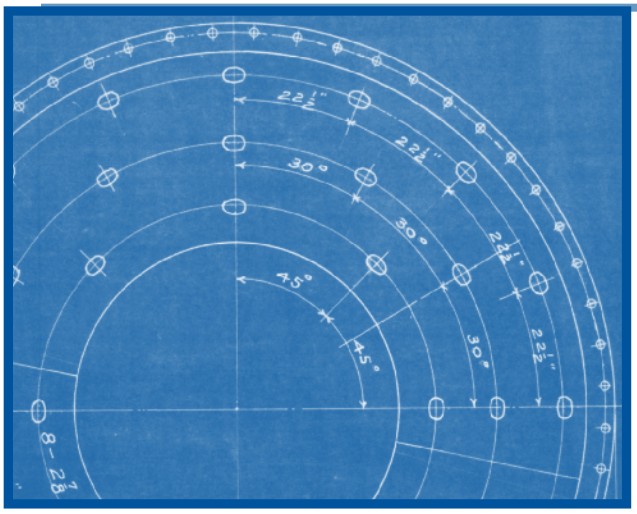

Selecting the Right Data

By Danette Parsley, Ceri Dean, and Kirsten Miller

Going beyond federal requirements to collect, analyze, and interpret data that answer specific questions, leads to better informed and effective educators. According to the Education Commission of the States (2000), data:

- Are factual information that are used as a basis for calculation, discussion, or reasoning
- Provide compelling evidence that grounds theories and conclusions in actual results rather than perceptions or speculation
- Are often described as either quantitative, such as enrollment figures, drop-out rates, and test scores, or qualitative, which are based on interviews, focus groups, or observations

Although this definition of *data* is fairly clear cut, learning how to use data to drive school improvement can be a challenge. Traditionally, data collection and analysis has been the purview of one or two people in a school or a district and has consisted mainly of examining standardized assessment data and reporting results. But using data can help principals and their teams establish school improvement goals, decide what educational programs may be more appropriate for students and their instructional needs, guide curriculum development and revision, monitor students' progress and provide them with feedback on their performance, determine the kinds of professional development activities that are most beneficial, guide resource allocation, and provide the feedback that teachers and administrators need to stay the course.

Like everything else within a school, however, data collection and analysis happen within the context of a community, and how that community approaches this process can make a significant difference in the degree to which data influences school improvement. Data use holds the most promise when it occurs within the context of a purposeful community: a community that practices collective efficacy, has agreed-upon processes, shares common purposes and goals, and uses all its available assets.

Under the No Child Left Behind Act, schools are required to collect summative data for all subgroups of students and report the disaggregated data to the U.S. Department of Education and the public. But rather than simply complying with state and federal data mandates, principals can instead view data as the axis around which school improvement revolves. When schools go beyond compliance with state and federal data collection requirements—when they begin to use data to evaluate structures and procedures, create school improvement plans, and monitor their progress—the "problem" of data collection becomes the solution to almost any school improvement issue.

Setting the Stage

Before data can become an integral part of a school's fabric, schools must first determine their readiness for using data. Determining readiness involves assessing the data knowledge and skills of school administrators, teachers, and staff members, as well as their attitudes toward and commitment to using data. Self-assessments can provide information about the data experience and expertise within the school faculty and identify people who may provide data leadership and professional development. To assess attitudes and beliefs, consider such questions as these:

- To what extent does the staff feel that data should drive decisions related to school improvement? Classroom practices? Policies?
- To what extent do we provide opportunities to hear from diverse perspectives and engage in honest dialogue about our assumptions?

Research suggests that principals have a substantial impact on the collective efficacy of their staff, which is defined as "the perceptions of teachers in a school that the faculty as a whole can execute the courses of action necessary to have positive effects on students" (Goddard, 2001, p. 467). And in their meta-analysis of the research on leadership, in which they identify 21 key leadership responsibilities, Waters, Marzano, and McNulty (2003) have concluded that the caliber of leadership in a school can also have a dramatic effect on student achievement. According to Waters et al., the average effect size between leadership and student achievement is 0.25. They explain this correlation as follows:

> Consider two schools (school A & school B) with similar student and teacher populations. Both demonstrate achievement on a standardized, norm-referenced test at the 50th percentile. Principals in both schools are also average—that is, their abilities in the 21 key leadership responsibilities are ranked at the 50th percentile. Now assume that the principal of school B improves her demonstrated abilities in all 21 responsibilities by exactly one standard deviation....
>
> Our research findings indicate that this increase in leadership ability would translate into mean student achievement at school B that is 10 percentile points higher than school A. (p. 3)

Although each of the key leadership principles identified by Waters et al. (2003) have the potential to affect data use within a school, a number are particularly applicable to creating a purposeful community in which data drives the decision-making process (see Figure 1).

