

McREL Leadership Responsibilities Through the Lens of Data: The Critical Nine

Cheryl James-Ward
San Diego State University

Joy Abuyen
San Diego State University

Abstract

At the onset of the 21st century, the United States ushered in a new era of school accountability and reform with the No Child Left Behind Act [NCLB] (United States Department of Education, 2010). Until and unless it is repealed or replaced, this law continues in effect today, with many states now applying to renew their NCLB waivers (Klein, 2015). Moreover, the responsibility for meeting the expectations of accountability and the need for ongoing improvement continue to rest squarely on the shoulders of school principals, many of whom may broadly understand data-driven decision making, but may lack the knowledge and strategic information to maximize the use of data findings in improving student achievement.

The Mid-Continent Research for Education and Learning organization (McREL) has identified 21 leadership responsibilities that describe the knowledge and skills school leaders need to positively impact student achievement.¹ This analysis centers around the McREL leadership responsibilities with an effect size of .25 or higher that require a focus on data. The use of hard and soft data to focus improvement is then analyzed and expanded upon through the McREL leadership framework lens.

Keywords

school leadership, metadata, hard data, soft data, change, McREL, student achievement

Leadership Responsibilities Through the Lens of Data

Over the last two decades, much attention has been paid to educational leadership and its effect on student outcomes. A particularly noteworthy finding, reinforced in a major study by researchers at the University of Minnesota and University of Toronto (Wallace Foundation, 2012) is the importance of the principal in improving student achievement. Drawing on

two studies and large-scale quantitative analysis, the research showed that most school variables, considered separately, have at most small effects on learning. The real payoff comes when these individual variables combine to reach critical mass. In another study based on wide-ranging

Corresponding Author:

Cheryl James-Ward, College of Education, San Diego State University, 5500 Campanile Dr, San Diego, CA 92182
Email: cward@mail.sdsu.edu

review of literature on educational leadership organized around a framework which emerged from the empirical research in sociology and organizational and industrial psychology, Leithwood, Louis, Anderson, & Wahlstrom (2004) found that “the effect of leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school” (p. 7). More recently, in a study that included roughly 7,240 Texas principals and their students over a period of 6 years (focusing on math achievement adjusted for student background characteristics and school mobility rates), Branch, Hanushek, and Rivkin (2013) revealed that “highly effective principals raise the achievement of a typical student in their schools by between two and seven months of learning in a single school year” (p.1). Marzano, Waters, and McNulty (2003) identified 21 leadership responsibilities that influence student achievement. At the core of nine of these responsibilities is the use of data to improve instruction.

This paper utilizes the research studies and findings from the Mid-Continent Research for Education and Learning (McREL) organization in order to examine those leadership responsibilities intertwined with the use of data to improve student achievement. Researchers from McREL; Marzano, Waters, and McNulty (2003); identified 21 leadership responsibilities they then translated into a leadership framework which describe the knowledge and skills school leaders need to

positively impact student achievement. The leadership framework was developed from two main sources of knowledge: (1) a quantitative meta-analysis of 30 years of research beginning in 1970; and (2) a comprehensive review of theoretical literature on leadership. Moreover, the meta-analysis consisted of more than 5,000 studies, of which 70 met the criteria for design, controls, data analysis, and rigor. These were quantitative student achievement data; student achievement measured on standardized or norm-referenced tests; student achievement as the dependent variable; and teacher perceptions of leadership as the independent variable.

The data from this meta-analysis confirmed that there is a significant relationship between leadership and student achievement. Specifically, Marzano et al. (2003) reported the importance of these findings by explaining that, “one standard deviation improvement in leadership practices is associated with an increase in average student achievement from [for example] the 50th percentile to the 60th percentile” (p.3) or 10 percentile points. Marzano, et al. (2003) reported that this translates into an average effect size (expressed as a correlation) between leadership and student achievement of .25 and that such an effect size signifies that as leadership practices improve, so does student achievement.

The 21 leadership responsibilities and the average size of their effect on student achievement are reported in Table 1 (Marzano et al., 2005, pp. 42-43).

Table 1
McREL's 21 Leadership Responsibilities That Impact Student Achievement

Responsibility	The Extent to Which the Principal...	Average <i>r</i>
1. Affirmation	Recognizes and celebrates accomplishments and acknowledges failures	.19
2. Change Agent	Is willing to challenge and actively challenges the status quo	.25
3. Contingent Rewards	Recognizes and rewards individual accomplishments	.24
4. Communication	Establishes strong lines of communication with and among teachers and students	.23
5. Culture	Fosters shared beliefs and a sense of community and cooperation	.25
6. Discipline	Protects teachers from issues and influences that would detract from their teaching time or focus	.27
7. Flexibility	Adapts his or her leadership behavior to the needs of the current situation and is comfortable with dissent	.28
8. Focus	Establishes clear goals and keeps those goals in the forefront of the school's attention	.24
9. Ideals/Beliefs	Communicates and operates from strong ideals and beliefs about schooling	.22
10. Input	Involves teachers in the design and implementation of important decisions and policies	.25
11. Intellectual Stimulation	Ensures faculty and staff are aware of the most current theories and practices and makes the discussion of these a regular aspect of the school's culture	.24
12. Involvement in Curriculum, Instruction, and Assessment	Is directly involved in the design and implementation of curriculum, instruction, and assessment practices	.20
13. Knowledge of Curriculum, Instruction, and Assessment	Is knowledgeable about current curriculum, instruction, and assessment practices	.25
14. Monitoring/ Evaluating	Monitors the effectiveness of school practices and their impact on student learning	.27
15. Optimizer	Inspires and leads new and challenging innovations	.20
16. Order	Establishes a set of standard operating procedures and routines	.25
17. Outreach	Is an advocate and spokesperson for the school to all stakeholders	.27
18. Relationships	Demonstrates an awareness of the personal aspects of teachers and staff	.18
19. Resources	Provides teachers with materials and professional development necessary for the successful execution of their jobs	.25
20. Situational Awareness	Is aware of the details and undercurrents in the running of the school and uses this information to address current and potential problems	.33
21. Visibility	Has quality contact and interactions with teachers and students	.20

Source: (Marzano et al., 2005, p. 42-43)

Analyzing the McREL Nine Through a Data Lens

This paper focuses on the McREL leadership responsibilities with an effect size of .25 or higher which require a focus on data, both hard and soft. It is this focus on data that the authors will expound upon for the nine identified McREL leadership responsibilities listed in Table 2.

Hard Data

Hard data is quantitative. It is reported using descriptive statistics that answer the questions who, what, and when (Creswell, 2009). For example, when did the students take the exam, which students took the exam, and what was the content of the assessment? Another example would be which students were suspended, when,

why and by whom? Hard data is generally a “snapshot” report: a report of student understanding of mathematics or the students being suspended from school on a given day, month, or year (James-Ward et al., 2013). Such hard data also qualifies for comparative statistical analysis. As we look at hard data and discuss the relevant leadership responsibilities, the comparative statistical analysis skills of the leader - along with other leadership skills - becomes magnified. It is through the comparison of data across a number of factors that leaders are able to make compelling arguments to address student achievement (White, 2005). McREL’s leadership responsibilities regarding change, resources, discipline, monitoring and evaluation, and input all depend on school leaders’ ability to navigate through the hard data. Finally, hard data is actionable, meaning that we can do something

Table 2

McREL’s Nine Leadership Responsibilities with a Focus on Data

1. Change Agent	Is willing to challenge and actively challenges the status quo	25
2. Culture	Fosters shared beliefs and a sense of community and cooperation	25
3. Input	Involves teachers in the design and implementation of important decisions and policies	25
4. Knowledge of Curriculum, Instruction, and Assessment	Is knowledgeable about current curriculum, instruction, and assessment practices	25
5. Resources	Provides teachers with materials and professional development necessary for the successful execution of their jobs	25
6. Monitoring/Evaluating	Monitors the effectiveness of school practices and their impact on student learning	27
7. Outreach	Is an advocate and spokesperson for the school to all stakeholders	27
8. Discipline	Protects teachers from issues and influences that would detract from their teaching time or focus	27
9. Flexibility	Adapts his or her leadership behavior to the needs of the current situation and is comfortable with dissent	28

with it. Under all nine of the identified leadership responsibilities, the leaders' ability to turn hard data into action is significant.