Figure 1

Key Leadership Principles	
Culture	Fosters shared beliefs and a sense of community and co-operation
Order	Establishes a set of standard operating principles and routines
Focus	Establishes clear goals and keeps those goals in the forefront of the school's attention
Input	Involves teachers in the design and implementation of important decisions and policies
Affirmation	Recognizes and celebrates school accomplishments and acknowledges failures

Source: Waters, T., Marzano, R.J., & Mcnulty B. (2003). *Balanced Leadership: What 30 years of research tells us about the effect of leadership on student achievement. A working paper.* Aurora, CO: Mid-continent Research for Education and Learning.

Although it is routine in many schools for teachers and administrators to review data annually, it may not be routine for them to discuss the data regularly—that is, to talk about real students and their achievement and to unveil the things that are working well and the areas in which teachers need real-time professional development. Regular discussions about data require data leadership teams and established purposes for and uses of data—thereby attending to the culture, order, focus, and input leadership responsibilities (Waters et al., 2003).

Data leadership teams should meet annually to set or revise improvement goals and facilitate monthly collaborative meetings with teams of teachers to monitor progress and make ongoing adjustments. When forming a team to lead data efforts, principals should consider including a cross-section of staff members who like working with data, have skills and experience in using data analysis and data presentation software, are interested in learning more about data use, or are interested in using data to improve their programs.

Data-Driven Decision Making

There are four steps for using data to make effective decisions: collecting and organizing data, analyzing data, interpreting data, and taking action. This four-step process can be used at any decision level: district, school, grade or subject, and classroom.

Collecting and Organizing Data

Data can help us answer questions about a variety of schooling topics, but using data to answer questions from broad to specific can be overwhelming. Defining questions can help focus a school's efforts. Because student learning is the primary goal of education, data teams generally start by defining questions that are related to student achievement. Having questions in mind before beginning the data collection process focuses data collection efforts and minimizes data overload (see Figure 1).

After the data team has defined specific questions, the next step is to take inventory of their available data—which could include standardized assessment results, IEP achievement data, enrollment data, or portfolio data. Often, schools and districts collect or have access to a great deal of data that is not always tapped for the decision-making process. By using multiple sources of data, schools can compensate for any imperfections in data instruments; increase confidence in their analyses when multiple sources yield the same results; and highlight conflicting results, which can help prompt follow-up questions. Drawing from different types of data—for example, outcome, demographic, perception, or program data—can help to circumvent over reliance on one type of data (e.g., standardized assessment scores) and can strengthen collective ownership of the decisions made as a result of what the data reveals.

This lays the groundwork for developing a data collection plan, which should include, at a minimum, the sources of data, the levels of data, the location of data, the person responsible for accessing the information, the time line, and the information provided.

Analyzing Data

The amount, type, and level of data to be analyzed is dependent upon the data team's specific questions; however, there are several processes that can help data teams uncover meaningful patterns and relationships to better

Purposes for and Uses of Data

- Discovering issues
- Diagnosing situations
- Forecasting future conditions
- Improving policies and practices
- Evaluating effectiveness
- Promoting accountability

Source: Education Commission of the States. (2000, August). *ECS Issue Paper: Informing practices and improving results with data-driven decisions.* Denver, CO: Author.

understand student progress. These steps help data teams make factual, thorough observations and avoid jumping to conclusions about the implications of the data—a danger in any analysis, because each member of the team comes to the table with individual assumptions and experiences. To avoid this particular pitfall, data teams should:

- Organize data reports according to the type and level of information provided
- Work systematically through layers of information, from broad to specific
- Make appropriate calculations and display data through tables (e.g., data tables, charts, and graphs)
- Disaggregate data by subgroup to reveal patterns and gaps
- Record factual observations for each question or source of information
- Avoid explaining patterns until observations are exhausted.

Interpreting Data

Upon systematically analyzing the data, the data team will likely have a long list of observations. Clearly, it is important to prioritize problems and areas of concern and identify areas of immediate focus before taking action. However, it is equally important to celebrate successes, taking the time to articulate what is working well and to reflect on the factors that led to the successes.

At this stage of data collection and analysis, there is a great deal of benefit to bringing in additional stakeholders with diverse perspectives. Additional perspectives increase the likelihood of getting to the root of a school's issue, but equally important is generating shared ownership of potential solutions. When stakeholders engage in generating explanations and hypotheses, they are less likely to resist school improvement efforts.

It can be helpful to create data interpretation charts during this phase, to include problem statements (e.g., "Reading scores in K–3 have improved; reading performance in grades 4 and 5 remains flat") and root-cause explanations (e.g., "K–3 has implemented a new core reading program, whereas grades 4 and 5 have not"), whether the explanation is supported by the existing data and whether there is additional data available for confirmation.

Taking Action

Taking action is the most important aspect of the data-driven decision-making process. In this stage, the data team sets short-term and long-term goals, generates specific action strategies (informed by the available research), and monitors implementation and strategy effectiveness. Goals should be specific and clearly articulated, measurable, data driven, systemic and sustainable, realistic but challenging, and supported by all stakeholders.

When implementation efforts fail, it is often because of a lack of focus and sustained commitment to monitoring the data plan and making adjustments as needed. Shared agreements can help circumvent this common issue. Shared agreements are simply group commitments to individual actions, formalized in a public fashion, and monitored by the group—in this case, the data team. They help teachers answer the question, What does this strategy mean for what I will do in the classroom tomorrow?