The types of hard data include: criterion and norm-referenced student assessments results, demographic data, attendance data, suspension rates, referral rates, detention rates, school nurse records, and teacher credentials and assignments (James-Ward et al., 2013). Success in the nine identified leadership responsibilities requires the ability of the leader to triangulate data from multiple sources to confirm findings so that decisions have solid bases (White, 2005). For example, referral rates from a single teacher to teacher preparedness across periods, weeks and even months; suspension rates of a given group of students by teacher, periods, and teacher attendance or preparedness; yet another example would be third grade student benchmark results compared to taught curriculum and instructional strategies. Effectiveness in the nine leadership practices requires the ability to analyze data across data points, looking for trends across multiple periods, disciplines, and classrooms. It requires looking for and confirming trends across numerous weeks, months, quarters, and even years. In essence, it requires that the leader have a focus on both useful assessment data like baseline assessments, weekly quizzes, progress monitoring data, benchmark exams, and end of year state tests, as well as nonacademic data, such as attendance and suspensions, that nonetheless have a direct impact on academic achievement.

Soft Data

Soft data is qualitative information about student learning. It is acquired by observing student and adult actions and by talking to students and adults (Merriam, 2009). It is uncovered in classrooms, staff lounges, the front office, playground, athletic fields, the hallways, and other corners of the school. Soft data can be described best in words and pictures rather than numbers.

Soft data is gathered through observations, by talking to students and other

stakeholders, and through surveys. Observations include learning walks, capacity-building learning walks, ghost walks, instructional rounds, and guided visits. Learning walks are those in which the principal and the *capacity building team* walk the campus together in order to get a common sense of what's happening, to share ideas, learn from one-another, and to determine and prioritize needs for faculty growth. Capacity building teams are groups of classroom teachers and instructional support staff that observe classrooms together, with a focus on a particular instructional strategy, curriculum delivery method, or classroom environment. A briefing must initiate the process, to ensure that as the team walks everyone is visualizing what they are seeing in a similar manner (David, 2008; Fisher & Frey, 2014).

Since the classroom with or without students should tell a story of the learning that has and is occurring when students are present, capacity building teams might also engage in ghost walks. Ghost walks are classroom visits when students and teachers are not present. Their purpose is to get a sense of the classroom environment and to determine whether the room supports current and past instruction through evidence found in and around the classroom. Examples of evidence include student artifacts, writing samples, and recently made instructional charts. Ghost walks in essence, mine visual and tangible data to determine if the classroom is a living, supportive environment.

Other types of soft data observations include instructional rounds and guided visits. Instructional rounds are performed by faculty and/or administrators from two or more campuses who walk classrooms together with a particular focus (City, Elmore, Fiarman, & Teitel, 2009). *Guided visits* refer to classroom walkthroughs with outside school visitors. These walkthroughs begin with discussions regarding the school's strengths and challenges, the school's instructional foci, and request by the hosting team for visitors to provide feedback based on the pre-meeting discussions. All walkthroughs should end with a debriefing in

which members share what they observed in structured terms.

Walkthroughs, in addition to surveys, can lead to situational awareness. Through the gathering and analysis of this sort of data, school leaders are made aware of the details and undercurrents in the running of their school. They use this information to address current and potential problems before they can undermine student achievement.

Surveys include those focused on school climate and/or course evaluations, and teacher and administrator evaluations. Climate questionnaires can be geared toward parents, students, teachers, other community members, or a combination of stakeholders. They include requests for input ranging from the performance of the school as a whole, components thereof, and interaction between school stakeholders, to its curricula and other programs. Course evaluation surveys, although standard in higher education, are not very common in the PreK-12th grades, but school leaders focused on the McREL leadership responsibilities - specifically systemic changes, school culture, curriculum and instruction, monitoring/evaluating and allocation of resources - may want information that can be garnered by these evaluations. These can be administered at middle and high schools.

They may include information about instructional delivery, student engagement, usefulness of the course, student/teacher engagement, relation of homework to classwork, and teacher readiness, to name a few (Fiore, 2011). Leaders focused on culture as well as curriculum, and instructors can use findings from these surveys to address issues around equity and access (Theoharis, 2009).

Soft Data Culture

School culture both internal and external, can be defined by the continuum of cultural proficiency (Lindsey, Robins & Terrell, 2009), described in Table 3.

School leaders wishing to continuously focus on the McREL leadership responsibilities around data use soft data to transform their staff by fully engaging them in difficult conversations, exercises, and professional development in order to move teachers and their students along the cultural proficiency continuum from culturally destructive towards being culturally proficient (Lindsey et al., 2009) (Table 3). This transformation can only take place if the leadership and the staff both have a firm focus on the social and emotional aspects of schooling as obtained through both soft and hard data.

Table 3
Cultural Proficiency Continuum

Cultural Destructiveness	Cultural Incapacity	Cultural Blindness	Cultural Precompetence	Cultural Competence	Cultural Proficiency
Practices that seek to eradicate cultures different than that of the dominant culture.	Practices that demean and seek to show cultures other than the dominant as wrong.	Practices in which the dominant culture refuses to acknowledge the cultures of others.	Working awareness of what one knows or doesn't know about working in diverse settings.	Practices that are additive to cultures that are different than the dominant culture.	Practices that seek to continuously learn about other cultures in a positive manner and are inclusive and celebratory of all groups in the school community.

Note. Adapted from *Cultural Proficiency: A Manual for School Leaders*, by R. Lindsey, K. Robins, and R. Terrell, p. 112. Copyright 2009 by Corwin.

The culturally proficiency continuum moves from destructive behaviors to culturally proficient ones. At the destructive end, adults and students engage in behaviors that may lead to students withdrawing from and even dropping out of school (Rumberger & Lim, 2008). At the culturally proficient end of the spectrum, adults educate all students to high levels, a process which includes knowing, valuing, and using students' cultural backgrounds, languages, and learning styles within the context of their teaching. Being culturally proficient requires acknowledging the additive value that all stakeholders bring to the school community. It requires a paradigmatic shift from viewing others as problematic to viewing how we work with people who are different from ourselves in a manner that ensures social justice and equitable practices (Robins et al., 2002). This comes from a deep desire to seek soft and hard data about our students' demographics and analysis of the data followed by second-order changes or transformational training for staff and students. Leadership responsibilities, especially those pertaining to culture, change, and flexibility, are critical here.

Data for Change

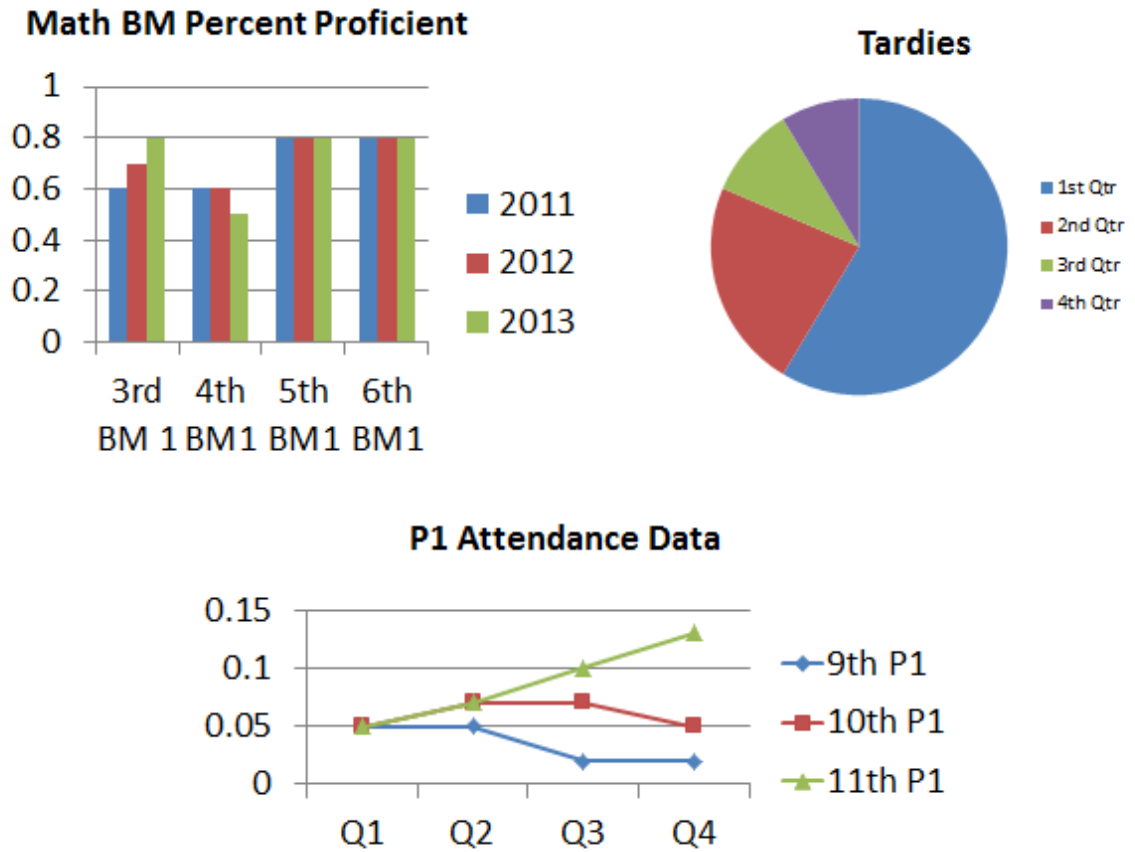
Leaders wishing to focus on the McREL leadership responsibilities around data are purposeful in how they display data and engage in conversation around information gathered through the data analysis. These leaders are likely to use bar graphs, line graphs, frequency