Final Thoughts

The effective use of data can help principals make informed decisions about their policies, practices, and procedures to improve student achievement. The more systematic and thorough principals are about bringing data to the table when making decisions, the more confident they can be that their decisions will lead them to their intended results. Although engaging in the data-driven decision making process might seem time-consuming at first, in the long run it can greatly reduce the amount of time and resources that might otherwise be spent by moving to action without an intentional examination of what the data reveal about both needs and improvement strategies.

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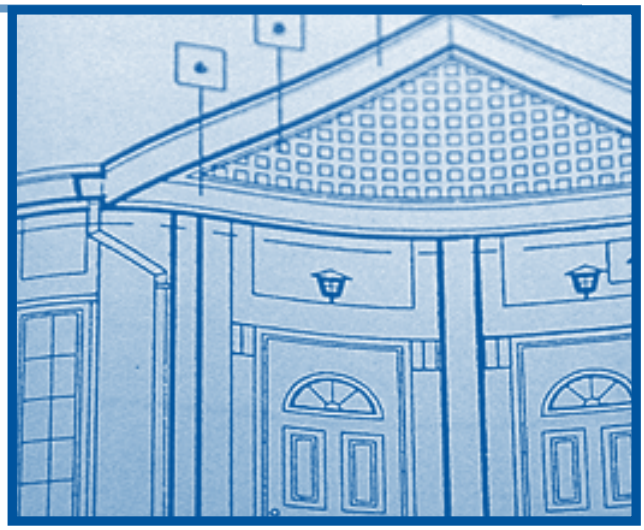
A Different Kind of Community



By Greg Cameron, Monette McIver, and Roger Goddard

Picture a group of teachers animatedly sharing ideas about how they utilized an agreed-upon researched–based strategy in their classrooms over the last week. They share samples of student work, look at the data they have been collecting over the course of the previous month, and talk about what the strategy looks like when utilized with fidelity, consistency, and intensity. They leave the conversation with new insights, ideas, and thoughts about how they can continually keep improving on their practice.

Increasingly, schools and districts understand the importance of creating environments where collaborative practice is the norm and where staff members share a common vision. Although this is important, it isn't enough to sustain a school through its improvement efforts. A truly "purposeful community" involves more than a shared mission and vision, two characteristics of professional learning communities. Rather, purposeful communities exhibit these four characteristics:

1. High levels of collective efficacy
2. Strategic and effective use of all available assets
3. Outcomes that matter to all
4. Adherence to agreed-upon processes

1. High Levels of Collective Efficacy

Collective efficacy is a shared belief that group members can execute a course of action that makes a difference (Goddard, 2001).

Researcher Albert Bandura (1997) identified these key sources of collective efficacy:

Mastery Experiences: When people experience initial success and have the opportunity to build on them. This occurs, for example, when a group of teachers utilizes a researched-based instructional strategy with fidelity, sees positive results, and begins to believe that as a team they can make a difference in the learning of students who had previously not shown significant academic success.

Vicarious Experiences: When there are opportunities to observe successful individuals in situations with similar circumstances. For example, when a group of teachers observe other teachers, whether in the same school or different school, who are effectively utilizing the strategies, the first group begins to believe that they too could use these strategies effectively.

Social Persuasion: When influential individuals within a group create high expectations and provide support to others to pursue their goals. This might occur when more experienced teachers model and share high expectations with newer staff, and all of the teachers have opportunities to interact and work together toward common goals for their students.

Affective States: When there is a shared sense of optimism that the group can accomplish their desired outcomes, even after disappointments. When a school staff responds to poor results on a state assessment by analyzing the data more deeply to identify what they can do differently next time, they exhibit this behavior.

2. Strategic and Effective Use of All Available Assets

Typically, educators focus on tangible assets, which we think of as physical, observable, and measurable. It would be foolish to suggest that school or district leaders ignore their budgets, facilities, and technology needs, but it is equally important for them to attend

Four steps to effective use of all available assets

1. Determine which assets are important to attaining identified outcomes.
2. Assess existing assets by collecting perception data regarding the strengths of the school or district from all stake-holders.
3. Determine underutilized assets by asking staff members to identify talents and strengths they have to contribute but do not.
4. Include all assets in school improve-ment planning.

What are agreed-upon processes?

Operating principles and agreements comprise agreed-upon processes.

Operating principles

- Lay the foundation for how individuals will function in the community
- Are developed to meet specific purposes and outcomes
- Are unique for every organization

Agreements

- Are behavioral expectations that guide and uphold the operating principles
- Require intentional leadership and stakeholder dialogue
- Complete the statement: *This operating principle requires us to . . .*

to the intangible assets (e.g., leadership, transparency, reputation) that have an equal and positive impact on student achievement.

All schools have the potential to develop and use all of their assets, although some schools do so more effectively than others. Leaders who continuously assess their use of available assets have the knowledge to confidently reallocate them to produce desired outcomes.