charts and tables to display different types of data so that the data are meaningful to stakeholders and lead to impactful discussions (James-Ward et al., 2013). The tools they use are further employed to gather input from staff, provide resources, protect teacher time and focus, and develop and adapt culture to optimally improve student achievement (Wallace Foundation, 2012).

Communicating data findings

Leaders concentrating on the McREL responsibilities around data are likely to use focused goals and objectives, valid sample sizes of data, and triangulation of both hard and soft data sets to actively challenge the status quo (McREL Leadership Responsibility, Change Agents). They actively engage teachers in the design and implementation of important decisions and policies (McREL Leadership Responsibility, Input), and jointly determine where to put resources so that teachers are provided with the materials and professional development necessary for successful execution of their job (McREL Leadership Responsibility, Resources). Figure 1 provides an example of several ways to visually display data so as to be more comprehensible to stakeholders. Table 4 is an example of how a school leader might organize the data for discussion, and Table 5 is an example of how the McREL leadership responsibilities – specifically, resources, monitoring/evaluating, and outreach – might be implemented and purposefully focused on various stakeholders.

Figure 1: Visual Displays of Data for Discussion and Action



BM refers to Benchmark assessments that are administered by grade level district wide generally 3 to 4 times yearly. P1 refers to period 1, and Q to quarters, i.e., quarter 1, quarter 2, quarter 3 and quarter 4 of the school year.

Table 4 Organizing Data for Discussion

Analysis of The Standards	We Asked Ourselves...	Next Steps Towards Mastery
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- Identify standards covered on 1st quarter benchmark assessment
- Determine standards that need intensive instruction both in ELA and Mathematics by grade level
- Determine which are common core (CC) standards emphasizing critical thinking and creativity

- Are we providing rigorous and intensive instruction to ALL students?
- Are we focusing on common core standards, critical thinking and creativity?
- Is delivery of the instruction and biweekly assessments aligned? If not, what needs to change?
- How can we guarantee that the common core standards are presented to students in a variety of ways so that we can meet the learning styles of ALL of our students?
- Are we maximizing all of the resources and programs that we have in order to master CC standards? How can we bring up the rigor of programs? What else can we incorporate and what needs to be modified?