3. Outcomes That Matter to All

Perhaps your school community has been brought together more by coincidence than by an enduring and articulated purpose that everyone shares. Accomplishing purpose and producing outcomes requires input from stakeholders and intentionality from a school's leaders. Using structured dialogues and protocols, school or district leaders can develop a vision of meaningful outcomes that they can only achieve together. The question to ask is, "What can we do together that we cannot do as individuals?"

4. Adherence to Agreed upon Processes

Having agreed upon processes builds patterns of communication, stronger relationships among community members, a sense of individual and collective well-being, connections between school and other critical institutions, shared leadership opportunities, and an orderly and disciplined environment. Agreed upon processes contribute to a community's stability and can rally its members to move in a different direction.

More Than the Sum of Its Parts

Virtually everything in a school occurs within the context of a community consisting of students, parents, teachers and other school staff members, central office administrators and support personnel, the school board, other social agencies, and businesses. The more this diverse community is able to unite around shared purposes, the more sustainable and effective a school's change efforts will be. School leaders who understand the characteristics of a purposeful community are better able to lead their schools and districts to success.

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This article originally appeared in McREL's quarterly magazine, *Changing Schools* (Winter 2008).

Montview Elementary: A Lesson in Sustainability

By Heather Hein

An extraordinary event occurred in 2001 at Montview Elementary in Aurora, Colorado. Montview, known in the community as a school with a high number of low-income students and second-language learners, defied the odds to win a national professional development award and create one of the state's highest performing schools.

Seven years later, and under different leadership, Montview teachers continue to thrive in its "culture of learning" and students continue to record significant gains on the Colorado Student Assessment Program (CSAP). As a result, the school's rating from the Colorado Department of Education has improved from "low" to "average"—making it the only high-poverty school in the district to be graded so high. In short, Montview has permanently changed people's attitudes, motivations, and perceptions.

Patti Capps, who has served as principal since 2001 and is retiring at the end of this school year, credits the school's staying power to its ability to "self-wind." She explained, "[My predecessor] taught me, and I'm teaching my successor, that we need to have systems in place that are not person-specific. Whoever's the principal, whoever the teachers are, doesn't change what we believe about schools."

What they believe is that every person in the building—students, teachers, administrators, parents—is a learner. This pervasive philosophy contributes to staff development that continually evolves. Those elements that work well have been used for years, such as weekly staff "dialogues," coaching and mentoring in literacy and mathematics, and a student teaching partnership with the University of Colorado at Denver.

Even so, Montview keeps finding new ways to improve. They've added a lesson study in mathematics and once-a-month, half-day "academies," focused specifically on literacy and mathematics.

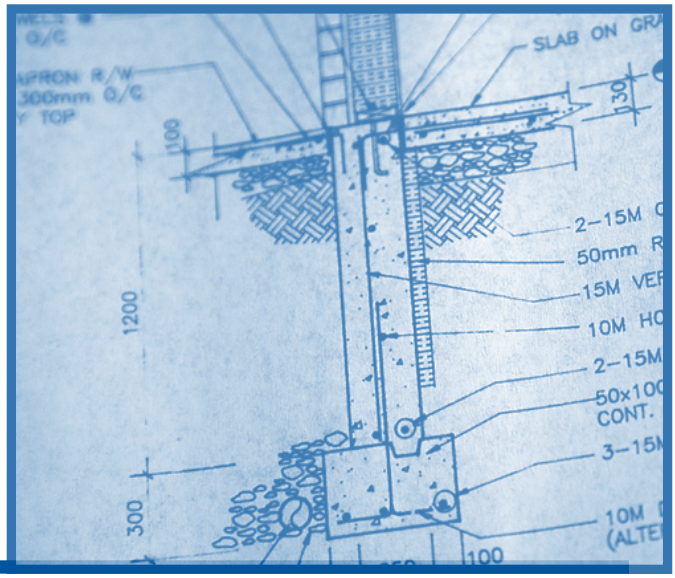
Capps is particularly proud of the school's extensive professional library, which continues to expand, and the parent community room. With 70 percent of students being English-language learners, it's critical for parents to feel comfortable with the school and their role in their children's education. In the community room, parents talk, work on the computer, learn about the school, and help teachers with projects or to organize events, such as Cinco de Mayo. At monthly coffees, parents receive training on techniques to help their kids at home; they might share learning games or simply discuss reading comprehension questions that will spark a conversation with their kids.

And how do teachers keep up with it all? Capps points to having a common language and philosophy and building in time for teachers to teach and develop. "There are two things that really matter: relationships and communication," she noted. "You have to value and care about people and their personal lives, but you also have to push."

This blend of pressure and support is a leadership style that has been described as "pinky-finger" leadership. "It's like, 'Come on, I'm going to take you by your pinky finger, I'm not going to push real hard, but we do have to go."

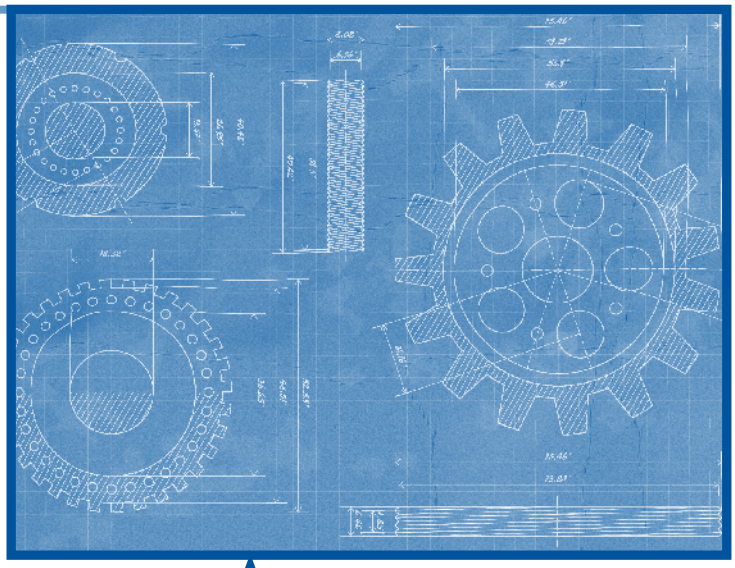
And Montview keeps going—and will do so beyond Capps' tenure. "I have every faith that the school will continue its philosophy," said Capps. In other words, while the school's tangible assets, including its teachers, curricula, and earning programs, may change, its intangible assets—namely, its culture of high expectations, will remain.

This article originally appeared in McREL's quarterly magazine, *Changing Schools* (Spring 2007).



Think Systemically, Act Systematically

By Danette Parsley and Mike Galvin



In an effort to be comprehensive, schools often outline sweeping plans for improvement in multiple goal areas. Although well-intended, the efforts may be either too diffuse to have much impact, or so overwhelming that staff become immobilized. A school that chooses to proceed in too limited a manner, on the other hand, may run the risk of obtaining only partial or temporary success, without the necessary system supports in place to support long-term sustainability.

How can schools strike a balance between these two extremes? School improvement specialists at Mid-continent Research for Education and Learning (McREL) suggest that schools can begin operating from a systems perspective while tackling real, pressing challenges by designing and implementing a "fractal improvement experience"—a manageable, carefully designed change initiative that is meant to help staff members gain skills in thinking systemically and acting systematically while building a sense of collective efficacy and making measurable progress.

What is a fractal improvement experience?

A "fractal" is a mathematical term that refers to a repeating geometric pattern that is reproducible at any magnification or reduction within the whole (e.g., clouds, snowflakes, ferns). McREL uses the term fractal improvement experience to describe a small, systemic improvement experience because encapsulated within this experience are all the required procedural parts of a major school improvement initiative.

The use of the term fractal reflects an understanding that school improvement efforts are "nested" and occur at many levels within an organization. It also implies that "big," or systemic, school improvement is made up of many smaller efforts, but is also greater than the sum of those individual efforts.

The focus of the fractal experience should have broad impact and require wide participation by staff members, yet be narrow enough to implement and see results in a short period of time (e.g., 4–6 weeks). During the fractal experience, schools quickly make their way through an entire improvement cycle by:

1. Taking stock of current needs using data
2. Focusing on the right solution
3. Taking collective action
4. Monitoring implementation and the impact of efforts on students
5. Maintaining momentum by identifying sustainability strategies

Since fractals are limited in scope and completed in a relatively short period of time, they offer the potential for the designer of the experience to assist those involved in "connecting the dots" between the steps of initial assessment, planning for and taking collective action, post-testing, and attribution of ultimate success.

Why use a fractal improvement experience?

A common image of schools is that of a series of one room school houses connected only by a common hallway. Given the prevailing culture of independent practice, it is not uncommon to find school faculties who have never experienced measurable success that they attribute to working together as a team.

Changing the culture of a school to one of shared responsibility and collective action is foundational to improvement, but is a complex and lengthy process. Engaging in a fractal experience provides a vehicle for a school staff to begin changing the culture of their school while making real, measurable gains for students in a short period of time.

The fractal experience also allows the school to experience an initial small success, the power of which is described by Jim Collins in *Good to Great* (2001):

> Tremendous power exists in the fact of continued improvement and the delivery of results. Point to tangible accomplishments — however incremental at first —and show how these steps fit into the context of an overall concept that will work. When you do this in such as way that people see and feel the buildup of momentum,

they will line up with enthusiasm (p. 174–175).

As the school staff begin to see real changes that result from their actions, the staff will build collective efficacy; that is, "the perception of teachers in a school that the faculty as a whole can execute the courses of action necessary to have positive effects on students" (Goddard, 2001).

A strong sense of collective efficacy actually outweighs characteristics over which practitioners generally feel that they have no influence. Researchers Hoy, Smith, and Sweetland (2002) note that a high level of collective efficacy can have a greater effect on achievement than student socioeconomic status. Goddard finds similar effects concerning race (Goddard, 2003).

Goddard, Hoy, and Hoy (2000) suggest that collective efficacy can be developed by providing mastery experiences—successful teaching and learning experiences that engender even more successful experiences. A fractal improvement experience is a type of mastery experience designed to involve teachers in acting systematically to achieve focused results, while thinking systemically about how the interrelationships among individuals, structures, and processes affect the initiative.