- Teachers will meet in PLCs (with focus on culturally proficient curriculum) to analyze biweekly assessments as well as re-teaching and/or reassessing strategies.
- Leadership team will meet bi-weekly to analyze weekly data results and instruction
- Teaching schedules will be rearranged such that the most qualified teachers will teach both the lowest and highest performing students during regrouping
- Students will be grouped accordingly for re-teaching in order to maximize time and results
- Teachers will meet monthly as culturally proficient learning communities, examining practices through the lens of student demographics

Table 5 Example of Implementation of McREL Responsibilities: Resources, Outreach and Monitoring and Evaluating

	School-Wide	Grade Level or Content Area	Targeted Group	Targeted Individual
Student	<ul style="list-style-type: none"> • Restorative practices implemented school-wide • Revised homework policy emphasizing spiral review and student reflection 	<ul style="list-style-type: none"> • Academic language development initiative in K-3 • 11th and 12th graders use writing processes to publish essay including college entrance essays • Design thinking k-5 to increase creativity and critical thinking 	<ul style="list-style-type: none"> • Students at bottom 25% on benchmarks receive 30 minutes daily targeted intervention by most highly QT • Self-advocacy workshop for students with disabilities • Boys' group for those most challenged academically and socially 	<ul style="list-style-type: none"> • Response to intervention for identified students • Wraparound service and counseling for students with significant attendance issues • Online Intervention for high and low performing students
Faculty and Staff	<ul style="list-style-type: none"> • Professional development in Design Thinking • Daylong focus on school data • Cultural proficiency training for school climate and multiple perspectives in curriculum 	<ul style="list-style-type: none"> • Interdisciplinary units designed by 9th grade team • Professional learning community focusing on fostering critical thinking • Grade-level effort on improving attendance • Review of units for multiple perspectives & contributions 	<ul style="list-style-type: none"> • Classroom management coaching and support for new teachers • Restorative practice training for new teachers • Front office personnel training on a welcoming climate • Common Core Math Training through SWUN Math 	<ul style="list-style-type: none"> • Coaching using gradual release of responsibility framework for identified teachers • Collegial coaching for co-teaching k-5

Families and Community	<ul style="list-style-type: none"> • Use home calling programs to disseminate information to families • School-wide vaccination initiative per enrollment guidelines 	<ul style="list-style-type: none"> • Financial aid training for 11th grade families • Parent-Teacher Literacy and Math Nights for incoming 6th grade families 	<ul style="list-style-type: none"> • Career-development community mentors assigned for gifted and talented students • Language education classes for parents offered during school day 	<ul style="list-style-type: none"> • Counseling for parents of frequently absent students • Creation of book share program for parents • Nutrition and Health training for parents
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Source: *Note*. Adapted from *Using Data to Focus Instructional Improvement*, by James-Ward et al., p. 69 Copyright 2013 by ASCD.

Conclusion

The purpose of this analysis was to highlight specific strategies that school leaders can employ to achieve the McREL leadership responsibilities by focusing on data. In order for school leaders to be successful change agents they must know how to harness and utilize both hard and soft school data to create second-order change (Waters, Marzano & McNulty, 2003). This same focus on data is essential to establish a school culture of shared beliefs and practices that are culturally additive by nature (Magelano, 2013). Developing such a school culture and creating second-order change comes from knowledge about stakeholders, curriculum, instruction and assessment. These are garnered through the purposeful use of soft and hard data. Armed with cyclically gathered data (Boudette, City, & Murnane, 2007), school leaders are able to continuously present information to staff and other stakeholders in ways that allow for purposeful and impactful input from all stakeholders, lead to vetted use of resources, and protect the sacred use of teacher time so that the focus can be on student achievement.

Notes

1. McREL is an international education research organization founded in 1966. It is dedicated to supporting schools and districts across the globe through educational research, training, workshops, resources and consulting.

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About the Author(s)

Cheryl James-Ward, EdD, is the Director of the San Diego State University Master of Arts in Educational Leadership with a Focus on Technology Online Program. She directs the SDSU Chinese and American Educational Leadership Symposium. She co-coordinates the master's and administrative credential programs in the Department of Educational Leadership where she teaches both master's and doctorate level courses. Dr. Ward also coaches principals across the state and leads schools in Design Thinking Training.

Joy Abuyen, MA, is an Ed.D. candidate in the Department of Educational Leadership at San Diego State University. Her research interest focuses on school leadership. She teaches in a neighboring school district.