The fractal improvement experience is central to McREL's *Success in Sight: A Comprehensive Approach to School Improvement* (http://www.mcrel.org/successinsight/).

A fractal improvement experience in action

School teams who use systems thinking to facilitate change recognize that a change in one part of the system affects and is dependent upon other parts of the system. They can anticipate potential barriers and unintended consequences of initiatives. They also use feedback loops and make ongoing adjustments.

The following is a snapshot of one school's fractal improvement experience in action.

Annette Cole, the new principal of Jefferson High School, pondered the results of her introductory interviews with staff members as she prepared for the start of the school year. Repeatedly teachers described themselves and their colleagues as hard working and dedicated, yet unable to overcome barriers to improvement that they attributed to serving students within a community of "working class families too busy to participate in the education of their children." Dr. Cole wondered whether the teachers at Jefferson understood the extent to which collective, team-oriented actions could improve the learning of their students

During the first meeting with her leadership team, Dr. Cole proposed a short, beginning-of-the-year improvement project. The team agreed, but wondered where to begin. Dr. Cole offered that in her conversations with teachers, she heard many complaints about students having poor writing backgrounds and claims that students, in general, "can't even write a good paragraph."

The team quickly agreed that this was a common problem, and decided to do a quick but thorough review of the data to shed more light on the potential causes. After considering the issue from many angles, the team hypothesized that one of the most likely reasons that students were unable to write high quality paragraphs was because they were never provided with explicit instruction and common expectations.

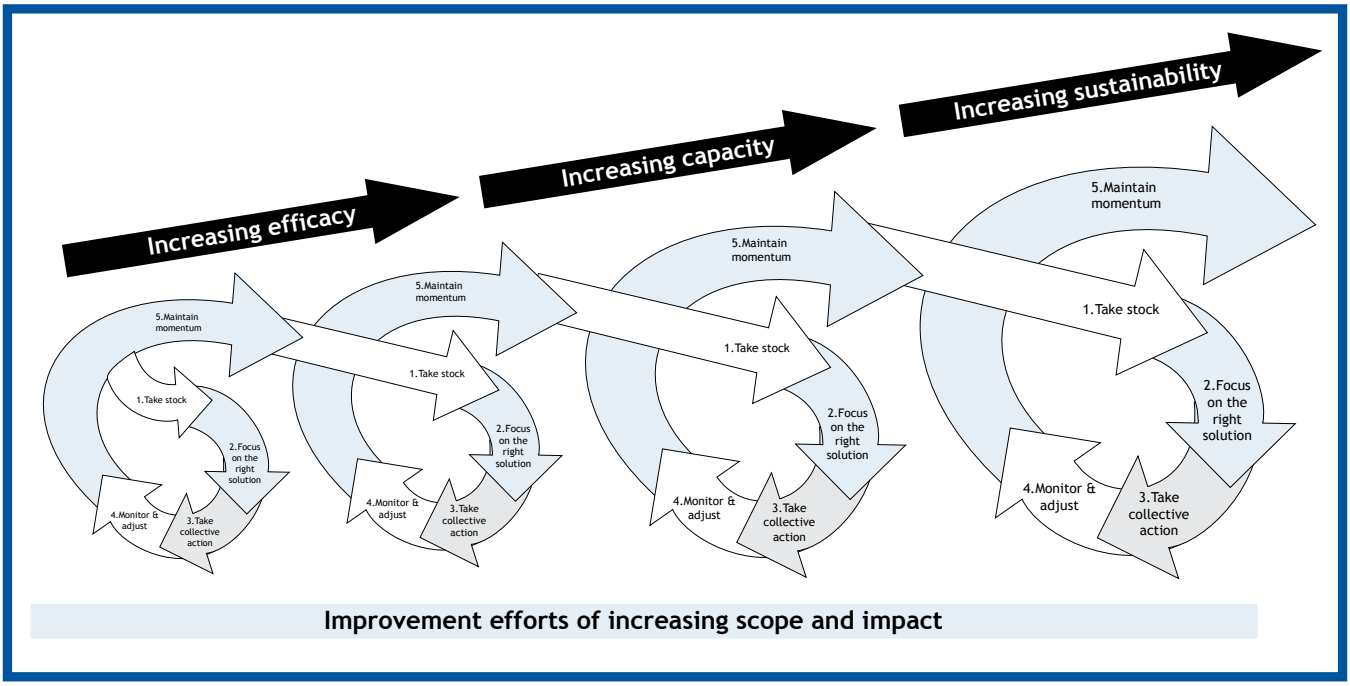
"What if," one team member proposed, "we collect some data about paragraph writing ability the first week of school, and all of us, regardless of our subject area, incorporate instruction on paragraph writing into our first two weeks of teach ing? Then, we could give a quick post-test to determine our progress."

The team agreed that the proposed intervention was manageable, yet likely to make an impact. But in order to be successful, they knew that they would have to step back and view the larger picture, carefully considering anything that might make or break this initiative. For example, they discussed what exactly the intensive writing instruction would look like in the classroom, who would participate, ways to support content area teachers in developing paragraph writing activities, and strategies for communicating about the initiative with families and other stakeholders. Some team members wondered whether they should adopt a whole new writing program, but Dr. Cole encouraged teachers to instead stay focused on their smaller, more immediate goal of improving students' ability to write coherent paragraphs. They designed a quick and easily administered assessment and a common format for recording students' progress. And they developed a set of talking points that would help them explain to their colleagues the advantages of this kind of shared, systemic action.

When the team reconvened to examine the results of their fractal improvement experience, they were excited to see increases in student proficiency. They discussed the importance attributing their success to their own collegial efforts toward the shared goal of improved writing instruction. Finally, they took time to reflect on the structures and processes they believed helped make this effort a success so they could carry those forward with the next initiative.

Jefferson High School's story illustrates the power of using a fractal improvement experience to think systemically and act systematically in improving student outcomes. Jefferson's team is now ready to take on another challenge, perhaps of a slightly larger scope and complexity. Each time they work through a new change initiative, they will stay focused on a common goal and make sure that all parts of the system (e.g., professional development, schedule, instructional materials, assessments, parent initiatives) are aligned to support the goal. Over time, their efforts to strike a balance between systemic thinking and systematic action will lead them to increased collective efficacy, capacity, and ability to sustain improved outcomes for students (see Figure 1).

Figure 1. Improvement efforts of increasing scope and impact (McREL, 2006).



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Tips for Designing and Implementing a Fractal Improvement Experience

- Design the fractal to take advantage of existing energy within the system: *go with the energy.*
- Select a goal (or small portion of a goal) from the existing school improvement plan and a strategy that lends itself to a short-term effort.
- Design methods for monitoring the intervention.
- Develop simple, easily administered assessments that can be used for both pre- and post-measurement.
- Develop common record-keeping systems that allow you to track the implementation and results of the effort. Ensure that the system allows for easy data aggregation and manipulation.
- Gain agreement from all before moving ahead.
- Ensure that all staff members are absolutely clear about expectations for their individual roles in the improvement effort.
- Debrief and learn from the experience together. Be sure to attribute the success or failure to the collective effort and identify steps to either sustain successful change or improve results during the next improvement cycle.

Parsley, D. & Galvin, M. Think Systemically, Act Systematically. Reprinted with permission from the Winter 2008 issue of *The American Association of School Administrators Journal of Scholarship and Practice.*

Balance the Science & Art of School Improvement: McREL's Success in Sight

Schools are increasingly challenged to improve student achievement rapidly and significantly. This challenge can be daunting, particularly for low-performing schools. This *ERS Critical Issues Brief* looks at *Success in Sight: A Comprehensive Approach to School Improvement*, a resource developed by Mid-continent Research for Education and Learning (McREL) to help schools organize their improvement efforts.

In the first portion of this brief report, highlights are provided of McREL's efforts to synthesize large bodies of research on effective schools, leaders, and classrooms. This extensive research base-which the authors describe as the science of school improvement-was used as a foundation for the development of Success in Sight, the systemic approach to the school improvement described in the remainder of the report. In McREL's view, the research findings are especially important for today's schools since they "do not require a large influx of additional resources to implement."

An Overview of the Process

Success in Sight is a systemic approach "based on the 'science' of improvement—it provides clear, specific, research-based guidance for what to do in schools. But it also helps schools learn the 'art' of continuous improvement by [focusing on] the many nuances and complexities of school change." Extensive experience of McREL staff with schools using the Success in Sight approach have helped them identify some key principles that are part of the "art" necessary to support the school improvement process; these include:

Principle 1: Use standards to create high expectations, as students 'rarely fail to live up—or live down—to the expectations set for them. That's why schools that are successful in raising student achievement understand that standards are not simply 'one more thing to do,' but rather are at the heart of everything they do."

Principle 2: Look to research to identify needs and effective solutions for addressing these. "By looking to the research for guidance, schools can ensure they are focused on solving the right problems and enacting changes that truly make a difference for students."

Principle 3: Get "hooked on data... It's a phrase that applies to all of the successful schools we've worked with, where staff members ask themselves, 'Is this working?' and 'How do I know it's working?' and use data—from not only state and district assessments, but also classroom assessments, to answer these questions."

Principle 4: "Keep the focus on student learning. With the myriad of issues that arise daily in a school—bus schedules, fund raising, paperwork, etc.—it's easy to lose sight of what's really important in schools: student learning. Successful schools always keep student learning at front-and-center. Indeed, for many schools it becomes their mantra... .. That is, they constantly ask whether proposed changes—or resistance to changes—are in the name of improving student learning or making life easier for adults."

Principle 5: "Think systemically, act systematically. . . . While schools must address the entire system, they also need to remain focused, starting with small steps, such as direct vocabulary instruction, and building on those small steps to undertake increasingly comprehensive or systemic change efforts."

Principle 6: "Manage the implications of change. Most changes worth making are difficult. They require stakeholders to gain new knowledge and skills if not change their assumptions about their students and how to teach them. Such changes are 'second-order' changes for some or all stakeholders. Effective leaders learn to recognize the implications of changes for their staff members and adjust their leadership behaviors accordingly to manage the change process effectively."

Principle 7: "Keep success in sight in order to create 'purposeful communities'. . . . where everyone works together to improve student learning."

Using the Success in Sight Process

The five-stage process developed by McREL—and refined through work with schools—is cyclical. It is also intended to provide schools with a framework to support continuous improvement efforts.

Stage 1 : Take Stock

Using the McREL model of school improvement, a school first takes stock of its situation. It asks, "Are we ready for change? Are the structures, processes, and attitudes needed to support the heavy lifting of school improvement in place?' The authors then ask: "What's the nature of our problem . . . [and conducts] an honest assessment of the school's situation and its students' needs." McREL

offers a framework for schools to use in this initial phase of improvement planning in *Asking the Right Questions: A Leader's Guide to System's Thinking about School Improvement*, a resource available at http://www.mcrel.org/topics/products/82/. Finally, school staff should engage in conversations about vision, creating a "purposeful community" with shared goals among all stakeholders as well as an understanding of what it will take to achieve those goals.

Stage 2: Focus on the Right Solution

To avoid "spinning their wheels" during the improvement process, schools should use a variety of data sources in an effort to identify both the right problem and the right solution. Relevant research findings might include, for example, those analyzed by McREL on effective schools, leaders, and classrooms.

As schools begin to identify strategies, they should also not try to do too much. "Staying focused on one or two research-based strategies helps schools generate quick wins, which, in turn, inspire stake-holders to undertake increasingly complex, bigger picture efforts." During this stage, school leaders should also keep in mind the concept of the "magnitude of change," the impact—or perceived impact—a proposed change will have on individual members of the school community. "For example, even a seemingly simple change, like creating study groups to help teachers learn new instructional strategies, could alter their schedules and diminish autonomy."

Finally, schools should determine how they are going measure their success or failure, and adopt "as their mantra the question, How are we improving student learning?"

Stage 3 : Take Collective Action

"After identifying a focus and plan for improvement, the next step is to take action. This is where school improvement efforts often break down. Schools develop thoughtful plans but fail to implement them well. To ensure proper implementation, school leadership teams should consider two dimensions for these actions: first, their breadth—that is, how many people in the school are taking action; and second, their depth—how to ensure that the actions will have an impact on current practices and student learning."

McREL suggests that schools periodically ask: "Are we all working toward the same end?" to ensure that staff members are working together as a "purposeful community." One aspect of this is developing "shared agreements [that] clearly describe what teachers will do in their classrooms and with their students to move the school toward success and how they will be held responsible for living up to their end of the bargain. . . . Without these specific agreements, it's easy for people to avoid taking the steps they need to help the school reach its goals."

However, it also is "important for school improvement efforts to strike the right balance between telling teachers what to do and respecting their intelligence, professionalism, and ability to create their own solutions for improving student performance."

Stage 4: Monitor and Adjust

One school leader with whom McREL collaborated "reported that a key to the school's success was that it became 'hooked on data.' That is, staff learned to constantly ask themselves, 'Is this working?' and 'How do we know it's working?' and to use data from a variety of sources to answer these questions. . . . Because implementation is often where school improvement efforts get off track, it is important to monitor progress on how well improvement strategies are being implemented."

McREL cautions against relying on end-of-the-year test results since they do not provide data in time for mid-course corrections, but highlights the importance of leading indicators such as teacher collegiality and safe and orderly classrooms. Instead, schools should identify a variety of data collection approaches that can be embedded in the daily work of classrooms and the school. For example, classroom assessments can be effective tools that provide feedback for teachers on their own instruction or on the needs of individual students.

Stage 5: Maintain Momentum

"A key goal of Success in Sight is to build schools' capacity for continuous improvement by helping them establish structures and processes that will help them not just continue, but build on, their successes." This is critical to long-term success, since maintaining momentum is often more difficult than initiating the change.

McREL highlights the importance of building on sometimes small, concrete successes and of carefully developing "the structures, routines, and processes, needed for improvement." McREL's experiences with schools using the Success in Sight process have identified a key lesson. Specifically, "a small, carefully designed improvement experience serves a dual purpose: to teach improvement processes and to begin to build collective efficacy that encourages school staff to take on ever-larger challenges. . . . Increasing efficacy leads to increasing capacity, and ultimately to increasing sustainability."

In Summary

As schools continue to search for ways to raise student achievement levels, Success in Sight offers a strategy that both uses the knowledge base and recognizes the need for each school to take its unique strengths and challenges into account. The *think systemically, act systematically* approach provides a framework for school efforts that help to build the processes necessary for both short-term reform and sustainability of improvement efforts.

This article originally appeared as an ERS Critical Issues Brief and was adapted from McREL's report *Success in Sight: A Comprehensive Approach to School Improvement* by Lou Cicchinelli, Ceri Dean, Mike Galvin, Bryan Goodwin, and Danette Parsley.

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